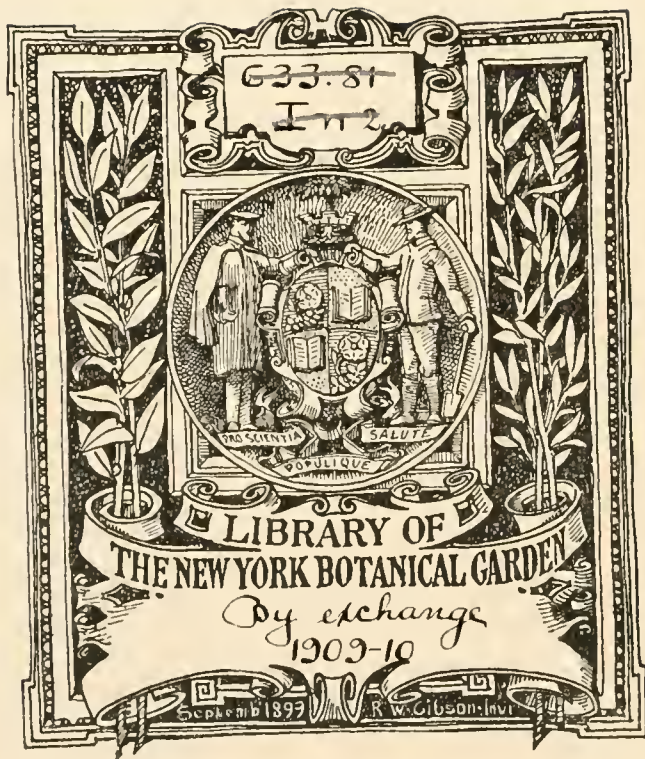


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INDIA RUBBER WORLD

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Edited by HENRY C. PEARSON—Offices, No. 395 Broadway, NEW YORK.

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OCTOBER 1, 1909.

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SPECULATION IN RUBBER.

ABOUT twenty-five years ago, when a rubber trader at Pará, then a small and little known city, managed to get the then existing stocks under control to an extent which forced the price up to \$1.24, there was consternation among consumers accustomed to buy "from hand to mouth." It was not long, however, before the continued arrivals from sources up the Amazon not controlled by the venturesome speculator filled his financial backers with alarm; prices dropped to their former level, about one-half the figure reached under speculative influences. This result, by the way, came too soon, for too many people were left with the idea that "whenever rubber goes up, it must come down again."

Subsequently, whatever the conditions of the rubber trade, there were manufacturers who, following every rise in the price of raw material, laid their plans for a fall as prompt and as decided as that which followed the ill-fated speculation of Vianna. In other words, that episode seemed to inspire many consumers with the idea that rubber prices could not, long at a time, remain higher than in the pioneer days. Hence, selling goods at too low a margin of profit—as ultimately proved; hence, cheapening the quality of goods—to the disadvantage of the whole trade; hence, some unnecessary bankruptcies.

Came then into the field a daring American specu-

lator, with the idea that the Amazon river, the sole channel by which "Pará" rubber could reach the market, was capable of being "bottled up." Seize the whole output, and the trade could be controlled; then every buyer would be at the mercy of the bold operator. But to "make good" on this proposition, it was necessary to buy, buy, buy—while a production up-river, which can never be measured in advance, was coming in at an inconvenient rate. And one day the last straw broke the camel's back; there was no more money with which to buy.

There might have been money still at command, but rubber is not so thoroughly a necessity as some people have described it; the masses will not buy even overshoes if they become too costly. So the speculation based upon the idea of controlling all the Amazon rubber, because people would be obliged to buy it in the end, failed, and prices again dropped temporarily to almost nothing, strengthening the idea that "when rubber goes up, it must come down again."

Meanwhile, rubbers from elsewhere than the Amazon had appeared in such quantities, and had been utilized to such an extent, as to rob South America of its old-time primacy. And this latter condition still prevails, as illustrated in the growing output from plantations in the Far East. This observation is pertinent here, however, only as showing the futility of trying to "bottle up" the Amazon.

The third and last great "coup" attempted in the Pará market seems to have been based neither upon lessons learned from the former episodes, nor upon any other discernible reason than that it was intended only as a pure "gamble" of a day. Rubber had fallen to the lowest figure for years, and America was not buying heavily. It had been declining steadily; why not assume that it would decline further? Hence exceptionally heavy "short sales," at prices lower than were actually quoted during the year—*i. e.*, at 2s. 6d., when lower than 2s. 9d. was never reached in the published quotations. These sales had to be "covered," of course, at any prices that might be claimed by whoever happened to be in possession of rubber when the time came for deliveries. Again losses overtook the speculators, and corresponding profits for those in a position to supply the demands of the market. Meanwhile some of the largest consumers in the world have been in a fortunate position from having bought a great deal of rubber at artificially low prices.

The latter circumstance undoubtedly tended to put rubber prices higher at times during the past year than would have been reached otherwise, but its effect cannot be held to explain current quotations. In other words, a high level of prices may reasonably be expected to continue at least until raw material for the business in sight at the factories has been secured, and the current and early prospective demand for goods has been more accurately measured.

So far as the manufacturers are concerned, it may be

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taken for granted that they will be less confident in future that "when rubber goes up, it must come down again"—at least the next day. As for such speculators as may be left, THE INDIA RUBBER WORLD has never sought to be their representative.

TWENTY-FIVE CENTS TO TWO DOLLARS.

THE story of "The Winning of the West," which won fame for Mr. Roosevelt as an author before he became President, must be taken into account by whoever would understand the advance to \$2 or more for rubber. Mr. Roosevelt, whose personal knowledge of America had been confined to the Atlantic coast, when he became a resident of the Rocky Mountain region, was inspired by the growth of a new Western empire under his eyes to write a book which has helped the nation to feel a sympathy with the spirit which underlies the greatest of successes in colonization.

For nothing that other great powers have done in the name of colonization in modern history has been comparable with the planting of great and populous states in that vast "desert" which such men as Frederick M. Shepard and "Dick" Pease, still active in the rubber trade, used to traverse in stage coaches beyond the Mississippi when going to San Francisco to expand their trade. Mr. Shepard, by the way, can remember when his company bought Pará rubber for 25 cents a pound, and so they might be doing to-day but for "the winning of the west."

Edward H. Harriman, the famous railway manager who died within a month, was only a broker's clerk when the rubbermen named here were discounting the growth of the west by becoming established on the Pacific. Mr. Harriman, impelled by the same spirit, later sacrificed his life in organizing a transcontinental line along the path traveled by the old coaches which had Mr. Shepard for a passenger. James J. Hill, the greatest surviving American railway "king," pins his faith to the growth of the west, and J. Pierpont Morgan, international banker though he be, and trained in a school which scarcely knew an America westward of the Hudson river, has become a great factor in railway development beyond the Mississippi.

The basis of all this is the prosperity of the trans-Mississippi farmer, no less than of the farmer this side of the great river—a class who, within a generation, were appealed to by political demagogues as a mortgage-ridden class. Today they have become lords of the soil, heavy depositors in banks, and the dominant factor in life in many states. These farmers, and the city populations supported by their industry—in spite of the growth of the east—are doubling the purchasing power of the country, for rubber goods as well as other commodities. Where stage coaches of the "Wild West" type ran through uninhabited wastes not so long ago, railways now connect prosperous villages and populous cities, all surrounded

by farms, every one of which calls for some rubber goods every year, even if every farmer does not yet own an automobile.

The rubber goods manufacture still abides in the east—for even Akron is very far east to the Pacific coasts—and this condition may long continue, but the product of this industry yearly becomes more widespread, and it is not too much to claim that the first indications of improvement in the rubber trade after the depression of two years ago were revealed in the revival of a demand for goods from what was so recently described in the maps as the Great American Desert.

It is only natural, in view of these conditions, and of the unexampled crops now being gathered, that rubber should go up to \$2. This is an abnormal price, of course, and not to be regarded as permanent, but a tremendous acreage of rubber must be planted yet, and become productive, before the price of 25 cents, which Mr. Shepard remembers, can be seen again. The American farm demand for automobiles alone is enough to prevent an early return to low prices for rubber, for while the new demand for tires is developing makers of them feel obliged to keep supplied with rubber, without regard to prices.

THREE HUNDRED TONS A MONTH NOW.

Cultivated rubber as yet plays no real part in the world's markets, not more than 100 tons having yet come into consumption in any one year.—The Hon. WILLIAM M. IVINS, in *The American Monthly Review of Reviews*, July, 1907.

IN dealing with plantation rubber on any broad scale, the question is not so much what has been, but what is now, and what is reasonably in prospect. Ten years ago Mr. Ivins, for a long time widely informed in relation to crude rubber, could have pointed out that no "cultivated rubber"—not even one ton—figured in the world's markets. But would Mr. Ivins's legally trained mind have argued from this fact that the planting of rubber was impracticable? Yet his widely circulated magazine article of only two years ago, from which a quotation is given above, did much to support the doubters, then still numerous, whether rubber could be produced on a practical basis otherwise than from forest sources.

The present article is not argumentative, but a brief summary of present-day facts. As indicated in the news department of this issue, the offerings from Straits and Ceylon plantations alone, at the London rubber auctions alone, within a single month, aggregated no less than 262 tons. Nor was this the result of an unusual aggregation of plantation rubber. It represented the current receipts from a considerable number of plantations, all making shipments frequently, if not regularly, and all shipping at a steadily increasing rate. For the corresponding period in 1908 the offerings at the London auctions were only 69 tons. A year hence it is not unreasonable to expect that the same plantations—and others nearing the productive period—will be represented by double the amount of rubber now credited

to the Straits and Ceylon month by month. At the same time rubber from other plantations is appearing in other markets than London.

Whatever may have been the case when Mr. Ivins's article was written, cultivated rubber plays a very "real part in the world's markets" today. The mere quantity is a factor which cannot be ignored, but the trade is confronted with a much broader consideration. Whether manufacturers, importers and brokers have considered the question fully, it has made an impression in the producing centers of the Amazon and in Africa—that the future of their trade depends to no small extent upon their capacity to produce rubber which will rival in cleanliness the plantation grades from the Far East. Otherwise, the industry will demand plantation rubber. It is true that THE INDIA RUBBER WORLD has sounded a warning against the feverish promotion of rubber plantation companies. But what has been objected to in these pages is not the planting of more rubber; the thing to be guarded against is putting money into companies formed primarily for other purposes than rubber cultivation.

RUBBER IN FIRE FIGHTING.

THE use of india-rubber in connection with apparatus for fighting fire deserves largely more attention than it receives, as a rule, at the hands of those who attempt to show what becomes of the world's large and growing production of this important material. One hears on every hand that rubber costs more today than formerly because of the increasing production of tires, which appears reasonable in view of the great number of automobiles to be seen everywhere. Or the increasing use of rubber for insulation purposes may be suggested by those familiar with the growth in the uses of electricity. And so on, through a long list of rubber-consuming interests. But who has written anything on the manufacture of fire hose as a factor in the constant drain on crude rubber supplies?

Important and comprehensive as were the pioneer works by Goodyear and Hancock—dealing with so many practical applications of india-rubber already accomplished or foreseen—one looks in vain through these volumes for the slightest suggestion of rubber fire hose. It was not, indeed, until after these fathers of the industry had passed away that rubber hose came into use in connection with fire department apparatus. Only half a century ago the world's chief dependence for putting out fires was still the time-honored practice of emptying pails of water upon the flames, except that in larger towns pumping "engines" were employed to convert the water into streams which would carry farther than water from pails. The first such engines forced the water through short metal pipes, which came to be succeeded by leather hose, and this in time by hose made of linen or cotton and rubber.

The latter development marks the beginning of fire fighting upon which dependence could be placed—of fire

insurance at economical rates—of conditions under which great cities could be founded hopefully. Through all the stages of modern development of means of contending with fires in cities the rubber hose manufacturer has contributed largely to the successive steps in advance which have been attained. The steam fire engine seemed a wonderful invention, contrasted with the old hand truck, and the work it did stimulated the growth of cities, but that work would have been impossible without rubber hose. But the present-day steamer is a mere pygmy—a squirt gun—compared with the still later high-pressure systems which the "skyscraper" has called into use. Here again, rubber hose figures: rubber hose such as the last generation never dreamed of, hose without which there could be no high-pressure systems, and without high pressure the skyscraper cannot endure.

What the rubber tire maker has done for the automobile the rubber hose maker has done for protection against fire. This is not the only debt of the fire departments to the rubber trade, however. The resilient tire has become a necessity for wheeled fire apparatus. The motor fire engine is driving out every other type, by reason of the prompter service possible, the fact that the motor serves also as the means of propelling streams, and owing to the greater durability of machines equipped with rubber tires as compared with rigid steel.

The rubber industry, as a whole, while it may not welcome the increasing cost of rubber, may console itself with the thought of having contributed in so many ways to the world's needs—the hose industry not being the least in importance. And rubber planters have only to consider the inevitable growth of fire department systems to gain a new incentive for the encouragement of their work.

CREATION OR EXTRACTION.

IT is not generous or charitable to consider all of the geniuses who "make" crude rubber as frauds. Dishonesty presupposes a knowledge of and an abandonment of the right. The rubber maker is often honest but without a knowledge either of india-rubber or exact English. He extracts from a bastard gum by certain chemicals a proportion of rubber. Delighted with the result, he announces that he makes rubber. But his work is not creative. He is not a parent. He is simply a midwife. What he accomplishes may be of value or not. It is honest, of course, but he is an extractor not a maker.

THE THANKS OF THE RUBBER TRADE are due to the esteemed New York Times for the information that crude rubber prices are raised by the directors of the United States Rubber Co. We had supposed that, in view of the large consumption of crude rubber by this company, the interest of the directors would lie in the direction of lower prices. The Times's information cannot be ignored, however, particularly when it gives evidence of possessing access to such special facts as this statement from its columns indicates: "As early as three years ago automobile rubber orders in advance were sufficient for more than six times the possible rubber output. The rubber famine was foreseen years ago, and rubber tree planting began in the Pará district of

Brazil at once." The *Times* heads an article "Rubber Prices Still Soar." The sides of the *Times's* rubber editor must be still sore from laughing over how he has outdistanced all competitors in sizing up the rubber market situation.

THE DISCOVERY OF THE NORTH POLE has given rise to a controversy between rival explorers as to their respective honors in the matter, all of which is outside the scope of THE INDIA RUBBER WORLD. It may be permitted, however, to express satisfaction that the new area thus brought to the knowledge of the world can hardly be utilized by the professional rubber-planting promoter as a field for mapping out new plantations.

THAT VERY EXCELLENT AND USUALLY ACCURATE magazine, *The Automobile*, under date of September 16, not only skids badly but completely turns turtle when it comes to a description of the preparation of rubber for tire manufacture. After a preliminary, in which it says that the process is not a long one, or complicated, it goes on: "The crude rubber is cleaned, sulphur added to it, and then baked into a mit by the application of heat. *The cleaning process is called curing and it is in this part that the acid is used.*" The truth is, the cleaning process is called washing; the curing process is called baking or vulcanizing. In the process of curing by heat no acid is ever used.

IN THE PAST THE OXIDIZED OILS, the cheaper gums, the asphalts and earth waxes have been of great use in rubber compounding. Where rubber is used with either a fabric insertion or backing, which precludes stretch, but leaves plasticity, they have all been useful in displacing a certain amount of crude rubber. So much has been done in adopting various plastics to rubber compounding that one wonders if much more cannot be accomplished. Suppose, for example, cellulose could be produced in such form that it would make a cheap, strong, lasting friction, what a wide use it would find and what a lot of rubber it would displace. With crude rubber higher than before, is not some such product about due?

SUCCESSFUL RUBBER PAVEMENT.

JUST to show the wonderful lasting quality of india-rubber in pavements, it is interesting to note a Scottish instance. Thirty years ago the North British Rubber Co., Limited, paved the whole sidewalk in front of their warehouse on Princes street, Edinburgh, a very busy thoroughfare, with rubber. The walk was 12 feet wide and the store front 50 feet. About a month ago, to carry out their agreement with the city, as they were vacating the premises, the rubber pavement was removed and regular city pavement substituted. Careful examination of the rubber failed to detect the slightest sign of wear. The surface was no where oxidized and it seemed to be absolutely unaffected by the elements or by the millions who had passed over it.

THE FIRST ATLANTIC CABLE.

THE celebration of the centennial of the laying of the Atlantic cable of 1858 was the occasion of a paper of some length on this subject, in *The Electrical World* (August 22, 1908), by Mr. William Mayer, Jr., which has lately drawn a letter of criticism from Mr. Charles Bright. To the latter Mr. Mayer makes reply in *The Electrical World* (August 19, 1909), in an article filling more than four pages. It does not appear that the two distinguished contributors named have done anything to settle the question whether England or America is entitled to greater credit for the first accomplishment of transatlantic cable laying. In other words, Mr. Mayer, the American, and Mr. Bright, the Britisher, has each convinced himself on this point, and

not each other. The controversy is hardly one for review in these columns, but Mr. Mayer's last paper is of special interest from his liberal quotations from an important publication not often seen nowadays—

"Report of The Joint Committee appointed by the Lords of the Committee of Privy Council for Trade and the Atlantic Telegraph Company to inquire into the Construction of Submarine Cables; together with the Minutes of Evidence and Appendix. Presented to both Houses of Parliament by command of Her Majesty. London: Eyre & Spottiswoode, Printers to Her Majesty's Stationery Office. 1861. [Paper. Fol. Pp. XLIV + 519 + plates.]"

WHITING FOUND IN MEXICO.

THE discovery is reported of an important deposit of whiting, in the Mexican state of Campeche. The story is that it was found while a well was being drilled on a henequen (sisal) plantation on the Champton River, eight miles above the town of Champton. For developing this discovery the International Whiting and Fibre Co. has been incorporated, at Mobile, Alabama, with \$600,000 capital. W. H. Bell, of Vicksburg, Mississippi, is president, and J. T. Burke, of Mobile, vice-president. A refining plant has been established at Mobile, at a cost of \$10,000. THE INDIA RUBBER WORLD is advised:

"From expert tests, we have the best whiting for the composition of rubber that has ever been used, as its extreme natural fineness and silkiness gives it a density that other similar articles on the market are unequal to. Our deposit contains an approximate amount of 2,000,000 tons, very accessible to good and easy transportation."

Mr. Bell is quoted by *The Mexican Herald* as saying: "The product differs from the English whiting in that it is found on our property in a decomposed state and is almost fit for use at the time it is taken from the ground. The English product is found in the form of a very hard limestone, and thus the cost of refining and treating it is far more than will be the cost accruing to our work."

The United States, during the fiscal year 1906-07, imported 1,858,339 pounds of whiting and Paris white, mainly from England and France. The duty was $\frac{1}{4}$ cent per pound, which rate is maintained under the new Tariff act.

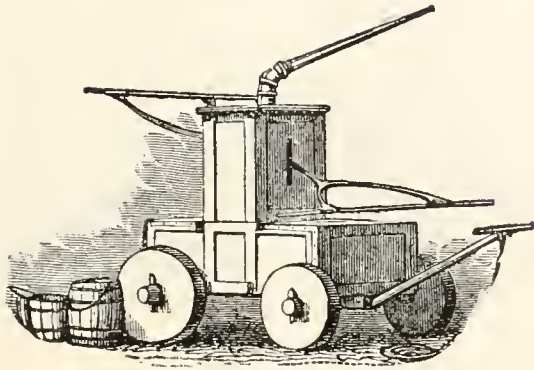
RUBBER FACTORIES IN AUSTRALIA.

THE Barnet Glass Rubber Co., Limited, of Melbourne, have erected new and larger buildings, to enable them to handle conveniently their growing trade. The new premises, situated in Swanston street, Melbourne, have been laid out in the most modern style. The firm referred to were the pioneer rubber manufacturers in Australia. As B. Glass & Son they had been interested in the india-rubber trade for twenty years, including the manufacture of mackintoshes from imported materials, when some ten years ago [see THE INDIA RUBBER WORLD, December 1, 1899—page 80] they opened a factory for proofing cloth and for making various lines of rubber goods, including bicycle tires. The company to-day are making tires of their own, in addition to which they are agents for the Michelin tires. There are now two rubber manufacturing companies in Australia, the Dunlop company having entered the field a little later.

Figures are not available showing the imports of crude rubber into Australia, but these details may be of interest. Exports from Great Britain to Australia for five years have been:

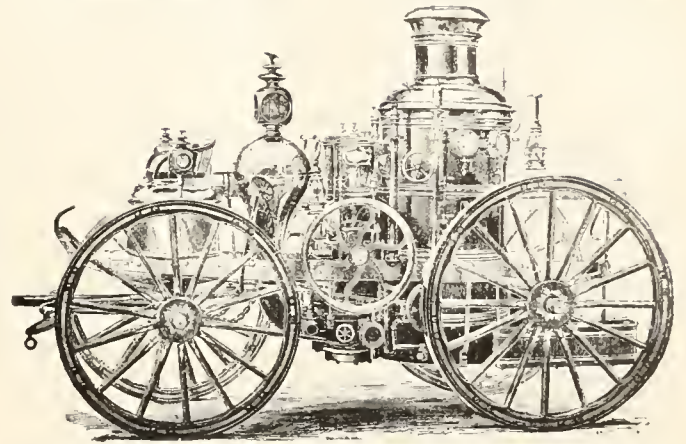
Years	1904	1905	1906	1907	1908
Pounds	394,688	341,488	616,448	681,184	706,832

Ceylon exported direct to Australia in 1908 over 39,000 pounds of home-grown rubber.



NEW YORK FIRE ENGINE, 1785.

[One of the first made in America. Built on the English model, by Jacob Boome.]



"AMOSKEAG" STEAM FIRE ENGINE (DOUBLE PLUNGER), 1869.

[The first manufacture of steam fire engines in America, begun at Manchester, New Hampshire, in 1859.]

Rubber Fire Hose Forty Years Ago.

A DISTINCT new epoch in municipal fire fighting was just starting forty years ago—a step in progress with which is connected one of the most interesting chapters in the history of the india-rubber industry. The subject is brought to the mind of the writer through his having come across files of a journal devoted to fire department interests* which was started at the beginning of 1869 and went out of existence on December 31 of that year. Hence the reference to a period just forty years ago.

The Metropolitan Fire Department, in New York, and the Metropolitan Fire Brigade, in London, had recently been organized, both based upon practically the same ideas, the principal of which was the substitution of paid firemen for volunteer services. The merits of the two systems were hotly discussed, and paid departments came into vogue only gradually. They were adopted in Brooklyn and in Philadelphia during 1869, and wherever adopted the change made easier the introduction of improved fire apparatus, in which rubber hose was to prove so important a factor.

"Not the least among the progressive steps made during the past few years," said this fireman's journal in 1869, "has been the substitution of the steam fire engine in the place of the comparatively inefficient apparatus formerly in use." At that time steam fire engines had been in the market for just ten years, the largest manufacturer having produced only 328 machines, less than 200 designed to be drawn by horses and the others, of lighter weight, to be drawn by men. It is worth quoting here that in 1869 Captain Eyre M. Shaw, head of the Metropolitan Fire Brigade of London, visited the United States on a tour of study, and on his return was reported by the London press as regarding it "a very singular and unaccountable fact" that the use of hand-worked engines was being ignored in American cities, instead of being retained for use in connection with the steam engines. London then had 25 steam and 80 hand-worked engines.

An illustration on this page relates to the first, or one of the first, "fire engines" built in New York; formerly they were all imported. This particular engine was the first used in Brooklyn, and was built in 1785, at a cost of £150 [= about \$750]. It differed little in appearance from the first engine used in New York, imported in 1730, and differed less in principle from the fire-fighting machines in vogue up to the era of steam engines. These early engines were operated without any hose. Water was poured into them from buck-

ets, and forced out through a metal pipe by means of a pump. The apparatus illustrated had 180 gallons capacity and a 6-foot pipe with 3/4-inch nozzle, through which water could be discharged 60 feet. It was 76 years before Brooklyn had a steam engine.

Leathern hose or pipes had been used earlier in London. An enactment in Queen Anne's reign (1708) mentions such hose in connection with fire apparatus, but probably little of it was used in America until a century later. But by 1869 a vast amount of leather hose was employed by the 120 fire departments in this country. No less than eight firms advertised leather hose in the journal under review. When Brooklyn's paid fire department took shape an official report says that the hose—leather—"was found to be in a very questionable condition. Whether new or old, merely nominal attention had been paid to the greasing or repairing of it, and instead of wearing out in actual service much of it was in a form to fall to pieces from corrosion and neglect." No doubt this would have applied to leather fire hose in general.

The New York department took up rubber—or, rather, "combination"—hose in earnest just before 1869. By August of that year it had purchased "over 55,000 feet" of the patented mildew-proof hose of the "Maltese Cross" brand, the manufacturers of which were beginning to find a market for



"AMOSKEAG" STEAM FIRE ENGINE, 1909.

[These machines are now built by International Power Co. (Boston). The machine illustrated has rubber tires.]

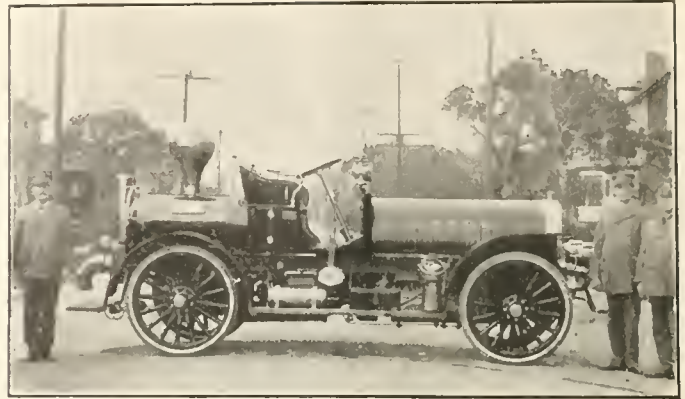
*The Fireman's Journal, edited first by Fred J. Miller, and later by William C. Lewis, No. 24 Liberty street, New York.

elsewhere as well, selling on an average, it was stated, 1,000 feet a day. This product was advertised as "the only hose that will stand the great pressure and severe tests of steam fire department engines without bursting or sweating." The New York board of fire underwriters recommended this hose and it was adopted by the United States navy department.

Other rubber manufacturers were not slow in coming into the market from this time on. The superiority of the steam fire engine was so marked that cities and towns ceased to buy any other, while the leather hose had to give way to rubber or "combination" brands on the modern engines. There were disputes over the hose patents naturally, but they need not be detailed here. The various makers advertised in the fireman's paper were the Gutta Percha and Rubber Manufacturing Co. and the Combination Rubber Co., both of New York—combination hose; New York Belting and Packing Co. and the National Rubber Co.—rubber hose; Post, Herkner & Co.—rubber hose and rubber cotton-lined hose; James Boyd & Co.—patent cotton hose; and the Grenoble hemp fire hose.

James Boyd & Co., by the way, were still offering leather hose, of which they had been makers for 50 years. C. M. Clapp & Co., so long prominent in the Boston rubber goods trade, advertised both leather and rubber hose. Among other advertisers not already named here were A. C. Eddy & Co., of Providence, and the Rubber Clothing Co., of New York, offering firemen's rubber coats and caps. Two other rubber men remain to be mentioned in these reminiscences. The Allerton Iron Works Manufacturing Co., of Naugatuck, Connecticut, were beginning to build fire engines, and George M. Allerton, Sr., of the "Goodyear Glove" company, was treasurer of this corporation, and Edward L. Perry, still engaged in the rubber industry, contributed an article on the hose patent situation.

The pages of this paper devoted much space to new inventions, in a field then practically new—improvements in engines, hose couplings, nozzles, rubber respirators, and so



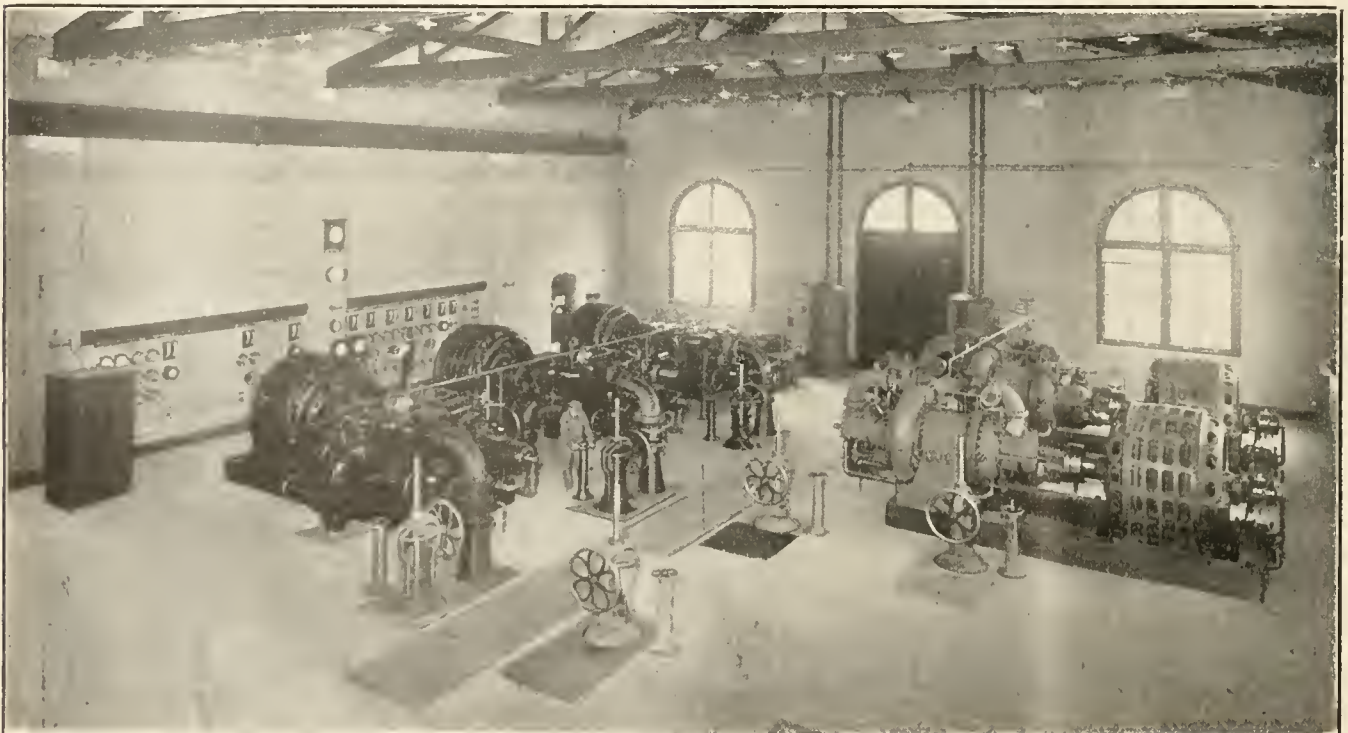
AN AUTOMOBILE FIRE ENGINE, 1900.

[This is the "Pioneer" type, made by the Waterous Engine Works Co., St. Paul, Minnesota.]

on. John Raddin's patent elastic wheel is recommended for fire engines and velocipedes (bicycles). It was constructed with a rubber cushion at either end of every spoke—one cushion at the hub and the other inside the felloe, the tire being steel, of course. By the way, several firemen's clubs were mentioned as having formed velocipede clubs.

C. D. FROST.

An official of the Michelin Tire Co. stated recently that high speed road and track contests have done more than anything else to bring pneumatic tires to their present high state of efficiency. He referred to the well-known fact that automobiles had been perfected by developing their weak points in open competitions of all kinds, to remedy which manufacturers were forced or encouraged to improve their product, and stated that the same spirit of rivalry and the same desire to produce the best had in the past stirred the tire makers to equally serious effort.



NEW YORK'S LATEST SUBSTITUTE FOR THE FIRE ENGINE SYSTEM HIGH PRESSURE, 1900.

The Coming Rubber Congress at Manaus.

IN connection with an announcement of a "Congresso Industrial Seringueiro," to be held in the Acre district, a short time ago, THE INDIA RUBBER WORLD (August 1, 1909—page 397), mentioned that a rubber congress to be held later at Manaus was also in prospect. It is too early yet to present here a report of the meeting in the Acre during August. But that the merchants and the producers of rubber up the Amazon are deeply interested in the improvement in industrial and commercial conditions in their region is indicated by the scope of the preparations under way for the Manaus conference, which has been called under the auspices of the Associação Commercial do Amazonas. The objects of the proposed meeting and the tentative programme may best be shown by giving here in full a translation of a communication appearing in the important newspaper, *A Provincia do Para*.

* * *

"In accordance with the provisions of our by-laws, we are going to hold a Commercial, Industrial and Agricultural Congress in this city in February, 1910, one destined to be an eloquent exponent of the Amazon basin, both as regards the interests of Brazil itself and the countries bordering on the state of Amazonas.

"Both the intervening distances separating us and the existing physiographical conditions seemed to make a work of this magnitude impossible of realization, a work that has always been hampered by rivalry and undue caution.

"But everything is now different. We have grown so large that we no longer fear to be absorbed by others. Each one has its own sphere of influence. In these latter days a wise foreign policy affords Brazil the opportunity of peacefully delimiting its extreme frontier lines. Finally, new treaties of commerce and navigation complete the patriotic and enduring work to which the second Baron do Rio Branco dedicated his activities and talents as a statesman, in removing the last traces of our ancient controversies.

"There is therefore no reason why Pará, Matto Grosso, and the cis-Andine region, embracing Peru, Colombia, Bolivia and Venezuela, should not also be represented at our congress. It is manifest that when brought face to face in this way they cannot but be moved by the desire of knowing one another better, of strengthening more firmly their community of interests, of studying and solving in unison their economic problems, their native products, their industries, agriculture, and commerce, beset with surprises and discouragements.

"The honor of presiding over the congress falls by right to his excellency, the governor of the state of Amazonas. The Federal government, Pará, Matto Grosso, and each of the neo-Spanish countries above mentioned will undoubtedly be officially represented at the congress. There will be a representative of the National Agricultural Society, and one from the Pará Agricultural Society. We count upon the attendance of the commercial associations of Pará, Parintins, and Itacoatiara, the Amazon Agricultural Society, the Gœldi museum, the Chamber of Commerce and Geographical Society of Iquitos, the Association for Geographical and Scientific Study of Rivera Alta, the Geographical and Colonial Development Society of Cobija (Bolivia), the state municipalities and their superintendents, the proprietors of rubber plantations, the regular press, and above, all the national and foreign journals especially dedicated to the subject of India-rubber, the one question which will be first and foremost at this congress. In furtherance of this purpose there will be a small exposition held in connection with the congress, with

a garden of practical demonstration, of the planting of the *Hevea Brasiliensis*.

"In subsequent congresses such subjects as cacao, the nuts, food plants, and sugar and cattle industries will be taken up.

"From the instructions published below it will be seen that the three groups of themes to be discussed are commerce, the extractive industries, and agriculture. Among them are comprehended, so far as possible, the elements requisite for the study and solution of the principal questions that so fundamentally concern the economic life of the Amazonian regions.

"We are confident therefore that the able editor of the *A Provincia do Para* will lend his assistance in our work of seeking closer regional affiliation, by opening the columns of his well edited journal to the propaganda, and to giving a clearer understanding of the objects of our congress of 1910.

"JOAQUIN GONCALVES D'ARAUJO, Vice-President."

"Manaus, July 6, 1909."

* * *

[The paragraphs which follow constitute a circular which forms part of the communication above quoted from.]

THE sessions of the Regional Congress will continue for four days—February 23 to 26, 1910. The opening session will be on the 22d and the closing one on the 27th. The following subjects will be discussed:

Commerce.—Development of commerce in the extreme North of Brazil and in the cis-Andine neo-Spanish territory; statistics and tables of imports and exports; the question of long haul freight, coast and river steamers; what changes are to be made in the existing relations between financial backers, producers, and exporters; what would be the best way of establishing among the factors above mentioned a system of reciprocal rights and duties, assuring free and independent action to each one of them; what would be the advantages of "warrants" in this respect; mortgaging the crops; the discounting of bills of exchange at a moderate rate of interest, the syndicates, etc.; the abuse of credit, ways of minimizing its bad effects; retrospective glance at its influence in commercial crises in the Brazilian Amazon, as well as abroad; is any agreement possible between the buyer and seller in the way of rules governing the acceptance and payment of drafts, accounts current, and the legalizing of merchandise purchase-memos. at maturity; long haul river and coastwise navigation; measures to be taken for cheapening freights and the reaching of reasonable understanding between carriers and ship owners; how far can the protection of the government and the intervention of private capital go in this respect; will not the clearing of river courses and channel cutting solve in a large measure the scarcity of freight and the problem of more rapid river communication; methods of developing the merchant marine and the coastwise steamer traffic in the Amazon valley.

Products of the Soil.—Will planting perhaps be the surest way of making solid and enduring the primacy of the Amazon rubber in the market of the consumers? What methods should be employed to demonstrate to producers that the value of their property will be increased more by planting rubber, thus rendering their profit more certain and less subject to speculation in the markets of the consumers? Are there any new methods of coagulating and preparing rubber? Is there any advantage in the replanting of caoutchouc? Is the area devoted to this purpose still of great extent? What is the approximate area in the three states of the Amazon, the territory of Acre and the cis-Andine neo-Spanish terri-

tory, of the *seringueiros* (rubber estates) not being worked? Are the causes that have prevented its development up to the present time of an economic or physical nature?

Agriculture.—Causes that retard another flourishing state of agriculture in the Amazonian regions; methods to adopt for restoring old plantations; what zones are best adapted to diversity of cultivation without detriment to products of the soil, and to what extent can they be made auxiliary to the cheapening of these latter; will the cultivation of food plants result in a falling off of hands for the rubber harvest; would not a proper division of time and labor in the harvesting of rubber facilitate the cultivation of food plants, contributing at the same time in this way to the value of the soil and the benefit of the rubber plantations.

TELEGRAPHING ON THE AMAZON.

The president of Brazil on July 20 signed a decree authorizing the Amazon Telegraph Co., Limited, to duplicate their cable between Pará and Manáos. The expense is to be borne by the company alone, in consideration of the concession being extended a further 20 years, after which the system reverts to the government, without indemnification.

The Amazon cable—1,326 miles in length, including branches—has proved of great advantage to the rubber trade since 1896, when it was first put down. The service has been intermittent, however, and the frequent breaks, coming without warning, were often disturbing to the trade, to say nothing of the embarrassment of the management and the disappointment of shareholders unable to realize dividends.

The Amazon company was registered July 5, 1895, with £250,000 [= \$1,216,625] capital. The cable between Pará and Manáos was constructed and laid by Siemens Brothers & Co., Limited (London), and turned over to the company in working order for £211,000 [= \$1,020,831.50]. The company were to receive a government subsidy of £17,125 [= \$83,338.81] annually for 20 years. There have since been authorized debentures amounting to £350,000 [= \$1,703,275], most of which have been issued—for extending the cable to other points than Pará and Manáos, for making repairs, and the like. The first year for which the accounts showed a net profit was that ending June 30, 1905, but the earnings were only credited against a heavy debit balance, and the company has never yet paid a dividend. The difficulties encountered in laying the Amazon cable were pointed out in an address by Mr. Alexander Siemens, head of the cable laying company, reported in THE INDIA RUBBER WORLD August 10, 1896 (page 329).

The hope is now entertained that, with duplicate cables, the failure of one wire at any time will prevent an interruption of communication, which stops the income of the cable company while interfering with the rubber trade.

FRENCH ENTERPRISE IN THE AMAZON REGION.

IN AN official report, the United States consul general at Rio de Janeiro refers to the steady increase in the amount of French capital invested in Brazil. What is of particular interest is the assertion that although concessions for important public improvements have been granted lately to an eminent American engineer, he has been unable to find in the United States the necessary capital for working them. He went to France, therefore, for funds, which he obtained on the condition that contracts for actual construction work should be given to French companies and French materials used. The consul general says: "Having furnished the money for the enterprises, French investors are disposed to favor French methods, materials, machinery, and manufactures generally, and this is already having a marked effect upon Brazilian imports. Such enterprises will draw upon France indefinitely in the future for their supplies." Among the improvements referred to is that of the port of Pará and to a certain extent the construction of the Madeira-Mamoré railway.

NEW TRADE PUBLICATIONS.

THE latest issue of THE MANHATTAN RUBBER MANUFACTURING Co. (Passaic, New Jersey), is a special catalogue of Fire Hose, embracing the leading brands of fire and mill hose made by them. Among the specialties listed is a hose for chemical engines and a line of fire-extinguisher tubing. Such accessories as play pipes, ring couplings, and the like are also illustrated. [5" x 7½". 24 pages.]

THE importance of the rubber stamp trade and the allied businesses is suggested by the size and variety of contents of Catalogue No. 34 issued by THE R. H. SMITH MANUFACTURING Co. (Springfield, Massachusetts). Here are illustrated vulcanizers, molding presses, and accessories, in great number, planned for large and small establishments. A number of pages are devoted to specimen faces of the metal-bodied rubber type which is a specialty with this firm. [6¼" x 9¾". 176 pages.]

THE BUFFALO FOUNDRY AND MACHINE Co. (Buffalo, New York) send out a novel-appearing advertising booklet having the outward appearance of a bank pass book. The point of the contents is that there is economy in the purchase of the products of this company, including their vacuum dryers, which are recommended for use in rubber factories. [3½" x 8¼". 28 pages.]

NEW JERSEY CAR SPRING AND RUBBER Co. (Jersey City) issue an illustrated catalogue of Rubber Mats and Matting, which relates to an interesting line of such goods, which is the result of many years of experience. [4½" x 6¼". 48 pages.]

THE MASON REGULATOR Co. (Boston) issue their general catalogue No. 58 of Mason Regulating Appliances, for use in connection with every form of steam equipment, including pumps; also Mason balance valves and Mason steam pumps. The catalogue is profusely illustrated. [6" x 9¼". 178 pages.]

ABBÉ ENGINEERING Co. (New York) issue their Catalogue No. 4 of Pebble Mill Specialties for fine grinding and thorough mixing. Several of their mills have been used with success in connection with grinding guayule, and also waste rubber. [6" x 9". 62 pages.]

THEODORE HOFELLER & Co. (Buffalo, New York) have issued a Private Telegraph Code for the use of their customers in the waste rubber trade. They have attempted to send one to everyone with whom they have had business relations, but if any such should not have received one they are invited to apply for it. [37½" x 57½". 60 pages.]

WALKER SONS & Co., LIMITED (Colombo and Kandy, Ceylon), issue an elaborate illustrated catalogue of Pará Rubber Appliances, including tapping knives, coagulating machines, rollers and other items of equipment for the preparation of rubber on plantations. [8¾" x 11". 20 pages.]

THE BRISTOL Co. (Waterbury, Connecticut) send their Bulletin No. 103, devoted to Bristol Recording Instruments for various purposes. These devices have found wide use in rubber factories. [8" x 10". 16 pages.]

ALSO RECEIVED.

BARRETT Manufacturing Co., New York and Philadelphia.—Tarviz [For preserving roads and preventing dust.] 40 pages.
J. K. Krieger Co., New York.—Die Blocks, Mallets, Dicing Out Machines. 4 pages.
W. H. Salisbury & Co., Chicago.—A Wireless on Rubber Belting. 8 pages.
E. J. Willis Co., New York.—Reduced Prices on Automobile Supplies. 12 pages.
Hubert H. Ward & Associates, Cleveland, Ohio.—The Seaton Spring Wheel. 4 pages.
Hagstrom Bros. Manufacturing Co., Inc., Lindsborg, Kansas.—Hagstrom Inside Tire Sleeve. 16 pages.
Auto-Tire Vulcanizing Co., Lowell, Massachusetts.—Auto Tire Vulcanizing Machines. 6 pages.

A PARTY of students from London made a tour of Germany during July, under the auspices of The Institution of Electrical Engineers. A number of important works were visited, particularly those of Allegemeine Elektrizitäts Gesellschaft (Berlin).

Notes on Rubber Cultivation.

PLANTED ACREAGE IN CEYLON AND MALAYA.

THE current edition of the "Ceylon Handbook and Directory," compiled annually by *The Ceylon Observer*, estimates the area under rubber in the colony, at the middle of 1909, at 184,000 acres, against 180,000 acres one year previously. From returns supplied by plantation managers it appears that 131,800 acres are planted to rubber alone; the additional acreage is arrived at by taking into account the rubber interplanted with 67,056 acres of tea and 18,698 acres of cacao, on the same basis of estimating employed in the past. In the "Handbook" for 1898 rubber planting was represented by an estimate of 750 acres; by May, 1901, they estimated 2,500 acres, while the return to the middle of 1904 gave an equivalent of 11,000 acres. Subsequently planting went on very rapidly until within a year, since which a halt seems to have been made. The 131,800 acres planted to rubber exclusively, if assembled in one tract, would cover just 206 square miles, affording a most striking example of what can be done in the way of forming an artificial forest.

Still larger is the acreage under cultivated rubber in the Federated Malay States. The last report issued by Mr. J. B. Carruthers, director of agriculture in the States, before taking leave for his new official position in Trinidad, gives the planted area at 241,138, while the number of planted trees is estimated at 37,500,000. The average yield per tapped tree all over the Malay peninsula is stated to have increased from

1 pound 6 ounces in 1907 to 1 pound 15 $\frac{3}{4}$ ounces—a gain of 11 per cent. The average yield of tapped trees in the state of Negri Sembilan was 3 pounds 2 ounces, without regard to age. Some seventeen year old trees at Parit Buntar are mentioned as having given a yield of 28 $\frac{1}{2}$ pounds in one year.

"CASTILLOA" RUBBER BY THE CENTRIFUGAL PROCESS.

THE rubber delivered by the Leshner centrifugal machine, now in use on La Zacualpa plantation, in Mexico, is in the form of biscuits, which would readily be taken for typical fine Para biscuits. When one of them is cut in two it shows a very densely coagulated light colored surface, with a suggestion of thin layers, such as are produced by the smoking process. The rubber is very clean and tough, and the outside surface, where it is exposed to the air, has a mahogany color instead of the black that *Castilloa* so often acquires.

LA ZACUALPA PLANTATION CO. NO. 2.

THIS company, though incorporated under the laws of California, is in a sense an English company. A considerable amount of its capital is held in Great Britain, and it has a London director, Mr. Ashmore Russan. The two La Zacualpa companies (No. 1 and No. 2) and one other are the only three Mexican rubber plantation enterprises mentioned in the "Rubber Share Handbook," which *The Financier and Bullionist* has lately brought out.

The first La Zacualpa Rubber Plantation Co. was incorporated ten years ago—September 8, 1899—when the cultivation of rubber



IMPROVED DEVICES FOR USE IN CONNECTION WITH *CASTILLOA* RUBBER.

[Just as the cultivated *Hevea* has called for and developed certain types of tools for gathering rubber, so now as the producing stage is being reached does the *Castilloa*. One of the illustrations given herewith show a light 24-foot ladder that one man can handle, and, once placed, clasps the trunk of the tree so that it cannot slip or fall. Another production is a rotary knife run by power that does excellent work. The motor shown in the illustration is gasoline, but the plan is to have a little electric motor to do the work of driving the knife. The same inventive mind that has produced the ladder and the power knife has also evolved two hand knives, one for the regular tapping, the other for opening first cuts. These views are supplied by Graves & Graves Co. (Boston), who are engaged in planting *Castilloa* rubber in Mexico.]

was in its infancy, and few persons had much experience regarding it, particularly with *Castilloa*, the rubber tree of Mexico. The La Zacualpa interest has been persistent, however, and their planting has been extended steadily, until today, as THE INDIA RUBBER WORLD is informed by the president of the company, the three La Zacualpa plantations embrace 18,500 acres [=29 square miles], and the first plantation "this year will produce fully 100,000 pounds of rubber."

CRUDE RUBBER AT THE MINNESOTA FAIR.

PROBABLY the first exhibit of crude rubber at an agricultural fair in the United States is that of the St. Paul Tropical Development Co. at the Minnesota State fair this year. The company's plantation is located in Mexico, but is owned by American capitalists and directed from the city of St. Paul.

LA ESPERANZA RUBBER CO. SOLD.

THE entire property of La Esperanza Rubber Co. offered for sale at public auction at Providence, Rhode Island, on August 30, was purchased by Carleton Hale, a creditor of the company. The property embraces 600 acres in the canton of El Maison, state of Vera Cruz, Mexico, purchased for the company by Mr. Hale in March, 1898, immediately after which the planting of rubber was begun. The principal buildings on the estate—known as Hacienda de Tula—were burned February 8, 1909, including a ton or more of fine creamed rubber, prepared under a method devised by Mr. Hale, who has retained an interest in the company from the beginning.

RUBBER PLANTERS IN JAVA ORGANIZE.

THERE was organized at Bandjar on July 20 a Vereeniging van Rubberplanters, which is stated to have a membership of 40 planters in the western part of the island. It has at once started to take up a question which is of preponderating interest for the future of these estates, namely, how to get a reliable labor supply. A lengthy account of the movement, from the *Praeger Bode*, appear in *De Indische Mercur* of August 31.

DETAILS OF RUBBER COST.

THE Bukit Rajah Co., Limited, figure the cost of tapping last year, curing, packing, and freight to London, at 7d. [=14.18 cents, gold] per pound, and the proportion of cost of administration and upkeep which they have charged to production at 6d. [=12.16 cents], or a total of 1s. 1d. [=26.34] as the cost landed in London, while the average net selling price was 4s. 7½d. [=51.12½], thus showing a profit of 3s. 6½d. [=86.16 cents] per pound. The business year closed on March 31, before the beginning of the era of unprecedented high prices.

THE NEW BELGIAN RUBBER INVESTMENT COMPANY.

THE Societe Financiere des Caoutchoucs, formed recently at Antwerp with a capital of 3,100,000 francs [=598,300] [see THE INDIA RUBBER WORLD, September 1, 1909—page 424] by a decision of the board have increased the capital to 10,000,000 francs [=1,930,000]. As already stated in these columns, Edouard Bunge, of Bunge & Co., of Antwerp, has been elected chairman of this company. Willy Friling, of the same firm, has been elected managing director, and F. Maus manager of the company. As before stated, the object is the making of investments in rubber planting and cultivation in the Far East and elsewhere.

RUBBER PLANTING MISCELLANY.

REFERRING to the forward selling of rubber on contract, a correspondent of *The Times of Ceylon* asks what security is given for fulfillment of the contracts—say, in case the market should fall below the stipulated prices.

A specimen of plantation Ceara rubber biscuits from the government experimental garden at Kullar, South India, reported on at the Imperial Institute, London, was considered very favorably. It was valued by brokers at 5s. 6d. [=51.33¾] per pound, with fine hard Para selling at 5s. 1d. and plantation Para biscuits at 5s. 3d. to 5s. 9d.

RUBBER SHARES ON 'CHANGE.

THE financial news cabled from Europe to America is beginning to reflect the prominence given to rubber plantation promotion in the London stock market. For example the principal transatlantic report in the *New York Journal of Commerce* of recent date starts off:

LONDON, September 23.—Except for Rubber shares our stock markets are dull. Rubber speculation is rapidly passing the bounds of prudence and caution; new flotations are of such frequent occurrence that they show how important a financial factor a popular enthusiasm can become.

"Rubber" is referred to prominently in the leading financial articles of the London papers daily, as indicated by a few recent extracts from the first page articles in *The Financial News*, in addition to the regular column of details inside the paper. For example, in three recent issues:

[September 6.]—A large volume of business was put through in British North Borneo shares, which rose at one period to 24s. 3d. and closed strong at 23s. 9d. The advance in these shares is partly attributed to the reports that a large amount of money is now coming into the country through the medium of the various subsidiary flotations, and that developments will, in consequence, be much more rapid than in past years.

[September 7.]—In other directions most sections were exceedingly quiet, owing, in a large degree, to the near approach of the settlement, but British North Borneo shares were an exception, and changed hands in large lines, while Pahangs also claimed attention, all cheap shares being readily picked up.

[September 8.]—There was increased activity in British North Borneo shares, on buying believed to be based on the details given in another column. In other directions prices were well maintained.

It must be taken into account that the North Borneo enterprises referred to are not yet producing any rubber, though their prospects appear good. The parent Borneo company has now on its premises a lot of rubber plantation companies, capitalized at more than \$5,000,000, and the activity of Borneo shares on the stock exchange is due to the paper profits made by the parent company in trading in their shares. As *The Financial News* of September 8 says, editorially:

The recent influential buying of British North Borneo shares is said to be due to a supposition that the dividend will be increased from 4 per cent. to 8 per cent., and also to the fact that the company have paid off £60,000 [=291,990] of their debentures out of the proceeds obtained from the recent rubber flotations.

Note that the £60,000 is paid from stock trading, and not from sales of rubber. And when we come to the important plantation companies now producing on an important scale, and at a handsome profit, we do not find in the stock market record any record of "business done" in their shares, with a few exceptions.

NEW VOGUE FOR RUBBER SHARES.

IT has been estimated that scarcely 1 per cent. of members of the Stock Exchange have hitherto used stronger language than the names of certain brands of cigars as a verbal vent for ruffled tempers. We understand, however, that the vogue is changing in favor of rubber shares, the names of several of which are said to give wonderful relief.—*The Financial News* (London).

VULCANIZATION OF RUBBER COATED FABRICS.

A FRENCH patent (No. 396,620—January 30, 1908) issued to M. Lamy, relates to a new vulcanizing process. Rubber-coated fabrics are wound around a drum, either separately or with metal strips inserted between the layers. The drum, fabric, and so on, are then mounted on bearings in an autoclave, into which some passive gas, such as carbonic acid or nitrogen, is fed under pressure. The autoclave is surmounted by a jacket, heated by hot air or steam, in which jacket the autoclave can revolve. This device is said to be especially well adapted for vulcanizing rubber-coated fabrics which would be injured by direct treatment with steam or chloride of sulphur, and cannot be vulcanized by a known method by means of hot air, because the rubber composition contains no substance which induces vulcanization, such as litharge.

On the Amsterdam stock exchange the shares of about a dozen rubber planting companies are now traded in.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

UP to the first week in August the weather conditions during this summer, since the third week in May, were continuously bad, a low temperature and continuous rain being the prevailing feature. It is not surprising that under these circumstances the proofing branch of the

THE PROOFING TRADE.

rubber trade has done well. In fact this is putting it too moderately, as some, at any rate, in the trade, report business as having been excellent, and even in August the work on hand was such as to preclude further orders being taken. This applies especially to the ladies' trade, but all round I understand the year has shown a great improvement on preceding years. Things are in a different and more healthy condition than in the years immediately preceding the great decline of some years ago. The get-business-at-any-price man is now practically extinct, and with him has gone the macintosh of cheap cotton and oil substitute. The demand of today is for goods that are really waterproof and that will wear. A point that has done a good deal towards improving the trade is the formation of two associations in the Manchester district, which may be considered the headquarters of the waterproofing business. One of these associations is representative of the proofers—that is, the actual rubber manufacturers—and the other is concerned with the dealers who buy the proofed cloth and make it up into garments in their workrooms. These bodies are by no means representative of the whole trade, but those important London firms who remain outside are in entire sympathy with their aims as they have always discountenanced the price-cutting which had become so characteristic of the Manchester center. The trade is now in fewer hands than was the case twenty years ago, and it will be generally admitted that a working arrangement as to prices, without there being anything in the form of a trust, is in the interests of all concerned. Although, owing to the rise in the price of rubber, retailers' prices have been raised twice, no noticeable effect on the volume of trade has to be recorded. In this respect the proofing branch is better off than others where the amount of rubber present forms a larger percentage of the whole article.

With the continued receipt of notices referring to increase in prices, it is not altogether surprising that buyers

HIGH PRICES AND SUBSTITUTES.

of rubber goods, or, at any rate, of some classes of such goods, are casting about to see if they cannot find efficient substitutes. This can hardly be to the ultimate welfare of the industry, which in previous times has received a setback in certain classes of goods by reason of reduction in quality due to competition. Present conditions certainly favor the manufacturers of non-rubber packings, and the asbestos people will not grumble. I notice that a writer in a contemporary says, that owing to the high price the use of rubber-faced card clothing is likely to die out altogether, and that a substitute has been found to take its place. With regard to this I may point out that both felt and composition cards have been on the market for years, and have had increasing sales, especially in woolen mills, where the destructive action of grease on rubber has to be contended with. Inquiries I have made in the trade indicate that there are no changed conditions which can be attributed to the rise in price of rubber, and that there are no present signs of the decrease of the rubber card-clothing. Doubtless where elastic bands have been largely used instead of string there

will be some reversion to the latter. On this point I may mention that in Germany the elastic band is largely used by shopkeepers for tying up small parcels, while in England it is rarely used for this purpose. Of course the Germans don't give too much away for nothing, and the bands are only very narrow ones, but they answer their purpose, and are appreciated by ladies. In periods of high prices of materials there is always a tendency to reduce the quality. This is apt to induce the use of other material, and if this proves satisfactory there is no return to rubber. The rubber-insulated cable has suffered in this way in the past, but at the present juncture history is unlikely to be repeated, because of the existence of the Cable Makers' Association. At the same time it is more than probable that the present situation will lead to more business going to Germany. The existence of the association, with its uniform prices for standard qualities, has led in several instances to substantial orders being given for German cables at a lower price, a fact which at Edinburgh has given rise to some acrimonious discussion in the city council.

A PATENT has recently been granted to Mr. Charles Kay Sagar, of St. Annes-on-Sea, Lancashire, for improvements in

BALATA BELTING PATENTS.

solid woven balata and gutta-percha belting. Mr. Sagar, I may say, is managing director of and has been associated many years with the well-known cotton belting firm of Messrs. George Banham & Co., Limited. This firm's work were for many years at Pendleton, Manchester, not far from those of F. Reddaway & Co. A few years ago more commodious premises were taken at Limefield Mills, Farnworth, near Bolton, and it is here that work is now carried on. Mr. George Banham, the founder of the business, died a year or two ago, as was reported at the time in these notes. A patent taken out about ten years ago by Mr. Banham was in connection with the same purpose as the recent one of Mr. Sagar, only it was sought to attain the end by employment of vacuum machinery. Although plant on a working scale was erected at the Pendleton works the patent was never actively worked. In Mr. Sagar's patent the vacuum is dispensed with, the cotton yarn being immersed in a solution of balata and after the solvent has been driven off, being woven in the ordinary way into belting. After compression at a temperature sufficient to soften the bala the result is a compact homogeneous belt which has certain definite advantages over the ordinary balata belting claimed for it.

In all the more important mining operations, and more especially in deep shaft sinking, the modern tendency is to fire the gelignite cartridges by electricity.

MINING-FUSE.

The current is obtained from a battery at the top of the shaft and is conducted to the scene of operations by a thin rubber insulated cable rolled on a drum. As many as 30 shots may be fired at once, the necessary connection between the wires and the primer cartridge containing the detonator being made by an expert. As this system allows of the men being drawn up without any rush or anxiety, it is, of course, much preferable to the use of the fuse, with its attendant dangers. Still it is more expensive, and the fuse is still largely used, especially in metal mining ventures on a small scale. Various qualities of fuse are supplied, but as water tamping is now so much in vogue, the waterproof kinds have come into increased demand. These cost more than the cotton covered, but this is always preferable to having a missfire with a greased cot-

ton-covered fuse. I am not in the secrets of manufacture, but an examination of some fuses, called by the miners gutta-percha fuse, showed that the coating consisted entirely of some resinous matter. This, however, has in my own experience always given satisfaction. Where this fuse is used to explode the detonator in the gelignite when sinking, the man who ignites it is drawn up by the windlass or engine as fast as possible to get out of harm's way. It is not often that hitches occur in the means of escape, but when they do, it is an anxious time for the miner who knows that the lighted fuse is rapidly approaching the dynamite. In the interests, therefore, of humanity, as well as of the cable trade, the extended use of electric firing in mines is desirable. In connection with this topic it is interesting to note that the government have just announced their intention to appoint a committee to consider the whole subject of the employment of electricity in mines.

In connection with this topic, it is interesting to note that the government have just announced their intention to appoint a committee to consider the whole subject of the employment of electricity in mines.

This is a new concern, located at 9 Charles street, Manchester. The main object is the exploitation of certain patents relating to football covers, these, up to now, having been invariably made of leather. The cover being put on the market by the Progressive Rubber Co. is made of rubber, or, at any rate, principally of rubber, and it is claimed for it that it is much superior to leather, especially in wet weather, when the leather-covered sphere is apt to swell and undergo changes in its symmetry. The rubber ball is said to retain its original dimensions in any sort of weather, and thus to ensure greater accuracy of play. My football days are long past and I am not prepared to enter into any discussion on the mathematics of a football's trajectory. I may say, however, that the new ball has received the approval of some of the football authorities and will be used this season in recognized competitions. The Progressive Rubber Co.'s patents relate to some other classes of goods as well and I shall refer again at a later date to the company's doings.

MR. O. A. ELIAS, a London analyst, has discovered a specific chemical which he says will revolutionize the present methods of coagulating Pará latex, both by the smoking and acetic methods. The cost is not to be increased while the product is to be much improved. A small quantity is to be added to the latex, when instantaneous coagulation will take place, with the complete elimination of the proteids and the production of a rubber which, when squeezed free from excess water can be quickly dried to good white color. He explains that the tacky conditions which rubber often gets into is due entirely to the proteids, which amount to 3 or 4 per cent. in Pará latex. This figure seems rather high, and I don't know that there are any complaints about tackiness in Brazilian line, though with some rather serious realities of plantation line something of the sort may be met with. So far the exact composition of the new specific does not appear to have been made public.

THE report and accounts presented at the annual meeting of this company, held on August 24, showed a very satisfactory state of affairs. In addition to the 7 per cent. dividend on the preference shares, the ordinary shares received 7½ per cent. and the sum of £1,936 was carried forward after £2,300 had been allotted to reserve, etc. In its earlier years the company had a somewhat chequered existence, paying no dividend for 20 years, but of late years, under the energetic management of Mr. Hart, great progress has been made in the recognition of the company's manufactures by engi-

neers, whose wants are especially catered for. Considering the long sustained depression we have experienced in so many branches of engineering, and the reduced demand for mechanical rubbers, the Derivative company's balance sheet is the more noteworthy. Last year the dividend on the ordinary shares was 5 per cent. Since the death of Mr. John Cooper, in October, 1904, Mr. R. F. H. Webb has been the managing director.

ON August 26 two tanks, each containing 500 gallons of naphtha, took fire at Messrs. Frankenstein's proofing works, Newton Heath, Manchester. The efforts of the Manchester fire brigade were successful in preventing the destruction of any part of the works, and the loss was confined to the naphtha. No explanation as to the cause of the outbreak was forthcoming at the time. I have no recollection of a similar fire in this district where naphtha tanks are in common use.

NAPHTHA BLAZE.

CARD FROM THE MURAC SYNDICATE.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Referring to the article and comments on "Rubber Washing in the Trade," in your September issue (page 430), we observe that you mention our name, as being responsible for the business in question, at the same time inferring that we are engaged in a similar business to that carried on by another firm.

Our business is quite distinct, being an entirely new departure, to which the leading india-rubber brokers throughout the world are giving their hearty support. We do not *work or excessively handle the rubbers*, using no rolls, drying chambers or currents of hot air, such as your article indicates. We produce our rubbers in practically their natural state, thus preserving in every respect their good properties and behaviors.

That our efforts are appreciated by all connected with the crude rubber trade, we can only say in confirmation, that the volume of business has been so rapid, that in a number of instances we have had to decline further contracts, owing to our outputs being nearly, if not entirely, sold.

We trust you will kindly give this publicity, by the insertion of this letter in your next issue. Yours truly,

THE BRITISH MURAC SYNDICATE, LIMITED,
MORLAND M. DESSAU, Joint Manager.
Lower Edmonton, London, September 13, 1909.

MEXICAN RUBBER PLANTERS AND THE STATE.

[FROM THE MEXICAN HERALD.]

THE rubber planters of the northern part of the republic have held two meetings for the general advance of the rubber interests. In the last session a committee was named to approach the secretary of fomento and obtain government assistance.

The association, represented by the committee, made several requests of the minister. They desire that a central body be formed in Mexico City for the investigation of questions relating to the subject of rubber producing and that eleven experiment stations be established in various parts of the republic for the purpose. An appropriation of \$10,000 is asked for the maintenance of the central body and its laboratory. A further appropriation of \$35,000 is requested for the publication of works relating to the subject, giving results achieved by the experiment stations.

The secretary of fomento has not yet taken any action with regard to these requests. He may, in place of authorizing this association to pursue investigations at the expense of the government, order greater emphasis on the subject in the work of the agricultural stations already established.

A copy of the Index to "Crude Rubber and Compounding Ingredients" is sent free on request.

PROGRESSIVE RUBBER
CO., LIMITED.

RUBBER
COAGULATION.

THE DERMATINE
CO., LIMITED.

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

THE Firestone Tire and Rubber Co. have purchased a tract of 15 acres in the extreme south end of the city, north of Cole avenue, near South Main street. The new site was made necessary by the desire for an increase of factory space. Plans are now being considered for the construction next year of a plant of large size, and of the most modern design, on the newly purchased land. A chemical laboratory with complete equipment will be included in the plan. When the new plant is occupied the old one on East Miller avenue will be vacated and disposed of. The company have an option on land adjoining the tract purchased, which they are holding until further developments. The 15-acre tract was bought from the heirs of Moses Falor for something like \$28,000. Speaking of the purchase, Mr. H. S. Firestone, president of the company, said: "This is only the first step in our plans for an expansion of our business. We have long had in mind the erection of a great modern plant, but have hitherto been handicapped by the lack of land on which to build." This step by the company is significant in view of the rapid growth since it was started in a tile building, eight years ago, by Mr. Firestone. The chief growth in the business of the company has been in pneumatic tires, which were added to the output five years ago.



HARVEY S. FIRESTONE.
[President Firestone Tire and Rubber Co.]

THE annual meeting of the Firestone Tire and Rubber Co. was held at the close of August, when the following directors were re-elected: H. S. Firestone, Will Christy, L. E. Sisler, A. C. Miller, and R. J. Firestone. These met and elected as officers the following: H. S. Firestone, president and general manager; Will Christy, vice-president; L. E. Sisler, treasurer; S. G. Carkhuff, secretary. "Our business has increased nearly 100 per cent. during the past year over the year before," was Mr. Firestone's statement after the meeting.

The annual convention of the salesmen and branch managers of the Firestone company was held during the second week of September in Akron. Seventy men were present and the convention closed September 11, with a banquet at the Portage Country Club. Among the branch managers present were: T. J. Glenn, Boston; D. C. Swander, New York; W. R. Walton, Philadelphia; C. E. Jackson, Pittsburgh; O. O. Petty, St. Louis; F. H. Martin, Chicago; W. A. Harshaw, Cleveland, and J. V. Mowe, Detroit.

SINCE the reorganization of the Swinehart Clincher Tire and Rubber Co. some radical changes have been decided upon by the directors. Two new factory buildings, one 40 x 100 feet, one story high, and the other 60 x 125 feet, and three stories high, will be added to the plant. The smaller building will contain the mill room and a part of the solid tire department, and the large building will be used to house the new branch of manufacture into which the company will launch—the making of pneumatic tires. The type of pneumatic tire to be made has not been announced. Mr. W. W. Wuchter, general manager of the plant, said, however, that the tire will have features to distinguish it from the standard types. Clinchers and quick detachable in all sizes will be made. To market the increased product of the plant, it is announced that branches will be established in Boston, Philadelphia and Buffalo, in addition to the present branches at New York and Chicago, and selling agencies will be started in all the trade centers. Mr. J. A. Swinehart, president of the company, spent September in Porto Rico on company business and at the end of the month sailed for Europe, where he will spend the next two years in looking after the foreign interests of the company.

* * *

THE Star Rubber Co. have filed a certificate of increase of capital stock from \$100,000 to \$250,000. Owing to the increased demand for their seamless rubber druggists' sundries they have found it necessary to increase their capacity. An additional building, three stories, and 50 x 100 feet, is being erected, to be devoted to making pneumatic automobile tires and inner tubes, except the third story, which will be used for the dipping department of the supplies line. They are also about to add a line of press goods, and hope to have the new factory in readiness by January 1.

* * *

FOLLOWING the fires at the plant of the Buckeye Rubber Co., a thorough investigation of city fire-fighting facilities was made by the directors of the chamber of commerce, acting as a committee of the whole. The finding of the board, after sessions lasting two weeks, was that the complaints made following the fires were not justified, that the city's fire-fighting facilities, both as to water and equipment, were adequate, and that as a matter of fact the annual fire loss is small, being only \$120,000. For the sake of providing further safeguards, the board made several recommendations for more thorough fire inspection, for the adoption of a building code modeled after that of Cincinnati, and an increase in the number of city firemen. The city council is taking steps to carry out these recommendations.

* * *

THE B. F. Goodrich Co. succeeded in acquiring, by purchase early in September, a piece of land on South Main street at the southwest corner of their plant, which now makes them owners of all the land facing on Main street for several hundred yards. The property was purchased from the heirs of Mary Abler, and the purchase price was more than \$16,000. Mr. E. C. Shaw, general manager of the Goodrich works, says that the land will be used for a new building.

* * *

MR. O. C. BARBER, a director in The Diamond Rubber Co. was banqueted on September 9 by the business men of the city of Barberton, which he founded 18 years ago. The function was given on the occasion of Mr. Barber's return from Europe. He is planning to make his home on a farm of 2,500 acres near Barberton.

* * *

THE output of high-wheeled automobiles in the plant of the International Harvester Co., in this city, is about to be increased from 10 a day to 15 a day. This type of car is being sold by the company chiefly to farmers on the western prairies. The demand for the high-wheeled auto buggy, as well as for the delivery wagon of similar construction, has increased so

rapidly that it was found necessary to increase the facilities of the local factory. The factory experimental department has perfected a new type of pneumatic tire runabout which will be manufactured here at the rate of five a day, with a prospect of a steady increase.

* * *

A SECOND uniform rise in the prices of automobile tires was made known by automobile tire manufacturers in this city on September 23. It will amount to about 15 per cent. Some manufacturers have already put the increase into effect, and others will wait until after October 1. The boost in prices is made to keep pace with the rising crude rubber market.

A general rise in prices of all kinds of footwear was announced late in September by The B. F. Goodrich Co. It amounts to about 12 per cent. The price lists being net, new lists will be issued. The change went into effect September 21. The rise is made simultaneously with that of the United States Rubber Co. The Goodrich company market the products of their rubber footwear department through the Mishawaka Woolen Manufacturing Co., of Mishawaka, Indiana.

* * *

THE annual conference of salesmen of The B. F. Goodrich Co. was held on September 23 and 24, in Akron. All branch managers and traveling salesmen were present, to the number of between 50 and 60. Mr. H. E. Raymond presided. A. E. Lumsden, manager of the London branch and the company's representative in Europe, was among those present.

* * *

ARTHUR W. WARNER, formerly chemist with the B. F. Goodrich company, and recently with the Pennsylvania Rubber Co. (Jeannette, Pa.), has taken a position as chemist for the Miller Rubber Co.

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

TAKING all lines of trade into consideration, there is an apparent feeling of revived interest in San Francisco. It must be admitted that the past year has been generally quiet and that there are those who have been struggling along with little to indicate to them how they could possibly continue for a much longer time, and it is fortunate for many that conditions have taken a broad turn for the better. But for the most part the business houses of the city have fared well enough right along, as long as the idea of getting rich is not taken into consideration. Nobody has succeeded in growing very rich as a result of their business during the past two years, but there are many who have good reason to believe that the coming fall season will bring them prosperous times and in due course, an accumulation of funds for which they have wished for a long time. San Francisco has done well enough considering the vast loss she has sustained. After the fire people here probably recovered some \$200,000,000 from the insurance companies, but even after credit is given for this, there is still a dead loss of perhaps more than \$400,000,000. Work of rebuilding the city has progressed until the city stands better now than before the fire but, to accomplish this result outside money was necessary and more of it is still necessary, so that instead of being money proud this city must for some time depend upon the money from outside sources.

In spite of the long period of money scarcity, however, commercial activity is rapidly being resumed, and a healthier tone is everywhere demonstrated, because instead of the retail merchants buying everything they can think of, as they did a little over a year ago, they are only ordering what they know they can pay for, and on this basis they are ordering quantities which are constantly increasing, so that indications point to a gradually improving business. The outlook on the coast is good and there is no complaint to be heard from any source.

ON Tuesday, September 21, the embryonic Western Mechanical Rubber Goods Association, of San Francisco and the coast, will hold its first meeting for the purpose of organizing. Mr. Runyan, of the Goodyear Rubber Co., is certain of the necessity for and success of the organization, because there are so many little features about the trade which a common understanding among the dealers will do much to improve upon. It brings the trade into closer relation, give a fitting opportunity for the development of social relations and for the correction of abuses in the business. Of two things which have given most annoyance the first is the guarantees which are now made recklessly, and which many of the customers take undue advantage of. Also, the question of dating can be discussed. As it is now, orders are so dated that they can be changed by the customer for a long time in advance. The establishments who have been invited to attend the first meeting, to be held at the Tait-Zaitland cafe are as follows: Bowers Rubber Works, Gutta Percha and Rubber Manufacturing Co., Goodyear Rubber Co., Gorham Rubber Co., Revere Rubber Co., New York Belting and Packing Co., Limited, The Pennsylvania Rubber Co., The American Rubber Manufacturing Co., The Barton Packing and Rubber Co., The Pacific Coast Rubber Co., The Phoenix Rubber Co., Plant Rubber and Supply Co., Western Belt and Hose Co., The Diamond Rubber Co., Electric Hose and Rubber Co., and Boston Woven Hose and Rubber Co.

* * *

THE Sterling Rubber Co. have been making a large exhibit at the Humboldt county fair, held in Eureka. The exhibit consists of 22 rolls of belt, and one big roll in operation, running through water, with two men in charge. This is practically the exhibit made by the firm recently in the Mechanics' fair held in San Francisco, the belt shown being the "Victor" balata belt, and the papers in Eureka have complimented the exhibit very highly. The exhibit there is being made through H. H. Buhne Co., the rubber goods house in Eureka. Mr. Perkins, manager for the Sterling Rubber Co., states that there is no more guess work about trade conditions. Business hit the bottom mark and now it is picking up. Trade is now good in the southern part of the State, and the northern valley will pick up. Oakland is not as good as it was and San Francisco is still quiet, but showing a little improvement right along.

* * *

MR. R. H. PEASE, president of the Goodyear Rubber Co., states that general business is much better than it was a year ago, and that they are looking for good business this fall, especially if there are rains in October and November. Mr. Pease believes that the coming Portola festival, which will commence on October 19, and last a week, will bring thousands of people to this city and state, many of whom, he believes, will remain, to take advantage of the excellent opportunities offered by the farming communities in the State where the lands are now being subdivided into small tracts. The festival will also show to the world that San Francisco is now in a position by virtue of its excellent and complete hotel accomodation, to entertain visitors in whatever style they desire.

* * *

JOSEPH V. SELBY, the Pacific coast agent for the Boston Woven Hose and Rubber Co., has moved from his former location, No. 507 Mission street, to new and more centrally-located offices at the corner of First and Market streets, in the Sheldon Building.

The Bowers Rubber Works report that they have received still another order from the Isthmian canal commission for dredging sleeves. They have recently installed new machinery at the plant. The Phoenix Rubber Co. report that they are having a large run on their Staggard tread auto tires.

Inquiries from merchants are increasing in number and this seems to indicate a larger prospective consumption, is the report from the New York Belting and Packing Co., than has been noted for some time.

The Late Herr Senator Dr. Traun.

THE passing of Heinrich Traun removes from the rubber industry one of the most distinguished individuals in its annals, and one whose name was associated in many ways with the cause of progress in the land of his birth and with movements for the benefit of human kind in general. Heinrich Traun, born in Hamburg on May 8, 1838, attended the college of Dr. Wichard Lange, after which he was prepared for the university by private tutors. He studied physical sciences at Göttingen and was graduated at the age of 21 as a doctor in philosophy, choosing "Kautschuk" as the subject of his thesis. That thesis to-day stands as a good summary of what was known regarding india-rubber a half century ago; the choice of his subject was influenced, doubtless, by the fact that he had been born into the rubber industry, so to speak.

Going to London, young Traun was a chemist in the royal dockyards, where his opportunities to come in contact with laboring men at their tasks instilled in his mind ideas which later were of great advantage to him as an extensive employer of labor. He was employed later in a professional way in Paris, after which, in 1863, he became a partner in the Harburger Gummi-Kamm Compagnie (Harburg Rubber Comb Co.), already an important concern, but destined to be greatly developed under his direction. Here the story of the beginnings of this enterprise, with which Dr. Traun's family was so closely connected, may be recited briefly.

There came to America in 1842 a son of Heinr. C. Meyer, Jr., the whalebone and ivory manufacturer of Hamburg—a business dating from 1818—to establish a branch factory, which he did at Jersey City. Shortly he was joined by a clerk from the Hamburg house, Conrad Poppenhusen, and the firm of Meyer & Poppenhusen resulted, dating from August 1, 1843. Heinr. Ad. Meyer returned to Europe the next year, and in time succeeded to his father's position in the business there, but Meyer & Poppenhusen in America continued for a number of years. It was this firm that first recognized the merit of hard rubber as developed under the patent of Nelson Goodyear of 1851. Upon the licenses granted to them were founded the India Rubber Comb Co., at College Point (New York) in 1853, and the Harburger Gummi-Kamm Compagnie, organized as a branch of the Meyer interests, in 1856. Ultimately Mr. Poppenhusen returned to Hamburg, where he died; his daughter married Fritz Achelis, now president of the American Hard Rubber Co., which succeeded to the College Point enterprise.

Mention may be made here of L. Otto P. Meyer, a younger brother of the founder of the Meyer business, who came to America as technical adviser of Meyer & Poppenhusen, and by whom many important improvements in the hard rubber manufacture—the tinfoil process, for example—were patented. L. Otto P. Meyer is still living in Dresden, at the age of eighty-six.

Also it may be mentioned that the wife of the late Hon. Carl Schurz, statesman, journalist, and general, was a sister of Heinr. Ad. Meyer and of the mother of Dr. Traun. Altogether, the list includes some notable names, beginning with the founder of the

family, whose work for the development of Hamburg is attested by a monument erected by the people of that city.

The subject of this sketch was the son of Friedrich Traun, who married a daughter of the founder of the house of Meyer. As early as 1835 he was admitted to an interest in the business, from which he retired in 1870. As already stated, Heinrich Traun became a partner in 1863, at which time the hard rubber branch was operated under a separate firm style. He had two brothers, Otto Traun, who in 1870 became a partner in the rubber branch, and Max Traun, who in 1873 joined the branch then still carried on as H. C. Meyer, Jr. In 1884 the two branches became definitely separated, Heinrich Traun becoming sole proprietor of the Harburger Gummi-Kamm Co. The division gave him not only the works at Harburg a/d Elbe, but extensive premises at Hamburg, all of which have been developed constantly, in keeping with the general growth of the rubber industry. Dr.

Traun's knowledge of chemistry was of constant advantage to his firm; he was the patentee of a number of inventions of merit; and he gave liberal encouragement to develop the crude rubber resources of German Africa.

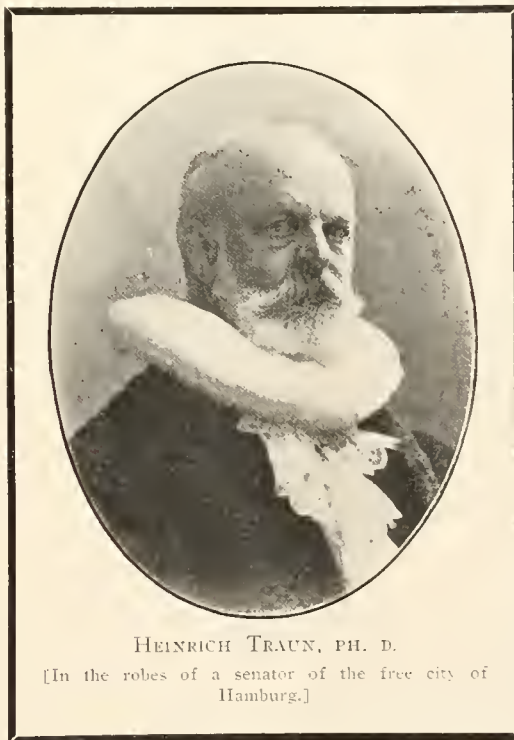
In August, 1902, Dr. Traun admitted to partnership his two sons—Heinrich Otto Traun and Dr. Friedrich Adolph Traun—the firm name becoming changed to Dr. Heinrich Traun u. Söhne, which style is still retained. At the beginning of 1908 Dr. Traun ceased to be an active partner in the firm, leaving the conduct of business to his sons. Later in that year occurred the lamented death of Dr. F. A. Traun. To-day the business is in charge of Heinrich Otto Traun, whose preparation for succeeding to such an important position has been most thorough, including a year spent in a business position in New York and travels in the Orient and the rubber country of the Amazon, with a view to giving him an insight to as many phases of the rubber business as possible.

In the early part of 1901 Dr. Heinrich Traun was elected to the position of senator of the free city of Hamburg, the highest and most honorable office in its government. He was the first representative in the senate of industrial interests. His election gave a great satisfaction to the people, to whose interest he afterwards devoted his time and talents almost solely, until, when nearing his seventieth birthday, he retired from office on account of advancing years.

In no part of his multifarious life work was Dr. Traun more deeply interested than in the measures for the benefit of the army of employes at his rubber works, in which respect he not only won the appreciation of those for whose welfare he planned, but set a model for other establishments which has been widely copied. In this work he was aided notably by his wife, whose death occurred in November, 1901.

For some time all reports regarding Dr. Traun's health were discouraging; his death occurred on September 10.

Dr. Traun never visited America, though in close touch with the progress made in this country, and his interests here were represented by the Traun Rubber Co. (New York), with a factory at College Point.



HEINRICH TRAUN, PH. D.

[In the robes of a senator of the free city of Hamburg.]

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED AUGUST 3, 1909.

- N** 9,005. Process of coating thread. F. D. C. Byers and J. A. Subers, Cleveland, Ohio.
 9,005. Fire tool. A. C. Webber, Marricks Ile, Sydney, New South Wales.
 9,004. Vehicle wheel. J. C. Wilmer, Los Angeles, Cal.
 9,004. Rubber elastic force coil. W. E. Schmitt, Goshen, Ind.
 9,004.73. Tire inflation mechanism. F. A. Demert, Kyabrien, Vietnam.

Trade Marks.

- 9,894. Air-Tite Security Co., Chicago. The word *Kemp*, for use in connection with preventing air from leaking through tire punctures.

ISSUED AUGUST 10, 1909.

- 9,874. Cellulose substitute. O. Muller, Cologne, Germany, assignor to Rheinische Kunstseide Fabrik, A. G., Cologne-on-the-Rhine, Germany.
 9,874.15. Insulating composition. [Asbestos, mica, slip clay, china, vegetable acid, glue, starch and water.] Min Delm McGerry, Kalamazoo, Mich., assignor to B. E. McDonald, Chicago.
 9,899. Boot or shoe lace. K. C. Rogers, Little Rock, Ark.

ISSUED AUGUST 17, 1909.

- 9,895. Pneumatic tire plug. F. Chanz, Hartford, Conn.
 9,873. Coupling. [For hose.] J. G. Zimmerman, Milwaukee, Wis.
 9,897. Making casings for pneumatic vehicle tires. J. O. King, assignor to King Leather Tire Co., both of Milwaukee, Wis.
 9,874. Anti-skid device for tires. F. E. Duffy, assignor of one half each to A. Vere Martin and G. J. Adam, all of Chicago.
 9,895. Vehicle wheel. [With cushioning means between inner and outer rims.] C. L. Shaw, Casa Grande, Ariz.
 9,893. Process for manufacturing elastic tires for wheels. T. L. Carbone, Charlotteburg, Germany.
 9,895. Vehicle wheel. [With lugs secured to the spokes, to engage with a tire carrying rim.] E. B. Jeffery, Kenosha, Wis.
 9,894. Inner tube of pneumatic tires. [With overlapping closed ends.] H. K. Raymond, Akron, Ohio, assignor to The B. F. Goodrich Co.
 9,894.74. Tire cover and fastening therefor. G. W. Brown, Junction City, Kan.

ISSUED AUGUST 24, 1909.

- 9,876. Tire. [Rubber tread, with chain of fellock.] W. H. Baetzel, Canton, Ohio.
 9,877. Cushioned wheel. *See* 9,895.
 9,876.8. Far protector. O. C. Kirkpatrick, Dallas City, Ill.
 9,879. Automobile tire. [Casing.] C. E. La Fleur, Philadelphia.
 9,899. Tire. [Pneumatic.] J. A. Bowden, Los Angeles, Cal.
 9,894. Pneumatic wheel tire. J. Neff, Sr., West Hoboken, N. J.
 9,893.18. Manufacture of an elastic cellulose or spongy material for use as a filler for vehicle tires, cushions, buffers, upholstery, and the like. F. Pleumler, Dresden, Germany, assignor to Pneumatic Syndicate, Ltd., London.

ISSUED AUGUST 31, 1909.

- 9,875. Casting for pneumatic tires. F. H. Scherling, Jonesboro, Ind.
 9,876.2. Vehicle wheel. [With rubber tire.] W. L. Howard, Trenton, N. J.
 9,876. Detachable rim for pneumatic or other tires. M. A. Lemercier, assignor to Societe des Jantes Amovibles, all of Paris, France.
 9,897. Resilient wheel. J. Edman, assignor of two-thirds to A. M. Hoyland and one-third to O. N. Nelson, all of Minneapolis, Minn.

Trade Marks.

- 28,184. New York Belting and Packing Co., Ltd., New York city. The word *Delta* within a triangular design. For rubber hose.
 28,162. New York Belting and Packing Co., Ltd., New York city. The words *Spider Hose* under the representation of a spider, within a triangular border. For rubber hose.
 42,734. Revere Rubber Co., Boston. The representation of a man on horseback. For mechanical rubber goods.
 42,735. Revere Rubber Co., Boston. The representation of a shield in outline. For mechanical rubber goods.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of these listed below was in 1908.

*Denotes Patents for American Inventions.

- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, AUGUST 5, 1909.]
 7,532 (1908). Siding wheel with pneumatic tire. L. Hardaker, Petersham, New South Wales.
 7,830 (1908). Pneumatic tire with tread provided with studded projections of rubber. E. Kempshall, London.
 7,831 (1908). Pneumatic tire, the tread provided with transverse ribs. E. Kempshall, London.

- 7,805 (1908). Spring steel with rubber cushioned rim. B. M. de Sa, Rio de Janeiro, Brazil.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, AUGUST 11, 1909.]

- 8,181 (1908). Elastic insertion for boot heels. E. Kauert, Unpa-Konigsborn, Germany.
 8,157 (1908). Method of inflating bicycle tires, through the use of one of the tubes as a pump. E. Gee, Newbridge, County Kildare.
 8,185 (1908). Tire valve. J. Murray, Cowra Creek, New South Wales.
 8,320 (1908). Pneumatic tires prevented from slipping by means of ropes in longitudinal grooves in the tread. H. Siebert, Hanover, Germany.
 8,340 (1908). Covering for heads of security bolts for pneumatic tires. Self-Sealing Rubber Co. and A. Franklin, Birmingham.
 8,556 (1908). Non-skid studs for pneumatic tires. J. W. Towle, Chelsea, London.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, AUGUST 18, 1909.]

- 8,747 (1908). Non-skid rivets for tires. J. Henon, Paris, France.
 8,840 (1908). Valve fitting for hot water haws and the like. J. B. Brooks, Bromsgrove, Worcestershire.
 8,850 (1908). Fabric for tire covers. J. F. Palmer, Chicago, Illinois.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, AUGUST 25, 1909.]

- 9,102 (1908). Non-slipping armors for pneumatic tires. American Electrical Novelty and Manufacturing Co., Berlin, Germany.
 9,204 (1908). Solid rubber tire. H. Palmer, Akron, Ohio.
 9,238 (1908). Tire in which the tensile strength of the material is used to support the tread. J. F. Spong, London.
 9,330 (1908). Elastic tire. C. A. Hutchison, Prestwick, Ayrshire, and two others.
 9,469 (1908). Golf ball. E. Kempshall, London.
 9,470 (1908). Pneumatic tire with recessed tread. E. Kempshall, London.

THE FRENCH REPUBLIC.

PATENTS ISSUED (with Dates of Application)

- 299,890 (May 7, 1908). Societe pour l'Exploitation des caoutchoucs au Congo. Apparatus for the extraction of caoutchouc and other gums from *hancs*, barks, and the like.
 299,954 (Jan. 28, 1909). E. Bolet. Machine for fastening revolving heels to shoes.
 400,085 (March 2). G. Ponzet and J. Bardin. Elastic tire.
 400,125 (March 3). M. Ritter. Pneumatic tire.
 400,199 (Feb. 13). J. D. Prince. Improvements in tires.
 400,232 (Feb. 22). C. Jenatyn. Pneumatic tire with multiple tubes.
 400,323 (Feb. 15). A. E. Reullier. Pneumatic tire.
 400,394 (March 5). H. Rougier. Removable rim for tires.
 400,453 (March 8). B. Paschka. Protective tread for tires.
 400,457 (March 8). C. Zimmermann. Protecting plates for pneumatic tires.
 400,466 (Jan. 9). Mme. C. Prince. Improvement in inner tubes for tires.
 400,560 (March 6). J. H. Messinger. Pneumatic tire.
 400,574 (June 11, 1908). C. de Rosetti. Pneumatic tire.
 400,585 (Feb. 6, 1909). J. C. Barker. Improvements in tires for vehicles.
 400,635 (March 10). G. Ehuillier. Protective tread for tires.
 400,644 (March 10). C. Beau. Protector for tire tubes.
 400,712 (March 12). H. W. Pickerny. Pneumatic tire.
 400,744 (June 20, 1908). L. Deroche. Pneumatic tire tread.
 400,761 (March 13, 1909). A. Oesterreicher. Process and apparatus for the manufacture of rubber stamps.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Conseil, 16 avenue de Villiers, Paris, at 50 cents each, postpaid.]

A RUBBER SHRUB IN CHILE.

THE United States consul at Valparaiso reports concerning the *Euphorbia lactiflua*, a rubber shrub discovered by the botanical section of the national museum of Chile:

"A very good quality of rubber can, it is claimed, be easily made from this shrub, which is found on the mountains and table lands of that portion of the interior of Chile extending from Taltal south to Caldera, a distance of about 75 miles. It is said to be of no other use than for rubber and wood pulp. It is claimed that extracting the sap does not injure the plant, and that there seems to be a future for the industry if attention be given to its cultivation. It is badly scattered and in many cases difficult of access, but it is claimed that it could easily be cultivated. A company has been organized to develop the industry, and is seeking a concession."

Points On the Cotton Situation.

THE superintendent of the New York Cotton Exchange, Colonel William V. King, in his annual report covering the crop season ended August 31, shows a total yield for 1908 of 13,817,516 bales, against 11,441,269 bales for 1907, and 13,539,948 bales the preceding year (also Colonel King's figures). Mr. William Hester, secretary of the New Orleans Cotton Exchange, another recognized authority, collecting his statistics independently, places the total of the last crop at 13,825,457 bales. It is admittedly the largest crop on record.

The following table, supplied by Superintendent King, indicates the disposition of the latest crop, as compared with that of the preceding year:

	This year.	Last year.
Southern mill takings.....bales	2,554,746	2,079,434
Northern mills and Canada.....	2,815,861	1,989,614
	5,370,607	4,069,048
Exports to—		
Great Britain.....	3,539,124	2,944,168
France	1,064,747	890,203
Germany and Continent.....	3,590,690	3,430,038
Mexico	48,769	5,041
Japan, etc.	201,593	191,386
	8,444,923	7,460,836
Total	13,815,530	11,629,884

The same authority refers to the uniformly good quality of the latest crop both as to grade and staple, making it for the spinner one of the most excellent crops produced in point of working quality. This has promoted the rapid absorption of the crop by spinners. The absorption has been further promoted by the fact that the spindles of the world are each year steadily increasing in number, requiring under normal conditions large crops of cotton to supply the demand for cotton goods.

Government reports and private statistics agree that the growing crop is below the average in point of acreage, while throughout the summer the condition was reported poor. This condition, combined with the increasing consumption of cotton, and the further fact that no other country is showing a larger production, points to the conclusion reached by the *New York Journal of Commerce*: "The price will no doubt be high relatively, and legitimately so, and the effect will be felt in the manufacturing industry here as well as abroad."

A LARGER "SEA ISLAND" CROP.

WHILE the crop of Sea Island cotton for the season ended August 31 was very much larger than for the preceding year, exports (which term embraces deliveries to domestic mills) were larger than the production, so that the current season began with somewhat smaller stocks than were reported one year previously. John Malloch & Co., of Savannah, report that the past year was one of fairly wide fluctuations in price. During the early fall of 1908 the demand was light, and the market sagged until "Fancy Georgias" sold at 17½ cents first cost. About the middle of October a larger demand sprang up, caused by the placing of yarn orders for automobile tires. The market was pretty well swept of cotton within two weeks and prices advanced until Fancy sold at 20½ cents first cost. Late in November the demand was again slack, and prices declined to 18½ cents. December saw large orders again, and there has been a good business most of the time since, with advancing prices. Messrs. Malloch & Co. reported September 3: "The market opened here at 22 cents first cost for Fancy

and there seems to be a sufficient demand to keep prices on the present level for some time to come." The same firm report the following statistics of the Sea Island crop for the last two seasons, from September 1 to August 31:

	1907-08.	1908-09.
Stock beginning of season.....bales	709	3,223
Receipts	85,024	101,420
Aggregating	85,733	104,643
Exports	82,510	102,303
Stocks end of season	3,223	2,340

Comparative Statement of Crop for Eight Years.

1901-02.....bales	78,621	1905-06.....bales	123,364
1902-03	102,634	1906-07	58,932
1903-04	76,704	1907-08	85,024
1904-05	102,668	1908-09	101,420

This year's crop is stated to have been in perfect condition up to the middle of July, after which heavy rains and hot weather affected it injuriously. While it is early yet to make an estimate, it is not regarded probable that the production will be as large as last season.

BRAZIL EXPORTS LESS COTTON.

THE British legation in Brazil reports: "Cotton exports, which average £1,500,000 sterling, and realized £1,750,000 in 1907, reached a value of only £200,000 in 1908. This decrease is put down to the fact that home manufactures are growing. Brazilian manufactured goods may be expected gradually to take the place of British, though the process may be a slow one. The native mills are perfecting their product, and goods formerly imported are now made in the country."

APPAREL FOR THE MOTORIST.

A WRITER on the subject of apparel for automobile use, in *The Motor News* (London), says that it is no longer necessary for a motorist to advertise himself by adopting a form of covering which is peculiar to the pastime, but it is essential that he should deviate sufficiently from ordinary practice as to render himself impervious to the coldest winds that blow and the heaviest rain that falls.

The reign of leather, this writer says, is over. It was never a satisfactory material. The saying, "there's nothing like leather," may apply to footgear, but its unsuitability as an outside body-covering has been proved, for it wears rapidly, or, rather, becomes shabby quickly, and, even in its very finest form, it is ugly and unhygienic.

Reference is made in the article to a number of styles of motoring clothes and accessories, more or less waterproof, made by high-class firms. The writer concludes: "One really good motoring coat, obtained from a firm that knows its business, is sufficient, with a well-designed mackintosh for heavy rains to complete the equipment."

RUBBER AS A SUBSTITUTE FOR ALCOHOL.—Dr. Charles Alexander T. MacNicol, in an address before the American Medical Society for the Study of Alcohol and Other Narcotics, at Atlantic City, said: "The mistaken idea that alcohol is a stimulant dates from mediæval times. It has been used as a stimulant for almost every disease known to man. Alcohol is not a stimulant but a narcotic and a nerve-deadener. Chewing a piece of india-rubber will produce better digestive juices in the stomach than any amount of alcohol."

THE RUBBER TRADE IN CANADA.

CANADIAN imports of manufactures of india-rubber and gutta-percha for the fiscal year ended March 31, 1909, by countries, are officially stated to have been in value as follows:

	United States.	Great Britain.	Other Countries.	Total Value.	Duties Collected.
Boots and shoes...	\$73,349	\$561	\$84	\$73,994	\$18,442
Belting	30,675	1,825	....	32,500	8,801
Clothing and water-proof cloth	39,497	86,389	297	117,183	30,363
Hose	55,220	907	145	56,272	19,598
Packing and mats.	63,821	2,507	25	66,353	23,028
Vehicle tires.....	96,795	10,732	2,048	109,575	37,432
All other	332,562	80,098	33,038	445,698	115,615
Total	\$682,919	\$183,019	\$35,637	\$901,575	\$253,270
Total, 1907-08....	666,307	182,360	49,457	898,124	247,898
a Total, 1906-07...	476,444	68,957	30,490	575,891	158,244
b Total, 1905-06....	680,014	99,695	32,034	811,743	100,879
b Total, 1904-05....	634,422	164,999	26,071	825,390	213,607

a. For nine months ended March 31, 1907.

b. For fiscal years ended June 30.

Imports from Germany amounted to \$22,646 for the nine months ended March 31, 1907; to \$27,815 in the next twelve months, and \$22,209 in the fiscal year ended March 31 last.

There may also be noted the following imports, not classified by the customs as "rubber goods," but having a relation to the industry:

	United States.	Great Britain.	Other Countries.	Total Value.	Duties Collected.
Webbing, elastic and non-elastic..	\$160,792	\$33,709	\$7,941	\$202,442	\$38,241
Stockinettes for rubber footwear.	67,852	8,296	....	76,148	11,006
Duck for rubber belting and hose	66,873	6,730	....	73,603	free
Rubber thread ...	1,480	23	....	1,503	free

EXPORTS OF CANADIAN RUBBER GOODS.

Belting	\$4,302	Clothing	\$250
Hose	5,419	All other	84,200
Footwear	141,374		
Mats and Matting...	538	Total	\$236,083

Distribution of Rubber Goods Exports.

To—	Value.	To—	Value.
Great Britain.....	\$21,273	British Guiana.....	\$238
Australia	43,129	Argentina	51
Newfoundland	44,344	Belgium	497
France	2,218	Denmark	1,347
United States	73,085	Italy	1,455
New Zealand	47,974	British West Indies...	147
Mexico	8	British East Indies...	31
St. Pierre	94		
British Africa	192	Total	\$236,083

Comparison with Former Exports.

Year ended March 31, 1908.....	\$239,983
Nine months ended March 31, 1907.....	169,204
Year ended June 30, 1906.....	266,504
Year ended June 30, 1905.....	170,359

IMPORTS OF RAW MATERIALS.

	Pounds.	Value.
India-rubber and gutta-percha.....	2,039,108	\$1,681,269
Rubber recovered; rubber substitute; hard rubber in sheets.....	2,652,704	634,940
Rubber, powdered, and rubber waste.....	1,433,970	167,361
Total, 1908-09	6,124,882	\$2,483,570

RUBBER GOODS IN MANITOBA.

AN indication of the growth of the rubber goods trade in the western part of the Dominion is the announcement that The Winnipeg Rubber Co., Limited, western selling agents for the Gutta Percha and Rubber Manufacturing Co. of Toronto, Limited, have made arrangements for largely increasing their facilities. Their plans involve the erection of a seven-story building on a lot 50 x 100 feet which they have

purchased for the purpose in Winnipeg, the building to cost \$75,000. Mr. Trumbull Warren is president of the company and Mr. A. A. Andrews vice-president and general manager. The company have a branch house at Calgary, Alberta.

CANADIAN IMPORTS OF RUBBER TIRES.

IMPORTS of the rubber tires (for vehicles of all kinds) are reported by the customs service in Canada in more detail than in other countries. The following official statements of value are for fiscal years ended March 31:

	1907-08.	1908-09.
Great Britain.....	\$10,326	\$10,732
France	931	1,484
Germany	1,287	564
United States.....	81,555	96,795

Total

Total	\$94,099	\$109,575
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Imports of automobiles and other motor vehicles during the past fiscal year amounted to 533, valued at \$585,097, of which the United States contributed 469, worth \$474,757.

CANADIAN CONSOLIDATED DIVIDENDS.

THE directors of Canadian Consolidated Rubber Co., Limited, declared regularly quarterly dividends of 1¼ per cent. on their preferred stock and 1 per cent. on the common, payable on October 1. A feature of the Montreal stock market of late has been the marked advance in Consolidated Rubber common shares, which have been quoted as high as 99½.

RUBBER REDEEMERS MADE HER RICH.

[FROM THE NEW YORK SUN, SEPTEMBER 19.]

THERE may be a thousand and one ways of going into business for one's self, but Mrs. Augusta Matzner, of New York City, seems to have found the one thousand and second. It was while she was on a trip to Europe a number of years ago that a merchant with whom she was talking at a reception remarked casually that he wondered whether there was any market in America for old rubbers and overshoes. Mrs. Matzner thought this request strange, and on inquiring found that many tons of worn rubber footwear was being thrown away or used for small profit in Europe.

When she returned to America Mrs. Matzner had something more valuable than Parisian frocks. It was something on which the custom inspectors could not assess duty, for it was an idea. She made a round of the New York rubber redeemers and manufacturers and learned that old rubber was in demand all the time. She cabled the European merchant with whom she had first talked to send her all the old rubbers he could get. She sold the shipment at a good profit. For two years she did business in this way, depositing her profits always in the same bank.

Finally she found she could get the trade of a number of the largest European firms, and for this she needed much more capital than she possessed. She went to the president of the bank with which she had done business and asked for a large loan. If the president had been at all sceptical as to her ability the explanation she gave him of the future of the old rubber trade convinced him and she got the loan. To-day she receives old rubber from Europe in thousand-ton lots and is one of the largest individual factors in the rubber redeeming trade.

THE Monte Cristo Rubber Plantation Co. (Greeley, Colorado) state that on their estate in Mexico they have 900 acres under rubber (*Castilloa*), all in good condition. They have planted rubber in each year (in June) as follows: Forty acres in 1906, 360 in 1907, 100 in 1908, and 400 in 1909. The first 40 acres, three years old in June last, was reported at the end of August to average 25 feet in height and 5 inches in diameter.

Some Rubber Interests in Europe.

THE INDUSTRY IN DENMARK.

A NATIONAL exposition for Denmark, on rather a large scale, was held recently at Aarhus, the second largest city in the Kingdom, closing about the middle of September. The beautiful location and the splendid buildings alone made the exposition worth visiting, besides which the exhibits were of real interest, both to the people of the country and to foreigners.

The two Danish rubber manufacturing companies, exhibiting in the Arts and Manufactures building, both received first-class diplomas (silver medals), the highest awards made.

Aktieselskabet de Forende Gummi- og Luftringefabriker Schiønning & Arvé, at Copenhagen, exhibited under a giant diving bell bearing the company's trade mark (elephant's head and the word "Force"), a diver in complete diving outfit, standing on a pedestal of hose and surrounded by four columns of alternating white and red pneumatic tires ("Aequator" brand), surmounted by rubber balls illustrating the national colors. The company, formed in 1806, employ about 100 men, and are credited with an annual production of 1,000,000 kroner [= \$268,000]. Exports are made to Sweden and Norway.

At the exhibit of Aktieselskabet Skandinavisk Gummi-Compagni, of Odeuse, the attention of the crown prince and crown princess was attracted on the opening day by the figure of a footman placed on a high pedestal and wearing a red rubber cap (in Denmark all the royal servants, as well as the letter carriers, are dressed in red uniforms). The company exhibited waterproof raincoats for men and women, as well as Danish army uniforms, wheel tires, and so on, all bearing their trade mark—the words "Isonandra Gutta," with pictures of rubber plantations. Posters announced that the company sell exclusively to dealers. Seventy-five to 100 workmen are employed, and the production amounts to 350,000 kroner.

Gutta-percha and india-rubber cable insulations, and plates illustrating the same, were shown by Det Store Nordiske Telegraf-Selskab A.-S. (Great Northern Telegraph Co.), of Copenhagen. The structure in which this company had its exhibit housed made an imposing effect on account of its size and practical arrangement for demonstrating purposes. The rotunda could be reached by a stairway and was topped by a cable buoy. A survey of their cable line could be obtained by means of maps, photographs, specimens, and sample collections, showing also instruments and various cable types. The display contained illustrations of the damage done to sea cables by the propeller screws of steamers and fishing gear. (First-class diploma.)

Aktieselskabet Nordiske Kabel- og Traadfabriker (Northern Cable and Wire Works Co), of Copenhagen and Middelfart, showed cables, wire and other products of their rolling mill.

The firm of Simonsen & Weels Efterfølger exhibited surgical dressing fabrics of their manufacture. Camillus Nyrops Etablissement, of Copenhagen, purveyors of instruments to the University, showed a similar line of goods of their own manufacture, as well as surgical, hospital and sick-room supplies, bandages, and the like.

Aktieselskabet Drivremmefabriken "Dana" of Lyngby, showed patented cotton canvas belting. Among the testimonials shown was one from the before-mentioned manufacturing concern of Schiønning & Arvé. (Second-class diploma.)

Madsen & Giersing, Fabriken Ondulium, of Copenhagen, manufacturers of paper board and corrugated board, exhibited a novel air cell insulation or covering for superheated steam,

made of a compound of asbestos and prepared paper—recommended as cheap, cleanly, and durable.

C. Ramm, of Copenhagen, exhibited rubber horseshoe pads made in imitation of American patterns. [The preceding details are derived from the *Gummi-Zeitung*.]

IMPROVED CONDITIONS IN GERMANY.

[FROM THE "GUMMI-ZEITUNG," BERLIN, SEPTEMBER 10.]

THE publication of the first balance sheet issued during the current year by a German rubber works was an event of unusual interest. It is well known that times have by no means been favorable to the rubber trade since January 1, 1909. Unfavorable fluctuations in the market, general business depression, unwillingness to buy goods, increased taxes, and advances in prices were prominent features of the first six months of the current year, in addition to the enormous advance in the price of crude rubber. In view of these conditions it was assumed that the balance sheets of the German rubber manufacturing concerns would show figures exactly of a nature to give cause for rejoicing.

It is consequently and all the more pleasant surprise to learn that the Vereinigte Gummiwaren-Fabriken Harburg-Wien, vormals Menier-J. N. Reithoffer intend to move in the general meeting to be held on October 30, that a dividend of 6 per cent. be declared. This showing, which may be considered very satisfactory for the rubber trade at large and for the aforesaid company in particular, furnish grounds for the expectation that the balance sheets of other rubber works will not fall far behind those of previous years.

The fact that the Harburg-Wien Company will declare a dividend of 6 per cent. proves that conditions have greatly improved and that we may now expect a continued general improvement and the dawning of better days for the shareholders. The amounts deducted for depreciation from the book value of the plant have this year been unusually large, and there is consequently reasons to assume that the company is once more enjoying the good old times. In this connection it deserves attention that higher prices have been obtained for the output of rubber shoes, a line which the Harburg works are pushing energetically. According to a recent report, such buyers of rubber shoes as have not as yet covered their requirements by making contracts at low prices, will henceforth have to pay higher rates both for prompt and future delivery. The advance in the prices of crude rubber is a sufficient justification of such a policy, the more so because American and Russian rubber good manufacturers have already advanced their quotations on rubber shoes.

GERMAN IMPORTS OF SWEDISH RUBBER FOOTWEAR.

[FROM THE "GUMMI-ZEITUNG," BERLIN.]

THE fact that Sweden is interested, to a by no means inconsiderable extent, in the exportation of rubber shoes to Germany, is proved by the following figures, compiled on the basis of the German trade statistics:

RUBBER SHOES IMPORTED INTO GERMANY FROM SWEDEN.

	Kilos.	Marks.		Kilos.	Marks.
1900	12,900	74,000	1905	142,800	785,000
1901	51,000	306,000	1906	264,300	1,454,000
1902	44,700	286,000	1907	5,000	20,000
1903	28,400	142,000	1908	77,300	309,000
1904	15,300	84,000			

The large imports during 1905 and 1906 must be attributed to the planned increase in the German import duty on rubber shoes, which was expected at that time. During January and February,

1906, alone, the imports of rubber shoes from Sweden amounted to 258,500 kilograms, representing a value of 1,422,000 marks. The imports during the period March-December, 1906, were, however, very insignificant.

By the large imports from Sweden in 1905, that country became second in importance as a source of supply for Germany, a place which had up to that time been occupied by the United States, the largest source of supply being Russia. On the other hand, imports from Austria-Hungary decreased very considerably. At the time of the negotiations for the commercial treaty between Germany and Sweden, the latter country showed a very active interest in permanently securing the German outlet for its rapidly developing new industry, in which five manufacturing concerns were engaged at that time.

In this connection we would state that the United States is not entitled to claim that rubber shoes of American manufacture should be allowed to enter Germany on the payment of a duty of 80 marks per 100 kilograms. Glazed rubber shoes imported from the United States must, in fact, pay duty at the general tariff rates of 100 marks per 100 kilograms. Imports from the other countries of supply are, however, entitled to enter Germany on payment of the reduced treaty rate of 80 marks, in consequence of their just claim to be allowed the benefit of the "most favored nation" clause.

LEYLAND AND BIRMINGHAM RUBBER CO., LIMITED.

For the year ended June 30, 1909, the trading profit was £35,353 [= \$172,045.37], to which has to be added the balance brought forward from last year of £0,337, making a total of £41,690. Depreciation, reserve for discounts, bad and doubtful debts, and directors' remuneration amount to £7,374, and an interim dividend at the rate of 5 per cent. per annum paid December last absorbed £0,700, leaving a disposable balance of £27,600. The directors recommend a final dividend at the rate of 10 per cent. per annum free of income-tax, payable on and after August 18, making, with the interim dividend as shown above, 7½ per cent. for the year and to carry forward to next year's accounts £14,196.

TAXICABS IN LONDON.

THE General Motor Cab Co., Limited, the pioneer company in its field in London, having introduced the taxicab there from Paris, with the aid of French capital, have issued a loan of £400,000 [= \$1,940,000] in 5 per cent. first mortgage debentures, with a view chiefly to completing the purchase of rolling stock, body and rig. A circular issued to the shareholders contains these details, going back to August, 1908, the first month of the present financial year:

	Aug., 1908.	Jan., 1909.	June, 1909.
Balance brought forward	98	1,725	1,501
Amount of debentures issued	—	41,985,300	£175,671
Total receipts	2,981	43,020	£84,560

The net profits for the six months ended January 31, 1909, were £101,521 8s. 6d. [= \$497,154.27]. The company will own 3,470 motor cabs when the present purchases are completed, at a cost of £1,437,713 [= \$5,070,220.31], besides "cars de luxe" and other items of rolling stock costing £50,017. The earnings of the latter cars are not listed in the preceding table. The capital of the company organized in May, 1900, after which it absorbed the Union Motor Cab Co. [see THE INDIA RUBBER WORLD, December 1, 1908, page 881, is £1,000,000 [= \$4,805,600].

In reply to an inquiry the British Home Office recently gave the numbers of taxicabs and of hansoms and four wheeled cabs licensed in the Metropolitan area on July 1, 1908, and July 1, 1909. The numbers are as follows:

	1908.	1909.
Hansom cabs	5,329	4,939
Four wheeled cabs	3,708	3,379
Motor cabs (taxicabs)	1,508	3,394

The number of motor cabs licensed at the beginning of this year was 2,805

All the taxicabs in London are not operated by the General Motor Cab Co., by a good deal. *Motor Traction* says The Coupé Co. have close on 1,500 cabs in service and will increase the number to 2,000 within a few months.

Everywhere in Great Britain interest in the taxicab is on the increase, and their use is being introduced. The number of taxicabs in Manchester has increased within a year from 53 to 67. The number in Edinburgh has increased from 50 to 106. The Bedford town council has granted licenses for 12.

GREAT BRITAIN.

ELECTRA Rubber and Vulcanite Syndicate, Limited, registered August 7, with £5,000 [= \$24,332.50] capital, to acquire a sole license to reclaim rubber under the invention of W. H. Hyatt. Registered office: 38 Wilson street, E. C., London.

St. Helens Cable and Rubber Co., Limited (Warrington), have appointed Davidson & Blackadder, of Glasgow, agents for the sale of their goods for the whole of Scotland.

J. Frankenberg & Sons, Limited, of Salford, Manchester, have appointed Watson & Whyte, of Glasgow, their agents for the sale in Scotland of rubber-insulated and bitumen cables.

RUSSIA.

THE Russian-French India-Rubber Co., "Prowodnik," at Riga, are understood to be producing 50 tons of reclaimed rubber per day in three qualities: (1) from the uppers of Russian galoshes; (2) from uppers and soles, and (3) from all parts of rubber boots and shoes. Their reclaiming plant is claimed to be large enough to deal with the whole Russian supply of old galoshes.

NORWAY.

AKTIESELSKABET den Norske Remfabrik, established in 1891 as manufacturers of balata belting and leather goods at Christiania, are extending their plant for the purpose of taking on the manufacture of mechanical rubber goods.

RUBBER IN AEROPLANE FABRICS.

THE manufacture of india-rubber proofed aeroplane and balloon fabrics has been taken on extensively by The North British Rubber Co., Limited (Edinburgh), who appear to be the pioneers in this field in Great Britain. They issue a list of different grades of aeroplane fabrics, 36 inches wide, varying in price from 2s. 10d. [= 60 cents] to 8s. 9d. [= \$2.13] per yard. A description of the highest-priced grade refers to its being formed of three plies of cotton, with rubber coatings, and yet this material weighs only 4½ ounces per square yard. The fabric is of the best quality that can be produced, and is mentioned as standing a strain per square yard of 3,000 pounds warp and 2,400 pounds weft. On its exposure to a supersaturated atmosphere for a moderate length of time, the increase in weight equals 71½ per cent. There are grades containing a single ply of cotton, proofed either on one or both sides with rubber, but the coating is referred to as being air proof, and the fabric capable of standing a very heavy strain. These fabrics are attached to the machines by means of grommets taped on.

The balloon fabrics offered by the same firm are composed of two plies, with three coatings of rubber, one coating between the plies and one each outer side. The outer coating is of red rubber, prepared specially to prevent decomposition from moisture and heat, and to withstand the actinic action of light. The grey coating employed for the inside is calculated more especially to withstand the deteriorating action of gases. The internal coating of rubber renders the whole practically one fabric. The threads of the two plies are placed at different angles and, when the whole is vulcanized together, it is practically impossible to tear it, and in the event of a rent, this will not continue along the fabric. The weight of this material is 0½ ounces per square yard, and the price 9s. [= \$2.19] per lineal yard 36 inches wide.

The Editor's Book Table.

ANALYSE DU CAOUTCHOUC ET DE LA GUTTA PERCHA. PAR Maurice Pontio. - - - [In the Encyclopédie Scientifique des Aide-Mémoire - Léauté.] Paris: Gauthier-Villars. 1909. [Paper. 16mo. Pp. 170. Price, 2.50 francs.]

THE author of this work is an expert chemist in the service of the French office having charge of posts and telegraphs, and the fact of his having been selected to prepare a volume on the chemistry of india-rubber and gutta-percha, in the important series to which this work belongs, is in itself a high testimonial to his professional standing. Beginning with a general account of the sources of rubber, of the nature of latex, and the different methods of coagulation, the author proceeds to the discussion of physical characteristics of the leading grades of rubber, after which he takes up the methods of analysis by the leading authorities, to which he adds some of his own. The book deals with physical tests as well as chemical analyses, and one-fourth of its space is devoted to gutta-percha, which is natural in a work from this source, on account of the importance of this material in electrical insulation.

LECTURES ON INDIA-RUBBER. BEING THE OFFICIAL ACCOUNT of the Proceedings of the Conference Held in Connection with the International Rubber and Allied Trades Exhibition, London, September, 1908. Edited by D. Spence, PH.D., F.I.C. - - - London: International Rubber and Allied Trades Exhibition, Limited. [1909.] [Cloth. 8vo Pp. 334. Price, 10/6, net.]

THE notice of this book in the last INDIA RUBBER WORLD was based upon advance sheets, without having before us the title of the book, which is here reproduced for the sake of having it in the record, so to speak. In addition to the features of the work mentioned already in these columns, Dr. Spence's compilation embraces reports on the social functions in connection with the International Rubber Exhibition, most of which were mentioned currently in THE INDIA RUBBER WORLD. These affairs particularly merit a record in this stately volume, since they contributed so conspicuously in aiding the representatives of so many rubber planting countries to become personally acquainted—by no means the least valuable result of the Rubber Exhibition.

RUBBER SHARE HANDBOOK. DETAILS OF COMPANIES OWNING Rubber and Other Produce Properties in Ceylon, the Malay Peninsula, British North Borneo, Sumatra, Java, Africa and South America. - - - London: *Financier and Bullionist*. 1909. [Boards, 12mo. Pp. 317. Price, 2 shillings.]

THIS, the third edition of a work already favorably commented upon in these pages, is the best book of its class which has yet appeared, both because it is the latest in the field and because it contains details in respect of more companies than any preceding compilation. Statistics are given of 290 companies devoted wholly or in part to rubber planting, the same being located in a score of colonies and countries. The work appears to leave nothing to be desired in respect of accuracy. The directors of each company are named on the page devoted to the company, and at the end appears a directory of directors—483 names in all—with the companies with which each is connected. We notice that there are individuals connected with the boards of nearly a score of companies each.

MANUEL PRATIQUE DE LA CULTURE ET DE L'EXPLOITATION des Essences Caoutchoutifères Indigènes et Introduites au Congo Belge. Brussels: A. Lesigne. 1909. [Cloth. 8vo. Pp. 126.]

THIS work, issued under the auspices of the Belgian minister of colonies, is an elaboration of a manual issued under a similar title several years ago. It relates in detail to (1) rubber trees, (2) lianes, or vines, and (3) *caoutchoucs des herbes*, or "root rubber." Following a brief description in plain language of each species is an account of the habitat, including conditions of soil and the like, with suggestions for propagating the species, and for its cultivation. Finally

are suggestions based upon practice for collecting latex, whether from trees, vines, or roots; the coagulation of the same, preparation for market, and transportation. Experiments in rubber cultivation in the Congo country, particularly at Coquilhatville and Eala, not to mention work done on rubber concessions, have been carried on to an extent which provides not a little material for a practical manual such as this is designed to be. Prominence is given in this book to the native *Funtumia* and *Hevea* among trees, *Landolphia Klainei* among vines, and *Landolphia Thollonii* of the "root rubber" species, though the cultivation of several other species is regarded with favor. The interest and value of the book are enhanced by the introduction of 29 plates, illustrating botanical specimens and methods of tapping and the like.

ANNUAIRE UNIVERSEL DU CAOUTCHOUC, DE LA GUTTA-Percha, et des Industries qui s'y Rattachent Paris: *La Caoutchouc et la Gutta-percha*. 1909. [Paper, 8vo. Pp. 167. Price, 6.50 francs.]

OUR excellent contemporary, the organ of the rubber trade in France, has brought out the second annual edition of its Universal Dictionary of the rubber and allied industries. The general character of the work is the same as last year, but it appears in a more convenient form. By increasing the number of entries on each page the work has been brought into smaller bulk, which is an advantage. Naturally the lists are fullest for France, but manufacturers and dealers are included for the other leading countries of Europe and the United States of America. The editor has not always distinguished properly between makers of goods and dealers, and the book bears evidences of having been set up by printers unfamiliar with the languages in which some of the firm names are expressed. We do not doubt, however, that the trade will accept the invitation to suggest corrections where any may be needed, and that the work will become increasingly valuable with each new edition. Strangely enough, no American manufacturers are mentioned under the heading of Tires. The fullest department, perhaps, is that of firms in the crude rubber trade, the list of which, filling 16 pages, relates to every country or colony now producing rubber commercially.

DE BALTA-INDUSTRIE IN SURINAME [SURINAM: 1909.] [PAPER. 8vo. Pp. x + 98 + cix.]

THIS is a government publication, which has grown out of the interest in the products of Dutch Guiana, stimulated by the exhibit made at the International Rubber Exhibition of 1908, where the colony was represented by a subcommittee of the Netherlands committee already mentioned at length in THE INDIA RUBBER WORLD. The secretary of that subcommittee was Dr. J. Sack, who is chemist at the Surinam experiment station of the colonial department of agriculture. Dr. Sack is the editor of this brochure on balata, which is devoted to the history of the development of this product in general and in Surinam in particular. The existence of *Minusops balata* was recognized in the colony practically as soon as in any other region, but the exportation of its product was not developed without considerable delay. The exports have grown from 166 kilograms in 1881 to 454,194 in 1908. The history of the concessions system is given, and the regulations adopted at various times for encouraging the industry while conserving the supply. Chapters are devoted to the botany and chemistry of balata.

THE VISCOSITY OF INDIA-RUBBER AND INDIA-RUBBER SOLUTIONS: With Special references to its Bearing on the Strength or "Nerve" of Crude Rubber. By Dr. P. Schidrowitz and H. A. Goldsbrough. [Reprinted from the *Journal* of the Society of Chemical Industry, London Section, January 15, 1909.] [Paper. 12mo. Pp. 14.]

"7-LEAGUE" RUBBER BOOTS.

IN the construction of this novelty in rubber footwear, with sewed leather soles, the vamp lining of the boot, as well as the counter lining, instead of being turned in under the foot, as is done ordinarily in making rubber boots, is turned out over the welt. A welt composed of two layers of canvas with rubber between them is then placed on the sole of the boot, and on the outside of the boot a strip of canvas extending about an inch above the sole is placed all the way around the foot. This also extends out over the out turned upper, and is forced into position by a blind stitcher. The shell is thus vulcanized, after which it is stitched with a stitching machine, the stitches passing down through the out turned canvas strip and out turned



"7-LEAGUE" RUBBER BOOT.

vamp and counter lining the welp sole and the wearing sole. In this manner the threads pass through four thicknesses of canvas, making a juncture so strong that no nails are necessary in the sole of the boot to hold it fast to the upper. Of course, nails are placed in the heels to hold fast the lifts and top piece. The illustration is intended to give the idea of a magnifying glass showing details of construction. These boots are patented—United States No. 895,284—and other designs and patents are being applied for. The name of the boot is protected by copyright. The rubber part of these boots is made by one of the principal rubber shoe factories. They are placed on the market by the owners of the patents, Mulconroy Co., Incorporated, Philadelphia.

THE MERIT OF RUBBER MATS.

AN important rubber firm specializing in the line of goods referred to states: "No other form of floor covering so thoroughly and satisfactorily fills the bill as rubber mats and matting. They are sanitary, noiseless, odorless, durable, economical and attractive, thereby filling every requirement of a modern floor covering. No other material combines these necessary and desirable features. - - - These goods are especially adapted for use in public and private buildings, institutions of all kinds, libraries, schools, churches, office buildings, banks, railroad stations, elevators, carriages, automobiles, boats, and in fact wherever a serviceable, sanitary and economical covering is desired."

The same company advise their patrons:

"When ordering lettered mats, do not use too much wording. A mat filled with letters is not effective. Letters smaller than 3 inches long do not show to advantage. In order to calculate how many letters you can place on a line, bear in mind that a letter occupies a running space about equal to its height, and that 5 inches on each side and at either end is taken up by the border of the mat. - - - We are frequently asked how long and how wide we can make perforated mats. We can make them

any length desired, and in width up to 12 feet, but as a matter of fact, no mat of this kind should be over 6 feet wide, and even 3 or 4 feet is a much more practical size."

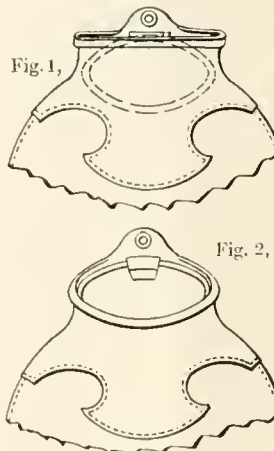
THE AMAZON RUBBER SYSTEM.

[FROM THE "BULLETIN OF THE AMERICAN REPUBLICS."]

AN intelligent survey of "The Rubber System of the Amazon," as published in THE INDIA RUBBER WORLD for July 1, 1909 [page 347], is made by Gustav Heinsolm. Primarily designed as a clear statement of the writer's views in regard to the so-called rubber valorization project, many instructive facts as to the gathering and marketing of this valuable commodity are furnished. It also corrects a mistake too prevalent abroad that "Amazon rubber is obtained by haphazard methods by ignorant denizens of the forest." To support the contention it is asked: "If it were not for a well organized system how could Pará show a certain and well sustained and annually growing export of rubber?"

FOUNTAIN SYRINGE IMPROVEMENT.

PATENTS have recently been granted for an improved fountain syringe bag, which will be appreciated by users, and no doubt interest rubber sundries manufacturers. In recent years there has been an increased demand for bags with larger openings or inlets, in order to permit of cleansing the inside, also to facilitate easy filling from a pitcher or other vessel. For hospital or general use, physicians advise bags with large inlets. Most bags made heretofore, whether with small or large openings, have been limp at the top, making it necessary to hold them open when being filled. If made with a wide inlet the sides hang down, often spilling a portion of



PEARL'S BAG DISTENDING RINGS.

the contents. The Pearl patents cover distending rings hinged to the inside of the bag, opening the ring readily folding down into the bag when the syringe is boxed, as indicated by the dotted lines in Fig. 1. When in use the ring is drawn up firmly into the bag neck, forming a rigid edge, as shown in Fig. 2. Distending rings are also made in various sizes so formed that they may be sprung into the bag inlet and firmly held without being hinged. These rings are made of nickel plated wire, celluloid, hard rubber and aluminum, also wire covered with rubber tubing, depending on the quality of bags fitted. These bag distending rings are the invention of Eugene Pearl, No. 23 Union square, New York.

THE president of Brazil, on August 5, signed decree No. 7485, authorizing the operation in that republic of Deutsch-Südamerikanische Telegraphen-Gesellschaft, A.-G., formed in Germany with 4,000,000 marks [= \$952,000] capital, to lay a cable from Borkum to Teneriffe, and thence to Brazil.

A NEW TYPE OF VACUUM DRYER.

AN improved vacuum drying apparatus recently designed is herewith shown. It has been customary in the past, with dryers as large as this one, to use a circular boiler plate shell, with rectangular heating shelves, which required a large floor space and caused much waste space between the shelves, and the shell had to be evacuated each time the dryer was put in operation. On the smaller size dryers it has been the custom to make the chambers rectangular, of cast iron, built up in sections. This necessitates many joints which have to be maintained, each joint causing additional danger to the maintenance of a high vacuum, and that a high vacuum is necessary is shown by the fact that the higher vacuum obtained on the



A NEW VACUUM DRYER.

apparatus the quicker the drying can be accomplished. The vacuum chambers on the dryers here shown are cast in one piece. The chambers are made of "air furnace iron," which is an exceedingly dense, homogeneous metal, having a tensile strength of approximately 36,000 pounds per square inch. As will be remembered, ordinary cupola iron rarely exceeds 23,000 pounds per square inch. Because of the great density of air furnace iron, manufacturers of ammonia and high pressure cylinders are using it on account of being able to maintain a higher pressure in cylinders, due to the fact that the air cannot get through the molecules of the metal. It will therefore be seen that a higher vacuum can be obtained in the drying chamber if casings are made from this iron. This vacuum dryer is made by the Buffalo Foundry and Machine Co., of Buffalo, New York.

FIRE FIGHTING IN NEW YORK.

THE chief of the fire department of New York, Edward F. Croker, a member of the service for 25 years, in a recent interview in the *New York Herald*, expressed the highest appreciation of the high pressure system now in vogue in New York, and the use of water towers.

"Have fire-fighting methods improved much since you first came to the department?" the interviewer asked.

"The development of methods of fighting fires," said Chief Croker, "has reached a point where, for a time, I do not expect them to go much further. More attention should now be given to fire prevention.

Asked if he favored limitation in the height of "skyscrapers," Mr. Croker said:

"Yes, I do. Fires cannot be surely controlled at any higher than 75 feet. No building should be allowed that goes any higher than seven stories, or they are liable to be dangerous."

At the same time the fire chief pointed out the advantage which New York possesses in the matter of water supply, and the liberal provision of apparatus, enabling 200 engines to be concentrated on any point within an hour.

The matter of fire hose was not mentioned in the full-page article from which these quotations are made, but it would appear from the tone of his interview that the best hose yet made by the rubber manufacturers will not, in the opinion of Mr. Croker, together with the best apparatus yet designed for use in connection with it, insure a reasonable degree of safety for buildings above a certain height. And yet buildings several times 75 feet tall are being erected every year. The hope of the future, then, as he says, is fire prevention.

GOOD RUBBER FROM MEXICO.

THE production of rubber has begun on the plantation "Doña Maria," of Tapachula Rubber Co., at Escuintla, Chiapas, Mexico. A recent report was that they had ready for shipment over 3 tons of rubber, coagulated in thin sheets and pressed into blocks of 25 kilograms, and branded "Doña Maria." A specimen sent to THE INDIA RUBBER WORLD is clean and otherwise very desirable rubber. The American domicile of the company is at San Francisco.

HEALTH IN THE RUBBER COUNTRIES.

IN a lecture on "The Panama Canal," at the West India Committee Rooms in London, on March 25, before a meeting presided over by the Governor of Trinidad and Tobago, Vaughan Cornish, F. R. G. S., an engineer of note who had devoted much study to the Canal Zone, said:

Whatever may be thought of the engineering principles involved in the present plan of the Panama canal, there can be no doubt whatever that the sanitation work of the United States has been a magnificent success, and that it has most important bearings on the future of the white race in tropical lands.

This assertion is commended to whoever may be interested in the development of the rubber interest in the South American tropics on a more extensive scale and more economically than in the past. The present Panama canal enterprise is by no means the first attempted in the same region, but the former efforts resulted in failure as much, as for any other reason, on account of the ravages of disease which sanitary science is now able to combat. To recur to the rubber areas, the work "Album do Estado do Pará" [see THE INDIA RUBBER WORLD, July 1, 1909—page 349] contains some facts of note regarding the improvements which have been made from a standpoint of health in the regions of which Pará is the capital. It says: "Even yellow fever, whose name has done so much to cast discredit on our country, has nearly completely disappeared from Santos and Rio de Janeiro. If there are occasionally a few sporadic cases in the north of Brazil, they are now few and far between, owing to the progress made by hygiene which enables us to counteract the deadly effect of all diseases, whether they occur in Europe, in America, in high or low latitudes."

The Pará publication continues: "The plain truth is that man lives just as well in Brazil as in Europe," and statistics are given to indicate that the death rate of Pará is lower than in St. Petersburg, Madrid, Venice, Marseilles, or Rome, and not much higher than in New York or Paris. This favorable condition for Pará, however, represents a great improvement over what existed when rubber was first obtained from that port, and but points to the possibilities of making the whole Amazon valley habitable by white men, who, by the way, in the last half century have found the Mississippi valley in the United States immensely more desirable for home than in the earlier years of the American republic.

PANAMA Rubber, Fruit and Lumber Co., September 9, 1909; capital, \$2,500,000. To grow fruits and for general farming. H. L. Cram, president; H. P. Sweetser, treasurer; Portland, Maine.

News of the American Rubber Trade.

GROWTH OF THE ELLWOOD LEE CO.

THE J. Ellwood Lee Co., established as manufacturing chemists since 1883 at Conshohocken, Pennsylvania, are building a new rubber plant at Spring Mill, on the outskirts of Conshohocken, which they intend to have in operation by January 1. They have planned an up-to-date factory for druggists' sundries, hospital supplies, molded goods, and automobile tires, to be in charge of C. E. Eckrode, superintendent of the company's rubber department. The new plant, it is reported, will consist of a four-story building 85 x 410 feet, a two-story building 82 x 90 feet, a one-story power house 82 x 93 feet, and a one-story forge 17 x 50 feet. The company named have long been specialists in elastic and surgical hosiery and bandages, to which they have added the products of the New Jersey Rubber Specialty Co., operating formerly at Milltown, New Jersey, under the proprietorship of Mr. Eckrode. It appears now that the scope of the Lee company is to be further broadened in a factory at once modern, complete, and extensive.

RUBBER FOOTWEAR FACTORIES RESUME.

THE two factories of the Boston Rubber Shoe Co., at Malden and Melrose, Massachusetts, after the annual shutdown of two weeks, resumed operations early in the month, the grinding department starting on September 7 and the other departments in the regular order thereafter. The same schedule was observed at the two factories of the Woonsocket Rubber Co. The boot and shoe making departments of the Goodyear's Metallic Rubber Shoe Co. and the Goodyear's India Rubber Glove Manufacturing Co., at Naugatuck, Connecticut, started to work on August 31, after the usual shutdown. Work was also resumed at the same date in the druggists' sundries department of the latter, after a brief period of idleness. The factory of the National India Rubber Co., at Bristol, Rhode Island, ended its annual shutdown on August 30.

GROWTH OF THE B. F. STURTEVANT CO.

THE B. F. Sturtevant Co. (Boston) formerly capitalized at \$500,000, have been reorganized under the corporation laws of Massachusetts with \$1,250,000 6 per cent. cumulative preferred stock and \$1,250,000 of common stock, and the stock has all been taken. John Carr, chairman of the board of directors of the First National Bank of Boston, is president of the company; Eugene N. Foss, treasurer, and E. B. Freeman, general manager. The fan and blower business of the Sturtevant company, so well known in the rubber industry, has increased to such an extent as to have made necessary during the past year the erection at Hyde Park of a new plant at a cost of more than \$1,500,000, and it is understood that the company contemplates addition building in the spring.

CONTROL OF THE B. & R. RUBBER CO.

A MAJORITY of the stock of the B. & R. Rubber Co. (North Brookfield, Massachusetts) is now held by Messrs. Thomas G. Richards and Charles C. Beebe, the founders of the company in 1906, and since holders of the principal official positions. These gentlemen were recently purchasers of considerable stock from individual holders, in addition to which they have purchased the shares held by the North Brookfield Industrial Association—\$7,000 in preferred and \$3,500 in common stock.

CENTRAL CITY RUBBER CO. (SYRACUSE, N. Y.)

THIS company, recently incorporated [see THE INDIA RUBBER WORLD, August 1, 1909—page 403], has been formed to do a jobbing business in mechanical rubber goods, and

automobile, motoreyle, motor boat, and bicycle supplies. They will also do a retail business in Syracuse. David A. Gould is president, George H. Lloyd, vice-president and general manager, and John R. Graham, secretary and treasurer—all in the employment of Frank C. Howlett's rubber store for upwards of 15 years. These officers and A. Park Sager and Daniel A. Pierce, all of Syracuse, make up the board of directors. Location, No. 129 East Water street.

RUBBER GOODS MANUFACTURING CO.—DIVIDEND.

THE directors of the Rubber Goods Manufacturing Co., on September 8, declared the forty-second regular quarterly dividend of 1¾ per cent. on the preferred stock, from net earnings, payable September 15. The amount to be disbursed was \$181,149.50.

AMERICAN LINSEED CO.—CONDITION IMPROVING.

THE directors report profits for the year ended July 31, 1909, before deducting interest, of \$1,264,184.99, and after deducting interest and depreciation charges of \$979,600.82. This has permitted them to cancel the former deficit and to carry to reserve practically \$100,000. Last year's American crop of flaxseed was not sufficient for the home demand, owing to unfavorable weather, and for the first time in years seed was imported from Canada and Argentina. The price of seed during the year ranged from \$1.20 to \$1.80, and the price of oil from 38 to 60 cents. The stocks of both, at the end of the business year, were the lowest since 1901. The outlook for the current year is reported favorable, as to average and condition of the seed crop and the prospective consumption of oil. The capital of the company is \$16,700,000 each in preferred and common shares. The last dividend reported was 1¾ per cent. on the preferred, September 1, 1900. Stock quotations have improved, as follows: Preferred: high 1909, 47¾; high 1908, 36¾; low 1909, 29; low 1908, 17. Common: high 1909, 20; high 1908 17¾; low 1909, 12; low 1908, 5¾.

TRADE NEWS NOTES.

THE BOSTON BELTING Co. recently made in one continuous length 1,170 feet of their Forsyth braided hose. This is the longest continuous length of hose, it is said, which has ever been produced, and is an indication that the Boston Belting Co. are fully equipped to meet the growing demand for long length hose. For years, efforts have been made to make hose in such lengths as this, but it has only recently been achieved.

At the plant of the Electric Hose and Rubber Co. (Wilmington, Delaware) recently the cement house caught fire, causing an explosion of gasoline which led to damage of about \$1,600, covered by insurance. Repairs to the building were at once made.

The Hartford Rubber Works Co. (Hartford, Connecticut) have issued a correction of the statement that they were the purchasers recently of the Pope Tube Works, from the United States Steel Corporation. The tube plant, which was built under the directions of the late Colonel Albert A. Pope and which was acquired by the Steel Corporation several years ago, has been idle for a considerable period, although it has been kept in excellent repair. The works have been purchased, however, by the Pope Manufacturing Co.

The R. H. Smith Manufacturing Co. (Springfield, Massachusetts) state that the first complete rubber stamp making plant ever exported from the United States was shipped by them to South America in 1873, since which time they have sold their supplies in every part of the civilized world.

TO MAKE "ARTIFICIAL RUBBER."

NORTH American Rubber Co., organized under the laws of Maine, with \$5,000,000 capital stated, claim "a process for the manufacture and production of crude rubber by means of chemicals, whereby it can place on the market a rubber which ranks with a fine grade African gum." It is stated that the company have orders "from large and well-known users of rubber" for all that they can produce, at \$1 a pound, and that it is expected to have a factory, with a daily capacity of a ton a day, operating by January 1, next. Wheeler & Shaw, Inc., Boston, are offering the company's shares.

ELSTON E. WADBROOK.

SHORTLY after the publication of this number, Mr. Elston E. Wadbrook, who for a number of years has successfully administered the business of Poel & Arnold, at their Boston office, will be established at the New York headquarters. Mr. Wadbrook's experience in crude rubber dates back many years, and his knowledge of conditions, particularly Brazilian, is very complete. It was somewhere about 1886 that he went to Rio Janeiro for the London and Brazilian Bank, to learn the banking end of the



ELSTON E. WADBROOK.

rubber business, and indeed, of all commodities, both of import and export. He first came into direct touch with the crude rubber trade in 1896, when he went to Pará for R. F. Sears & Co., remaining there about two years. On his return he was connected with the Crude Rubber Co., in New York, for a time, and then went to Boston with Reimers & Co., with which firm, under its later name of Poel & Arnold, he has continued. Mr. Wadbrook's acquaintance with rubber and the buyers thereof is well nigh universal. He was one of the founders of the New England Rubber Club, and has been one of the officers since its inception. He brings to New York much knowledge, wide acquaintance, the esteem of the whole New England trade and a fine record at golf.

OBITUARY NOTES.

WALTER F. PHILLIPS, only son of H. O. Phillips, president of the Phillips Insulated Wire Co., (Pawtucket, Rhode Island), lost his life in an automobile accident in which five companions were injured on September 1. He was a student at Phillips Exeter Academy, and 20 years of age.

F. B. Nickerson, who for several years had been in charge of the rubber department of the wholesale shoe house of Nathaniel Fisher & Co., in New York, died on August 29, after having been in ill health for several months. He had been

connected with the house since 1881, and is survived by a son, also connected with the house.

TRADE NEWS NOTES.

THE regular meeting of directors of the United States Rubber Co. for the declaration of dividends of the first preferred stock is scheduled for Thursday, October 7.

La Crosse Rubber Mills Co. (La Crosse, Wisconsin) are reported to be very busy, and making alterations with a view to doubling their capacity in the near future.

Elwyn C. Fish, long connected with the National India Rubber Co. factory (Bristol, Rhode Island), has become superintendent of the Elkhart Rubber Works, at Elkhart, Indiana.

Joseph Dixon Crucible Co. (Jersey City, New Jersey) have obtained in the United States circuit court a perpetual injunction restraining the Excelsior Supply Co., of Chicago, from offering for sale any graphite product not made by the Dixon company, in packages marked with red labels or otherwise resembling the Dixon packages.

The directors of the Manufactured Rubber Co. (Philadelphia) declared the regular quarterly dividend of 1½ per cent. on the preferred stock, payable on September 1.

E. A. Kendall, representing the Congress Shoe and Rubber Co. (Boston), is mentioned in a Massachusetts newspaper as having been visiting the trade in the Berkshires for 43 years, which makes him one of the oldest traveling salesmen in the country in any line.

Barker G. Hamill, secretary and treasurer of the Trenton Trust and Safe Deposit Co., has been elected a director of The Acme Rubber Manufacturing Co. (Trenton, New Jersey). Mr. Hamill succeeded his father, the late Hugh H. Hamill, as secretary and treasurer of the Trust company mentioned, and he is now a director in 14 corporations.

Mr. Albert N. Stanley, manager of the local tire agency of The Fisk Rubber Co., has been elected president of the Motor Accessories Association of St. Louis.

The Durlin Rubber Co., Limited (Bowmanville, Ontario), are having plans made for an extension to their plant.

The Hartford Rubber Works Co. (Hartford, Connecticut) have received reports on the satisfaction given by their Midgely tread tires on the automobile gun carriage in use at the Northwestern Military Academy, at Highland Park, Illinois. The tire has notably prevented skidding on the asphalt streets. The Hartford works were recently working on a 24-hour schedule owing to the heavy demand for tires.

PERSONAL MENTION.

MR. ALEXANDER JOHNSTON, general works superintendent of the North British Rubber Co., Limited, of Edinburgh, was a visitor to the United States during the past month.

Dr. Carlos de Cerqueira Pinto, of Pará, Brazil, the interesting results of whose researches in crude rubber in the Amazon regions have been reported on at some length in THE INDIA RUBBER WORLD of late, after a visit of several weeks to the United States, sailed on September 15 on the *Mauretania*, for London, whence he intended taking a steamer for Brazil.

Mr. Jules Amando Mendes, long identified with the rubber trade at Pará and a recent visitor to the United States, sailed for home on September 13, via Barbados, on the steamer *Suriname*.

Mr. Ernest E. Buckleton, secretary and general manager of Northwestern Rubber Co., Limited, of Liverpool, is expected to reach the United States about the middle of this month for a brief visit.

Mr. M. Wachter, formerly connected with an important American rubber factory, later at Yokohama, Japan, with an insulated wire works, and now in Germany with a company in the same interest, is contributing to the *Gummi-Zeitung* (Berlin) an interesting series of articles on "Die Fabriken der Gummi-drähte und Kabel" (the manufacture of rubber wires and cables).

BOSTON WOVEN HOSE IN CHICAGO.

THE Boston Woven Hose and Rubber Co. report that the increasing volume of western trade has made it necessary to increase their sales force and facilities for handling trade in and about Chicago. R. T. Davis, Jr., who has heretofore been in charge of their Cleveland office, will assume charge of the Chicago office and warehouse, and, with a large staff of assistants, will attend to the trade of the surrounding country. Mr. Huxley will devote his entire attention to the city of Chicago. The entire building, Nos. 667-669 West Lake street, is occupied with a very large and complete stock of the company's product, which stock will be further increased. Mr. Davis has been with the company for many years and is well known to the trade throughout the middle west.

McTERNAN RUBBER CO.—A NEW COMPANY.

THE McTernan Rubber Co., incorporated recently under the laws of Maine, have acquired the Commonwealth Rubber Co. plant at Reading, Massachusetts, and equipped it for the manufacture of druggists' sundries. At its head is Andrew McTernan, who, upon leaving school, entered the employ of the Tyer Rubber Co. (Andover, Massachusetts),



ANDREW McTERNAN.

with whom he remained until recently. Latterly, and for a number of years, he had been superintendent of the Tyer factory. Mr. McTernan was chosen to represent the Andover district in Massachusetts at the last general election.

The Commonwealth Rubber Co., referred to above, were incorporated in Maine, June 8, 1905, with \$500,000 capital authorized. They secured the plant at Reading occupied by the Chauncy Rubber Co. until 1880, and later operated under several different names. The Commonwealth company were heard from principally in connection with exploiting the Mitchell punctureless pneumatic tire, in 1906.

CONTINENTAL CAOUTCHOUC CO.—NEW APPOINTMENTS.

THE position of sales manager of the Continental Caoutchouc Co. (New York) has been filled by the appointment of O. S. Tweedy, for many years manager of the Chicago branch of The Diamond Rubber Co., and more recently with the Federal Rubber Co. (Cudahy, Wisconsin). General Manager Joseph M. Gilbert announces also the appointment of E. F. McMasters as general representative of the company in the West and Harry Sheldon as general representative in the East; also E. H.

Kidder as branch manager in Boston and Sam S. Poor in Philadelphia.

A NEW FIRM IN CRUDE RUBBER.

FRANCIS R. HENDERSON announces that the crude rubber business formerly conducted by him at No. 82 Beaver street, New York, will be continued under the firm name of Henderson & Korn, at the same location, Mr. Henderson having associated himself with Mr. Ernest A. Korn, who for a number of years was connected with Hagemeyer & Brunn, of New York, gaining a wide experience in Pará grades. Mr. Korn is at present in Manaus on business of the firm.

NEW FIRM IN THE WASTE RUBBER TRADE.

THE two firms, Erie Iron and Metal Co. and B. A. Zacks & Sons, dealers in scrap rubber and other waste materials at Erie, Pennsylvania, have combined their interests and formed a corporation styled Erie Iron and Steel Co., at Twentieth and Ash streets, Erie. The officers are: B. Emerman, president; B. A. Zacks, vice-president; J. H. Zacks, secretary; I. H. Emerman, treasurer; Henry Zacks, assistant secretary.

TIRE TRADE NOTES.

THE Empire Tire Co. (Trenton, New Jersey) have opened a branch at No. 322 North Broad street, Philadelphia, in which city the trade hitherto had been supplied through a jobbing house. E. B. Richardson is manager of the new branch.

Continental Caoutchouc Co. have located their Boston branch at a new location, No. 895 Boylston street. Mr. E. H. Kidder is the resident manager.

Morgan & Wright (Detroit, Michigan) on September 1 removed their Minneapolis branch to more commodious quarters, at No. 911 First avenue, S.

R. S. Ireland has been made sole sales manager of the Ajax-Grieb Rubber Co., with headquarters at Broadway and Fifty-seventh street, New York.

O. L. Weaver has resigned the position of Cincinnati branch manager of the Goodyear Tire and Rubber Co., which he held for six years, to become connected with the sales department of the Overland Automobile Co. (Indianapolis, Indiana).

The Diamond Rubber Co. (Akron, Ohio), who have not been producing motor cycle tires hitherto, announce that they are about to take on the manufacturing of such goods.

With reference to reports of troubles in motoring due to the heating of tires, the manufacturers of Dixon's flake graphite suggest the use of this material on the inner tube, to lessen the friction of the same on the tire casing.

Mr. J. B. Kavanaugh has resigned from the position of New York manager of The Fisk Rubber Co. on account of ill health, with the idea of resting for a year. He was formerly in the employ of The Hartford Rubber Works Co.

The Goodyear Tire and Rubber Co. (Akron, Ohio) report their production of bicycle tires to be more active than for several years past. They refer to more than 400 dealers—one to a town—now handling these tires. They have closed contracts for 1910 equipment with some large cycle manufacturers.

The automobile tire department of the Republic Rubber Co. (Youngstown, Ohio) was reported lately to be experiencing the busiest season since its establishment. For some time it had been operated three nights in each week.

Hagstrom Brothers Manufacturing Co., Inc. (Lindsburg, Kansas) recently voted to increase their capital stock from \$50,000 to \$150,000, particularly with reference to increasing the output of the rubber automobile tire sleeves which were illustrated in THE INDIA RUBBER WORLD in July (page 331). In addition to automobile rubber sleeves they are planning to put out a tire sleeve of similar description for motor cycles.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for five weeks, ending September 25:

COMMON STOCK, \$25,000,000.

[Less \$1,344,000 in treasury of a subsidiary company.]

Last Dividend, April 30, 1909—1%.

Week	Date	Sales	Shares	High	Low
Week August 28..	Sales 40,800 shares	High 56	Low 50 1/8		
Week September 4	Sales 15,775 shares	High 53 3/4	Low 52		
Week September 11	Sales 11,300 shares	High 52 3/4	Low 50		
Week September 18	Sales 20,850 shares	High 54 3/8	Low 50 3/4		
Week September 25	Sales 27,360 shares	High 56	Low 53 1/2		

For the year—High, 57 3/8, Aug. 19; Low, 27, Feb. 24.

Last year—High, 37 1/2; Low, 17 1/2.

FIRST PREFERRED STOCK, \$36,263,000.

Last Dividend, July 31, 1909—2%.

Week	Date	Sales	Shares	High	Low
Week August 28..	Sales 16,150 shares	High 123 1/2	Low 118 1/2		
Week September 4	Sales 3,210 shares	High 120 1/2	Low 119 1/2		
Week September 11	Sales 1,750 shares	High 120	Low 118 1/2		
Week September 18	Sales 2,600 shares	High 120 1/2	Low 118 3/4		
Week September 25	Sales 5,825 shares	High 123 1/4	Low 120 1/2		

For the year—High, 123 1/2, Aug. 24; Low, 08, Jan. 29.

Last year—High, 108; Low, 76.

SECOND PREFERRED STOCK, \$9,065,000.

Last Dividend, July 31, 1909—1 1/2%.

Week	Date	Sales	Shares	High	Low
Week August 28..	Sales 4,425 shares	High 89 1/2	Low 87		
Week September 4	Sales 300 shares	High 87 3/4	Low 87 3/8		
Week September 11	Sales 1,500 shares	High 88	Low 86 3/8		
Week September 18	Sales 750 shares	High 87 3/4	Low 87		
Week September 25	Sales 2,590 shares	High 89 1/4	Low 87 3/4		

For the year—High, 89 1/2, Aug. 23; Low, 67 1/2, Feb. 25.

Last year—High, 75 1/2; Low, 42.

SIX PER CENT CERTIFICATES, \$20,000,000.

\$15,000,000 issued.

Week	Date	Sales	Certs.	High	Low
Week August 28..	Sales 50 certs.	High 105 1/2	Low 105		
Week September 4	Sales 62 certs.	High 105 1/4	Low 105		
Week September 11	Sales 21 certs.	High 105 3/8	Low 105		
Week September 18	Sales 97 certs.	High 105 3/8	Low 104 3/4		
Week September 25	Sales 97 certs.	High 105	Low 104 3/8		

NEW INCORPORATIONS.

UNION RUBBER AND SUPPLY CO., August 6, 1909, under the laws of Missouri; capital, \$10,000, fully paid. Incorporators: Joseph S. Tracey (140 shares), Fred W. Brand (40 shares), John Coughlin (20 shares). Location, St. Louis.

This business was organized in 1902 as a copartnership, under the style, Union Supply Co., by Joseph F. Tracy and J. Frank Morrison. The new corporation has these officers: Joseph F. Tracy, president; John Coughlin, vice-president; Fred W. Brand, secretary and treasurer. Location, No. 410 Market street. A complete stock of mechanical rubber goods is carried, including leather and canvas belting.

Rubber Novelty Manufacturing Co., July 12, 1909, under Ohio laws; capital, \$10,000. Incorporators: C. D. Huber, George E. Gorz, F. O. Williams, Clarence A. Lindsay, and H. A. Mykrantz. Location, Ashland, Ohio.

Trenton Rubber Manufacturing Co., July 31, 1909, under New Jersey laws; capital, \$2,000. Incorporators: Joseph O. Stokes, William J. B. Stokes, and Francis C. Lowthrop. Location, Trenton, New Jersey. The former Trenton Rubber Manufacturing Co. recently adopted the name Thermoid Rubber Co. [see THE INDIA RUBBER WORLD, July 1, 1909—page 370], and the new corporation has been formed by the same interest for the sake of more fully protecting their interest in the goodwill of the old corporation.

Morgan & Wright, a corporation of Michigan, have qualified to do business in Illinois as a foreign corporation, under date of June 23, 1909. Charles J. Butler is president and J. P. Weston secretary, both of Detroit, Michigan.

West American Rubber Co., September 1, 1909, under the laws of California; capital authorized, \$50,000. Directors: V. C. Benjamin, William T. Gotbed, Caroline A. Benjamin, John D. Works, Lewis R. Works. Location, Los Angeles, California.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

THE following is an official statement of value of exports of manufactures of india-rubber and gutta-percha from the United States for ten fiscal years, ending June 30:

YEARS.	Belting, Packing and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
1908-09	\$1,498,445	\$1,202,673	\$3,823,956	\$6,615,074
1907-08	1,347,775	1,614,290	3,743,040	6,705,105
1906-07	1,253,369	1,231,898	3,729,643	6,214,910
1905-06	1,221,150	1,505,082	2,966,144	5,692,376
1904-05	994,100	1,214,342	2,572,375	4,780,817
1903-04	879,476	1,080,364	2,409,750	4,435,590
1902-03	819,985	1,056,491	2,299,875	4,176,351
1901-02	634,146	1,046,315	1,781,941	3,462,402
1900-01	565,726	724,015	1,727,527	3,017,268
1899-1900	541,830	420,746	1,405,212	2,367,788

The exports for the last fiscal year compare with the previous year as follows:

Decrease in boots and shoes	\$321,617
Increase in belting, etc.	\$150,670
Increase in miscellaneous	80,916
Total	231,586

Net decrease \$99,031

Exports of rubber boots and shoes (in pairs) have been as follows, by fiscal years ended June 30:

1901	1,450,100	1904	2,310,808	1907	2,310,420
1902	2,594,708	1905	2,390,539	1908	3,080,253
1903	2,307,401	1906	2,693,670	1909	2,397,435

Exports (in value) of reclaimed rubber and of waste rubber have been as follows:

	Reclaimed.	Waste
1908-09	\$414,861	\$402,897
1907-08	418,738	449,727
1906-07	665,109	548,695
1905-06	511,843	339,597
1904-05	522,902	204,945

IMPORTS INTO THE UNITED STATES.

YEARS.	India-rubber.	Gutta-percha.	TOTAL.
1908-09	\$1,391,770	\$71,819	\$1,463,589
1907-08	1,956,590	93,545	2,050,135
1906-07	2,262,783	191,064	2,453,847
1905-06	1,992,413	208,172	2,200,585
1904-05	1,389,064	117,735	1,506,799
1903-04	821,562	335,480	1,157,042
1902-03	665,972	225,198	891,170
1901-02	449,756	127,780	577,536
1900-01	478,663	163,337	642,000
1899-1900	564,088	254,332	818,420

SHIPMENTS TO NON-CONTIGUOUS COUNTRIES.

FOR the fiscal year ended June 30, 1909:

TERRITORIES.	Belting, Packing and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
Alaska	\$96,909	\$181,132	\$20,042	\$298,083
Hawaii	45,031	11,332	101,092	157,455
Porto Rico	0,277	308	69,936	70,521
Philippines	30,691	2,204	73,652	115,547
Total	\$190,908	\$194,976	\$264,722	\$650,606
Total, 1907-08	162,002	235,044	217,801	614,847
Total, 1906-07	197,568	215,630	167,488	580,626
Total, 1905-06	164,606	170,210	151,260	486,076
Total, 1904-05	107,356	181,204	116,314	404,874

It is nearly four years since motor fire appliances were first introduced in the city of Glasgow, Scotland, and a recent United States consular report states that "the results have been so satisfactory, from every point of view, that it is the intention to gradually substitute motor fire vehicles for steam fire engines, so that ultimately horse and steam power will be entirely dispensed with."

RUBBER FOOTWEAR PRICES HIGHER.

THE United States Rubber Co., under date of September 20, advised the trade of new discounts on rubber footwear, which has the effect of a material advance in prices, which it is stated has become necessary on account of the unprecedented high cost of crude rubber. The change in discounts consists of 20 per cent. being allowed now, as against 25, in the initial discount on each item in the company's lists. The Hood Rubber Co. have issued new price lists of the same date, with a similar change in discounts. The same is true of the Apsley Rubber Co. It may be stated, indeed, that the advance in footwear is general, in keeping with the upward movement of prices for rubber manufactures of all kinds.

RUBBER PRODUCTION IN AFRICA.

THE Prospects and Possibilities of Rubber Cultivation in West Africa" was the subject of an address before the African Trade Section of the Liverpool Chamber of Commerce, on July 12, by Mr. J. J. Fischer, who has long been engaged in the crude rubber trade at Liverpool. He is largely interested in trade generally with West Africa, in which region he once spent 20 years, besides which he has made many visits to the coast. Mr. Fischer is now managing director of the West African Rubber Plantations, Limited.

Funtumia elastica, a rubber tree indigenous to a large part of Africa, is highly regarded by Mr. Fischer. It yielded a large part of the production of the Gold Coast and Lagos in the days of the greatest export from those colonies. Since then the supply has gradually diminished, because the natives had cut down so many trees. After the government began to insist upon the trees being tapped, this was done so badly in many cases that the trees soon died. Now *Funtumia* is being planted in the British possessions, several years after the Germans made a beginning in Kamerun.

The United States consul at Durban reports that there are in Natal—in Zululand, for instance, large tracts of land suitable for rubber cultivation, but these are allotted only to persons who are British subjects or who may take out letters of naturalization in the colony.

At the London Rubber Exhibition samples of *Funtumia* were shown by Mr. Fischer's company. He said "The rubber was tried on a machine, also on exhibition, and it was found to be the strongest rubber at the exhibition. A strip cut off from a biscuit 5 inches long, 1 inch wide, and about $\frac{1}{8}$ inch thick, stretched out to 35 inches, seven times its length, before it broke.

The attendant at the machine said that he had never tested any rubber yet so strong as this."

The Mabira Forest (Uganda) Rubber Co., Limited, Mr. Fischer said, "also exhibited *Funtumia* rubber at the Rubber Exhibition. Their rubber was very black, I was told," said Mr. Fischer, "and not so strong. Since then they have improved the quality and got it paler, and it was sold at the same price recently as Ceylon plantation Pará rubber. If we could succeed in getting it still paler—to a bright amber color—it would fetch 6d. more per pound. This, I believe, is possible. *Funtumia elastica* rubber will, therefore, take the first place, always, provided it is planted and its latex scientifically treated."

The planting of *Hevea* rubber in various parts of Africa is also commended by Mr. Fischer. Several thousands of this species have been planted by the West African Plantations, Limited. The planting of *Funtumia* in certain districts is preferable, because this will succeed with less rainfall than is needed for *Hevea*.

Mr. Fischer devoted some remarks also to "manihoba" rubber (*Manihot*). "The Germans in East Africa," he said, "have found that this is the most remunerative for their country, and I see now that they have stripped £200,000 worth already."

An American consular official at Hongkong states that there would be very little market in China for rubber boots and overshoes of the patterns sold in the United States, but that if made according to Chinese styles considerable demand exists at the chief distributing ports of Hongkong, Canton, and Shanghai. The value of the imports of rubber footwear into the empire during 1907, the last year for which statistics are available, was \$244,000. With the Chinese the mark or brand (chop) plays an important part, and Americans seeking to build up trade in this line should adopt a distinctive mark, registered in the United States as well as in China, and place it on every shoe.

The highway commission of Massachusetts are at work upon a census of traffic on the highways of that State. While the returns are not complete, the commission figure that 45 per cent. of the total vehicular traffic is motor driven. Up to September 1 motorists had paid to the State of Massachusetts in registration and license fees \$151,935.52, which amount has been credited to the road maintenance account.

The *Observer* mentions the visit to Colombo of a young Chinese, Cheah Seng Yeah, who has a 750-acre plantation of rubber and coconuts in Penang. He was finding difficulty in gaining access to the Ceylon rubber estates.

Review of the Crude Rubber Market.

CURRENT quotations for crude rubber are unprecedented. A widespread impression that prices would decline steadily after the midsummer reaction from about \$2 a pound proved unfounded, and throughout the past month an advance has been in progress. Everywhere the story is the same—eager buying at rising prices wherever rubber is available. There are reports of business done in London at about \$2.23; at the last Antwerp sale lots were sold at an advance of a franc per kilogram above brokers' estimations.

It is yet between seasons for the arrival of rubber from the Amazon, and no other region is yielding an unusual amount of rubber. The active demand—evidently on an unusual scale—for consumption would alone tend to put up prices at such a time. The effect upon the trade, if present conditions should long continue, would likely prove very serious. But with increased supplies, and with factory

stocks assured until the crop season is well advanced, there can hardly fail to be a reduced level of prices. Meanwhile the cost of rubber goods is being put up by manufacturers everywhere. The effect on prices of speculative trading is not easy to point out at any time, and the position just now is more than unusually complex.

Arrivals of rubber (including cañcho) at Pará for the first three months of the crop year have been:

	1906.	1907.	1908.	1908.
July	1,840	1,370	1,300	1,400
August	1,090	1,500	1,800	1,870
September	2,070	2,410	2,355	21,860
Total	5,000	5,280	5,545	5,130
	[a—To September 28, 1909.]			

TO THE EDITOR OF THE INDIA RUBBER WORLD: In view of the prevailing high prices for rubber I think that the people in the Amazon regions will exert themselves this season to produce an unusually large crop. Receipts

at Pará, however, since the beginning of the crop year, have been lower than normal, due to unsettled conditions in the buying trade there. Manãos at present I believe to have a good stock of rubber in first hands.

As I understand the situation, the exporters at Pará, within a couple of months, expecting a decline in prices with the arrival of new rubber, made sales for forward delivery on a very low basis. They figured on the *aviadores*, as usual, being in need of money to meet their bills, and ready to sell rubber arriving in the new crop at prices dictated to them. Furthermore the buyers reached an agreement to remain out of the market to a certain extent, and it is stated that they were able to arrange with the shipping lines to reduce the frequency of sailings to Europe and New York—all with a view to bringing the *aviadores* (consignees) at Pará to terms.

While the result of the action here outlined has been to reduce the export of rubber below the extent which otherwise would have been probable. This condition is not likely to continue. Already the *aviadores* have been planning to act in concert, and with financial assistance from the Banco do Brazil, the export houses then seem likely to find their control of the Pará rubber market much lessened. The success of the *aviadores* does not mean, necessarily, lower prices of rubber, except in so far as a decline may follow the more prompt forwarding of rubber to the world's markets.

September 25, 1909.

S. CLARK.

Following are the quotations at New York for Pará grades, one year ago, one month ago, and September 30—the current date—all prices being practically nominal:

PARÁ.	Oct. 1, '08.	Sept. 1, '09.	Sept. 30.
Islands, fine new.....	94@ 95	@ 168	201@ 202
Islands, fine, old.....	none here	@ 175	none here
Upriver, fine new.....	102@ 103	@ 190	213@ 214
Upriver, fine old.....	106@ 107	none here	214@ 215
Islands, coarse, new.....	46@ 47	@ 64	78@ 79
Islands, coarse, old.....	none here	@ 75	82@ 83
Upriver, coarse, new.....	72@ 73	@ 113	131@ 132
Upriver, coarse, old.....	74@ 75	none here	none here
Cameté.....	52@ 53	@ 83	96@ 97
Caucho (Peruvian), ball..	63@ 64	@ 105	118@ 119
Caucho (Peruvian), sheet.	53@ 54	@ 86	90@ 91
Ceylon, fine sheet.....	105@ 106	@ 192	none here
Ceylon, crepe.....			218@ 220

AFRICAN.

Lopori ball, prime.....	82@ 83	@ 120	128@ 130
Lopori strip, prime.....	68@ 70	@ 118	none here
Aruwimi.....		@ 106	114@ 115
Upper Congo ball, red.....		@ 120	125@ 126
Ikelemba.....	none here	none here	none here
Sierra Leone, 1st quality...	82@ 83	@ 123	123@ 127
Massai, red.....	82@ 83	@ 123	126@ 127
Soudan niggers.....	58@ 59	@ 110	112@ 115
Cameroon ball.....	50@ 51	@ 105	89@ 90
Benguela.....	45@ 46	@ 80	81@ 82
Madagascar, pinky.....	67@ 68	@ 102	97@ 98
Accra flake.....	18@ 19	@ 24	23@ 24

CENTRALS.

Esmeralda, sausage.....	61@ 62	@ 95	100@ 102
Guayaquil, strip.....	46@ 47	@ 78	85@ 86
Nicaragua, scrap.....	59@ 60	@ 95	99@ 100
Panama.....	46@ 47	@ 83	84@ 85
Mexican, scrap.....	58@ 59	@ 95	100@ 102
Mexican, slab.....	42@ 43	@ 80	84@ 85
Mangabeira, sheet.....	43@ 44	@ 66	82@ 83
Guayule.....	20@ 30	@ 45	50@ 51

EAST INDIAN.

Assam.....	75@ 76	95@ 96	none here
Pontianak.....		@ 4 3/4	@ 5 1/4
Borneo.....	27@ 34	@ 40	52@ 53

NEW YORK RUBBER PRICES FOR AUGUST (NEW RUBBER).

	1909.	1908.	1907.
Upriver, fine.....	1.79@ 1.95	.89@ .96	1.08@ 1.15
Upriver, coarse.....	1.10@ 1.20	.65@ .69	.89@ .92
Islands, fine.....	1.65@ 1.84	.83@ .90	1.04@ 1.09
Islands, coarse.....	.62@ .75	.43@ .46	.60@ .62
Cameté.....	.80@ .92	.51@ .53	.66@ .69

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for car-load lots, per pound—show practically no change since last month:

Old rubber boots and shoes—domestic.....	103 3/4@ 10 1/2
Old rubber boots and shoes—foreign.....	10 @ 10 1/4
Pneumatic bicycle tires.....	63 1/4@
Automobile tires.....	6 7/8@ 7
Solid rubber wagon and carriage tires.....	9 @ 9 1/2
White trimmed rubber.....	10 @ 11
Heavy black rubber.....	6 1/2@ 6 3/4

Air brake hose.....	4 1/2@ 4 3/4
Garden hose.....	3 @ 3 1/8
Fire and large hose.....	3 3/4@ 3 1/2
Mating.....	2 @ 2 1/4

Statistics of Para Rubber (Excluding Caucho).

	NEW YORK.			Total 1909.	Total 1908.	Total 1907.
	Fine and Medium.	Coarse.				
Stocks, July 31.....	203	107	=	230	286	200
Arrivals, August.....	308	192	=	500	816	487
Aggregating.....	431	290	=	730	1102	777
Deliveries, August.....	309	205	=	574	973	537
Stocks, August 31.....	62	94	=	156	129	240

	PARÁ.			ENGLAND.		
	1909.	1908.	1907.	1909.	1908.	1907.
Stocks, July 31.....	550	250	165	245	200	675
Arrivals, August.....	1610	1490	1380	510	1150	450
Aggregating.....	2160	1740	1545	755	1350	1125
Deliveries, August.....	1250	1435	1255	460	975	500
Stocks, August 31.....	910	305	200	295	375	625

	1909.	1908.	1907.
World's visible supply, August 31.....	1,981	1,055	1,792
Pará receipts, July 1 to August 31.....	2,700	2,570	2,470
Pará receipts of Caucho, same dates.....	580	600	460
Afloat from Pará to United States, Aug. 31	none	438	124
Afloat from Pará to Europe, Aug. 31.....	620	417	513

Liverpool.

WILLIAM WRIGHT & Co. report [September 1]:

Fine Pará.—As was to be expected after the phenomenal rise of last month, there have been considerable fluctuations, but on the whole the market has been wonderfully steady, especially for the later positions, and, all things considered, we think manufacturers will for this season have to reckon on a basis of 6 shillings [= \$1.44] for fine. Present indications point to a further advance in values during next month, owing to small supplies and short sales; but once the squeeze is over, we cannot think that today's level of values can be maintained without severe injury to the trade generally. When all is said and done, supply and demand must regulate prices, and although there is no indication of a slump in prices, still as regards later deliveries a decline of at least 4d. to 5d. per pound is what might be reasonably expected. Manufacturers must bear in mind that all indications point to a record era of prosperity in America, and the American demand is the key to the situation.

Antwerp.

RUBBER STATISTICS FOR AUGUST.

DETAILS.	1909.	1908.	1907.	1906.	1905.
Stocks, July 31.....	524,512	695,551	931,356	531,441	819,559
Arrivals in August.....	220,260	640,712	309,067	587,122	509,389
Congo sorts.....	147,313	522,847	323,522	438,005	375,263
Other sorts.....	81,047	117,865	77,445	149,117	134,126
Aggregating.....	753,772	1,336,263	1,241,923	1,109,562	1,328,948
Sales in August.....	508,021	461,749	500,509	422,690	779,749
Stocks, August 31.....	244,851	874,514	740,514	686,867	558,202
Arrivals since Jan. 1.....	3,162,684	3,473,739	3,591,465	3,933,727	3,719,973
Congo sorts.....	2,325,028	2,952,211	2,986,244	2,998,843	2,911,293
Other sort.....	837,656	520,528	515,221	934,884	808,680
Sales since Jan. 1.....	3,513,568	3,606,119	3,419,135	3,982,047	3,702,832

RUBBER ARRIVALS FROM THE CONGO.

SEPTEMBER 14.—By the steamer *Albertville*:

Bunge & Co.....	(Société Générale Africaine) kilos	55,600
do.....	(Chemins de fer Grands Lacs)	2,600
do.....	(Société Abir)	6,900
do.....	(Comptoir Commercial Congolais)	19,100
do.....	(Comité Spécial Katanga)	5,200
do.....	(Cie. du Kasai)	73,700
Société Coloniale Anversoise.....	(Belge du Haut Congo)	1,100
do.....	(Sud Cameroun)	5,100
Cassart & Henrion.....		20
		169,320

AUGUST 17.—By the steamer *Bruxellesville*:

Bunge & Co.....	(Société Générale Africaine) kilos	45,700
do.....	(Comptoir Commercial Congolais)	23,600
do.....	(Chemins de fer Grands Lacs)	300
Société Coloniale Anversoise.....	(Belge der Haut Congo)	13,000
do.....	(Cie. du Lomami)	8,000
do.....		9,500
L. & W. Van de Velde.....	(Cie. du Kasai)	59,000
		2,000
		161,100

Rotterdam.

At the inscription of September 2 the offerings amounted to about 63 tons, including 34 tons of various Congo sorts

for account of Nieuwe Afrikaansche Handels Vennootschap; 12 tons Upper Congo for other parties, and several lots of Java plantation, of which 8,700 kilos rambong (*Ficus*) and 185 kilos Castilloa; also 6,750 kilos Niger rubber.

Para.

AUGUST 27.—On account of the unsteady Pará market to-day's auction here has given a rather irregular result and prices paid average by about 5 per cent. lower than valuations. We consider actual level of prices for medium sorts advantageous and fit to induce manufacturers to cover their requirements in these sorts, the more so as quantities offered in next month's auction will likely be very moderate. Also we are of opinion that the Pará market will not show any serious decline in the near future, as supplies at Pará will—as far as can be foreseen at present—remain poor for the next few months.—ZELLER, VILLINGER & Co.

New York.

In regard to the financial situation, Albert B. Beers (broker in crude rubber and commercial paper, No. 68 William street, New York) advises as follows: "During September the demand for commercial paper has continued fairly good, at slightly advanced rates, the best rubber names going at 5@5½ per cent., and those not so well known 5¼@6 per cent."

IMPORTS FROM PARA AT NEW YORK.

The Figures Indicate Weight in Pounds.

AUGUST 30.—By the steamer *Boniface*, from Manáos:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
Poel & Arnold.....	43,400	10,900	67,400	200=	121,900
A. T. Morse & Co.....	64,100	4,300	7,900	400=	76,700
General Rubber Co.....	39,300	6,800	6,900	3,900=	56,900
Hagemeyer & Brunn.....	.....	.....	23,100	.....=	23,100
C. P. dos Santos.....	1,800	300	700	.....=	2,800
Total	148,600	22,300	106,000	4,500=	281,400

AUGUST 27.—By the steamer *Acre*, from Pará:

A. T. Morse & Co.....	8,000	700=	8,700
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SEPTEMBER 14.—By the steamer *Maranhense*, from Manáos and Pará:

Poel & Arnold.....	204,800	17,200	149,200	20,700=	391,900
New York Commercial Co..	203,900	24,000	74,600	8,000=	310,500
A. T. Morse & Co.....	119,000	9,400	58,100	3,900=	190,400
Hagemeyer & Brunn.....	47,500	2,100	77,600	.....=	127,500
General Rubber Co.....	21,200	9,000	40,100	200=	70,500
C. P. dos Santos.....	17,500	1,400	9,900	.....=	28,800
Edmund Reeks & Co.....	3,200	.....	2,600	.....=	5,800
Total	617,100	63,100	412,400	34,800=	1,125,400

SEPTEMBER 14.—By the steamer *Napo*, from Iquitos:

G. Amsinek & Co.....	32,900	.....	6,000	118,800=	157,700
Thomsen & Co.....	4,100	.....	300	22,100=	26,500
Neuss, Hesselein & Co.....	8,000	.....	1,900	.....=	9,900
Total	45,000	.....	8,200	140,900=	194,100

[NOTE.—The steamer *Justin*, from Pará is due about October 1, with a cargo of 650 tons.]

PARA RUBBER VIA EUROPE.

SEPT. 2.—By the <i>Grant</i> =Hamburg: New York Commercial Co. (Fine).....	7,500
SEPT. 7.—By the <i>Advance</i> =Mollendo: W. R. Grace & Co. (Caucho).....	11,000
SEPT. 9.—By the <i>New York</i> =London: Poel & Arnold (Coarse).....	7,000
SEPT. 15.—By the <i>Majestic</i> =London: Poel & Arnold (Coarse).....	33,500
SEPT. 16.—By the <i>Lincoln</i> =Hamburg: N. Y. Com. Co. (Fine).....	5,500
N. Y. Com. Co. (Coarse).....	14,500
SEPT. 20.—By the <i>Cincinnati</i> =Hamburg: N. Y. Com. Co. (Fine).....	11,500
N. Y. Com. Co. (Coarse).....	20,500
SEPT. 21.—By the <i>Caronia</i> =Liverpool: N. Y. Com. Co. (Fine).....	40,000

OTHER NEW YORK ARRIVALS.

CENTRALS.

[*This sign, in connection with imports of Centrals, denotes Guayule rubber.]

AUG. 21.—By the <i>Amerika</i> =Hamburg: A. T. Morse & Co.....	11,000
AUG. 23.—By the <i>Byron</i> =Bahia: J. H. Rossbach & Bros.....	25,000
New York Commercial Co.....	47,500
AUG. 23.—By the <i>Manzanillo</i> =Tampico: Ed. Maurer.....	*145,000
AUG. 23.—By the <i>Colon</i> =Colon: Isaac Brandon & Bro.....	10,000
Piza, Nephews & Co.....	2,500
A. Rosenthal & Sons.....	2,500
Anderson Trading Co.....	1,000
Meeke & Co.....	1,000
AUG. 24.—By the <i>Antilles</i> =New Orleans: A. T. Morse & Co.....	3,000
AUG. 24.—By the <i>Tudor Prince</i> =Bahia: Poel & Arnold.....	22,500
A. Hirsch & Co.....	15,000
AUG. 25.—By the <i>El Dorado</i> =Galveston: Continental & Mexican Rubber Co.....	*65,000
AUG. 25.—By the <i>Joachim</i> =Colon: J. Sambrade & Co.....	3,000
Cabello & Blanco.....	1,500
A. Held.....	1,500
Wessels Kuhlenskampff Co.....	1,500
United Fruit Co.....	1,000
Eggers & Heinlein.....	1,000
AUG. 26.—By the <i>Acre</i> =Natal: A. D. Hitch & Co.....	6,000
AUG. 27.—By the <i>Monterey</i> =Mexico: H. Marquardt & Co.....	3,000

E. N. Tibbals & Co.....	1,500
Graham, Hinkley & Co.....	1,000
E. Steiger & Co.....	1,000
AUG. 30.—By the <i>El Sud</i> =Galveston: E. Boehringer.....	*11,500
AUG. 30.—By the <i>Momus</i> =New Orleans: Manhattan Rubber Mfg. Co.....	1,500
Eggers & Heinlein.....	1,000
AUG. 30.—By the <i>Panama</i> =Colon: Roldan & Van Sickle.....	4,000
L. Johnson & Co.....	2,000
Henry Mann & Co.....	2,000
Fidauque Bros.....	1,500
Piza, Nephews Co.....	1,500
W. R. Grace & Co.....	1,000
Pablo-Calvert Co.....	1,000
G. Amsinek & Co.....	1,000
Demarest Bros.....	1,000
SEPT. 1.—By the <i>Hugia</i> =Tampico: Ed. Maurer.....	*75,000
Poel & Arnold.....	*35,000
N. Y. Commercial Co.....	*33,000
Isaac Kubie & Co.....	*34,000
SEPT. 1.—By the <i>Tugas</i> =Colombia: Kugelman & Co.....	4,500
W. R. Grace & Co.....	1,500
J. A. Pauli & Co.....	1,500
Brandon & Bros.....	1,000
Maitland-Cappell Co.....	5,000
Kimhard & Co.....	2,000
Cabello & Blanco.....	1,000
SEPT. 4.—By the <i>Merida</i> =Frontera: Harburger & Slack.....	3,500
General Export Co.....	3,000
E. Steiger & Co.....	1,500
Chilian Trading Co.....	1,000
Graham, Hinkley & Co.....	1,000
SEPT. 4.—By the <i>El Uba</i> =Galveston: Continental & Mexican Co.....	*65,000
SEPT. 7.—By the <i>Advance</i> =Colon: Jose, Julia & Co.....	5,000
G. Amsinek & Co.....	5,000
W. R. Grace & Co.....	1,500
A. Rosenthal's Sons.....	1,500
Eggers & Heinlein.....	1,500
J. Sambrade & Co.....	1,500
Henry Mann & Co.....	1,000
R. F. Barthold.....	1,000
Wessels-Kuhlenskamp Co.....	1,000
SEPT. 7.—By the <i>Voltaire</i> =Bahia: J. H. Rossbach Bros.....	13,500
A. Hirsch & Co.....	6,500
SEPT. 8.—By the <i>Yumuri</i> =Tampico: Ed. Maurer.....	*135,000
SEPT. 8.—By the <i>LI Rig</i> =Galveston: Continental & Mexican Co.....	*50,000
Ed. Boehringer.....	*15,000

SEPT. 10.—By the <i>Allianza</i> =Colon: Brandon & Bro.....	17,000
Roldan & Van Sickle.....	6,500
L. Johnson & Co.....	6,500
J. Sambrade & Co.....	4,500
A. Santos & Co.....	3,500
G. Amsinek & Co.....	3,500
Meeke & Co.....	2,500
Demarest & Co.....	2,500
National Seig Mache Co.....	2,000
Elias & Abdou.....	1,500
Suzarte & Whitney.....	1,000
Henry Mann & Co.....	1,000
A. Rosenthal's Sons.....	1,000
SEPT. 10.—By the <i>Grecian</i> =Bahia: J. H. Rossbach & Bros.....	26,000
N. Y. Commercial Co.....	20,000
SEPT. 10.—By the <i>Sigismond</i> =Colon: H. C. Coleman.....	2,000
Schulte & Goschen.....	2,000
A. Held.....	2,000
Leauz & Co.....	1,000
SEPT. 11.—By the <i>Esperanza</i> =Frontera: Harburger & Slack.....	3,000
E. Steiger & Co.....	1,500
E. N. Tibbals & Co.....	1,000
General Export Co.....	1,000
A. T. Morse & Co.....	1,000
SEPT. 13.—By the <i>Comus</i> =New Orleans: A. N. Rotholz.....	3,000
A. T. Morse & Co.....	3,000
SEPT. 14.—By the <i>Cienfuegos</i> =Tampico: New York Commercial Co.....	*33,000
Ed. Maurer.....	*33,000
SEPT. 14.—By the <i>El Dorado</i> =Galveston: Continental & Mexican Co.....	*65,000
Ed. Boehringer.....	*5,000
SEPT. 14.—By the <i>Sibiria</i> =Greytown: G. Amsinek & Co.....	8,000
Jose Julia & Co.....	1,500
Roldan & Van Sickle.....	1,000
Pablo-Calvert Co.....	1,500
A. Rosenthal's Sons.....	1,000
SEPT. 15.—By the <i>Colon</i> =Colon: G. Amsinek & Co.....	4,000
Brandon & Bros.....	3,500
A. Rosenthal's Sons.....	3,000
American Trading Co.....	3,000
Carvalhos & Co.....	2,500
Andean Trading Co.....	2,500
J. Sambrade & Co.....	1,000
Henry Mann & Co.....	1,000
SEPT. 16.—By the <i>Momus</i> =New Orleans: A. T. Morse & Co.....	1,500
Eggers & Heinlein.....	1,500
SEPT. 17.—By the <i>Oraba</i> =Colombia: A. M. Capen's Sons.....	4,000
L. Delius & Co.....	2,500
R. Castillos & Co.....	2,000
Kunhardt & Co.....	2,000

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No. 17. Particularly adapted to softening material for tubing machine. Almost universally used for waterproofing wire.

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SEPT. 17.—By the *California*=Mexico:
H. Marquardt & Co. 6,500

SEPT. 17.—By the *Mexico*=Vera Cruz:
American Trading Co. 2,000
E. N. Tibbals & Co. 2,000
H. Marquardt & Co. 2,000
Harburger & Stack. 2,000
E. Steiger & Co. 1,000
L. M. Chemedlin Co. 1,000 10,000

SEPT. 18.—By the *Campania*=Liverpool:
Poel & Arnold. 10,000

SEPT. 20.—By the *Zeeland*=Antwerp:
Poel & Arnold. *55,000

SEPT. 20.—By the *Manzanillo*=Tampico:
Ed. Maurer. *70,000
New York Commercial Co. *33,000 *103,000

SEPT. 20.—By the *Tennyson*=Bahia:
A. Hirsch & Co. 45,000
New York Commercial Co. 25,000
J. H. Rossbach Bros. 22,500 92,500

CENTRALS NO. 9.

SEPT. 20.—By the *El Mor*=Galveston:
Continental & Mexican Co. *135,000

SEPT. 21.—By the *Panama*=Colon:
Piza, Nephews & Co. 10,000
W. R. Grace & Co. 4,000
G. Amsinck & Co. 3,500
West Coast Rubber Co. 2,000
Demarest Bros. 1,500 21,000

AFRICAN.

AUG. 21.—By the *Amerika*=Hamburg:
A. T. Morse & Co. 15,000

AUG. 23.—By the *Celtic*=Liverpool:
General Rubber Co. 45,000
Livesey & Co. 11,500
A. T. Morse & Co. 2,500
George A. Alden & Co. 2,500 61,500

AUG. 24.—By the *Zeeland*=Antwerp:
General Rubber Co. 28,000

AUG. 25.—By the *Coronia*=Liverpool:
George A. Alden & Co. 11,500
Poel & Arnold. 9,000
Livesey & Co. 5,500
Rubber Import Co. 7,000 33,000

AUG. 26.—By the *Delphine*=Lisbon:
General Rubber Co. 22,500

AUG. 29.—By the *Moltke*=Genoa:
George A. Alden & Co. 8,000

AUG. 31.—By the *Kroonland*=Antwerp:
Joseph Cantor. 5,000
W. L. Gough & Co. 4,000 9,000

SEPT. 2.—By the *Grant*=Hamburg:
A. T. Morse & Co. 58,000
W. L. Gough & Co. 4,500
General Rubber Co. 4,500 67,000

SEPT. 2.—By the *Teutonic*=London:
Poel & Arnold. 22,500

SEPT. 3.—By the *Produce*=Havre:
George A. Alden & Co. 5,500

SEPT. 4.—By the *Victoria*=Hamburg:
General Rubber Co. 120,000
A. T. Morse & Co. 11,000
George A. Alden & Co. 4,500 125,500

SEPT. 7.—By the *Baltic*=Liverpool:
A. T. Morse & Co. 20,000
W. L. Gough & Co. 9,000 29,000

SEPT. 8.—By the *Carmania*=Liverpool:
Livesey & Co. 11,000
George A. Alden & Co. 8,000 19,000

SEPT. 9.—By the *Pennsylvania*=Hamburg:
George A. Alden & Co. 10,000
W. L. Gough & Co. 2,000 12,000

SEPT. 10.—By the *Hudson*=Havre:
Poel & Arnold. 70,000
General Rubber Co. 11,000
Rubber Import Co. 7,000 88,000

SEPT. 10.—By the *Anchen*=Lisbon:
General Rubber Co. 68,000

SEPT. 13.—By the *Arabic*=Liverpool:
A. T. Morse & Co. 7,000
George A. Alden & Co. 5,000 12,000

SEPT. 13.—By the *Vaderland*=Antwerp:
A. T. Morse & Co. 210,000
Poel & Arnold. 80,000
George A. Alden & Co. 34,000
Rubber Trading Co. 22,000
Robinson & Co. 2,000 368,000

SEPT. 16.—By the *Lincoln*=Hamburg:
A. T. Morse & Co. 170,000
Poel & Arnold. 27,000
George A. Alden & Co. 15,000
Rubber Trading Co. 8,000 220,000

SEPT. 18.—By the *St. Louis*=London:
Poel & Arnold. 25,000

SEPT. 18.—By the *Campania*=Liverpool:
Poel & Arnold. 60,000
General Rubber Co. 22,500
George A. Alden & Co. 11,000
H. A. Gould Co. 9,000 102,500

SEPT. 20.—By the *Cincinnati*=Hamburg:
Geo. A. Alden & Co. 8,000
A. T. Morse & Co. 3,000
General Rubber Co. 2,500 13,500

SEPT. 20.—By the *Zeeland*=Antwerp:
Poel & Arnold. 90,000
General Rubber Co. 22,500
George A. Alden & Co. 3,500
A. T. Morse & Co. 2,000 118,000

SEPT. 20.—By the *Celtic*=Liverpool:
George A. Alden & Co. 10,000
W. L. Gough & Co. 9,000 19,000

SEPT. 20.—By the *Amsterdam*=Rotterdam:
Poel & Arnold. 100,000
George A. Alden & Co. 35,000 135,000

SEPT. 21.—By the *Coronia*=Liverpool:
Poel & Arnold. 58,000
George A. Alden & Co. 11,500
Livesey & Co. 15,000 84,500

SEPT. 22.—By the *Oceanic*=Havre:
Livesey & Co. 7,000

SEPT. 22.—By the *Bluecher*=Hamburg:
Poel & Arnold. 70,000
A. T. Morse & Co. 18,000
W. L. Gough & Co. 11,000
Rubber Trading Co. 7,000 106,000

EAST INDIAN.

[*Denotes plantation rubber.]

AUG. 23.—By the *St. Louis*=London:
A. T. Morse & Co. *13,500

AUG. 30.—By the *Katana*=Colombo:
A. T. Morse & Co. *42,000
New York Commercial Co. *11,500 *53,500

AUG. 30.—By the *Minneaska*=London:
General Rubber Co. *11,500

SEPT. 2.—By the *Teutonic*=London:
Poel & Arnold. *36,000

SEPT. 4.—By the *St. Paul*=London:
Poel & Arnold. *67,000
New York Commercial Co. 30,000 97,000

SEPT. 7.—By the *Minnehaha*=London:
A. T. Morse & Co. *13,500
General Rubber Co. *7,000 *20,500

SEPT. 7.—By the *St. Paul*=London:
Poel & Arnold. 10,000

SEPT. 7.—By the *Midenfels*=Colombo:
A. T. Morse & Co. *11,500

SEPT. 9.—By the *Adriatic*=London:
Poel & Arnold. *65,000
Poel & Arnold. 7,000 72,000

SEPT. 11.—By the *New York*=London:
Poel & Arnold. *9,000

SEPT. 13.—By the *Vaderland*=Antwerp:
Poel & Arnold. *25,000

SEPT. 13.—By the *Minneapolis*=London:
General Rubber Co. *34,000
A. T. Morse & Co. *22,000 *56,000

SEPT. 15.—By the *Kasama*=Colombo:
New York Commercial Co. *13,000
A. T. Morse & Co. *5,000 *18,000

SEPT. 15.—By the *Majestic*=London:
Poel & Arnold. *15,000

SEPT. 18.—By the *Seneca*=Singapore:
O. Isenstein & Co. 15,000
Heabler & Co. 9,000 24,000

SEPT. 18.—By the *St. Patrick*=Colombo:
New York Commercial Co. *5,500

SEPT. 18.—By the *St. Louis*=London:
Poel & Arnold. *35,000

SEPT. 20.—By the *Pathau*=Singapore:
Heabler & Co. 34,000
Poel & Arnold. 33,000

W. L. Gough & Co. 13,500
O. Isenstein & Co. 28,000 108,500

SEPT. 20.—By the *Minnetonka*=London:
General Rubber Co. *22,500

SEPT. 21.—By the *Caronia*=Liverpool:
Poel & Arnold. 9,000

SEPT. 22.—By the *Oceanic*=London:
Poel & Arnold. *90,000
New York Commercial Co. *40,000
A. T. Morse & Co. *2,500 *132,500

GUTTA-JELUTONG.

AUG. 23.—By the *Kennebec*=Singapore:
Heabler & Co. 125,000
W. L. Gough & Co. 110,000
L. Littlejohn & Co. 100,000 335,000

SEPT. 17.—By the *St. Patrick*=Singapore:
Heabler & Co. 150,000
Poel & Arnold. 110,000 260,000

SEPT. 18.—By the *Seneca*=Singapore:
Heabler & Co. 300,000
W. L. Gough & Co. 175,000
Poel & Arnold. 150,000
L. Littlejohn & Co. 150,000
D. A. Shaw & Co. 65,000 840,000

SEPT. 20.—By the *Pathau*=Singapore:
Heabler & Co. 650,000
Poel & Arnold. 265,000
W. L. Gough & Co. 250,000
D. A. Shaw & Co. 225,000
M. Weschner & Co. 225,000
L. C. Hopkins Co. 110,000 1,725,000

GUTTA-PERCHA.

AUG. 26.—By the *Walderssee*=Hamburg:
E. Oppenheim. 11,500

AUG. 30.—By the *Minneaska*=London:
Heabler & Co. 44,500

SEPT. 2.—By the *Grant*=Hamburg:
E. Oppenheim. 14,000

SEPT. 18.—By the *Seneca*=Singapore:
Otto Isenstein & Co. 15,000
Heabler & Co. 15,000 30,000

SEPT. 20.—By the *Pathau*=Singapore:
Heabler & Co. 50,000

SEPT. 22.—By the *Bluecher*=Hamburg:
E. Oppenheimer. 15,000

BALATA.

AUG. 24.—By the *Coppename*=Demerara:
Ed. Maurer. 3,000

SEPT. 2.—By the *Korona*=Demerara:
George A. Alden & Co. 9,000
J. A. Pauli & Co. 3,000
Smith, Sons & Co. 2,000 14,000

SEPT. 14.—By the *Maracovic*=Trinidad:
G. Amsinck & Co. 25,000

SEPT. 17.—By the *Maracas*=Bolivar:
American Trading Co. 4,500
J. A. Pauli & Co. 4,000
Frame & Co. 4,000
Middleton & Co. 3,000 15,500

SEPT. 20.—By the *Coppename*=Demerara:
Middleton & Co. 11,500
G. Amsinck & Co. 4,500
Frame & Co. 3,500 19,500

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK - AUGUST.

Imports:	Pounds.	Value.
India-rubber	2,399,394	\$3,151,023
Balata	25,990	13,241
Gutta-percha	82,371	10,649
Gutta-jelutong (Pontianak)	2,289,201	76,295
Total	4,796,955	\$3,251,208
Exports:		
India-rubber	314,202	\$324,493
Reclaimed rubber	77,501	9,078
Rubber scrap, imported	2,063,964	\$211,294

BOSTON ARRIVALS.

JULY 28.—By the *Hohenfels*=Colombo:
George A. Alden & Co., Ceylon. 4,700

AUG. 2.—By the *Crostafels*=Colombo:
George A. Alden & Co., Ceylon. 1,760

AUG. 12.—By the *Kennebec*=Singapore:
Heabler & Co., Gutta-jelutong 258,800
George A. Alden & Co., Gutta-jelutong 250,000 508,800



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London.

AUGUST 23.—At the regular fortnight auction of August 20 about 17¾ tons of Straits and 22¼ tons Ceylon plantation rubber were offered. The sale not being concluded, it was continued to-day. On the former date prices were slightly below those of the preceding auction, but to-day shows a recovery. Vallambrosa smoked sheet sold up to 8s. 1¼d. [= \$1.97.2] and Highlands to 7s. 11¾d. [= \$1.94]. Fine lots of very fine crepe sold at 7s. 9d. to 7s. 9½d. [= \$1.89.5]. Hard fine Pará sold at 8s. 3d. [= \$2.00.6].

SEPTEMBER 3.—At to-day's auction 100½ tons Straits and 12¾ tons Ceylon plantation were offered, a large proportion

of which found buyers at an advance of 4d. 6a 8d. per pound over last sale quotations. The few parcels of smoked sheet on offer were again eagerly bid for and realized 8s. 5d. to 8s. 6d. [= \$2.06.8], the latter figure being paid for some of the high-lands sheet. Roschaugh crepe sold at 8s. 4d., and several other parcels of this grade fetched 8s. 3d. and over.

Gow, Wilson & Stanton, Limited, quote for plantation:

Sheet and Biscuits:

Fine smoked sheet.....	8s.	5d.	at 8s.	6d.
Good to fine sheet.....	8s.	6½d.	at 8s.	3¼d.
Good to fine biscuits.....	8s.	6¼d.	at 8s.	3½d.

Crepe:

Very pale.....	8s.	2d.	at 8s.	4d.
Medium and pale-b.....	7s.	6d.	at 7s.	1d.
Dark and brown.....	4s.	10d.	at 6s.	10d.

Unwashed Scrap:

Medium to fine.....	5s.	3d.	at 5s.	8d.
Dark to low.....	2s.	7d.	at 5s.	

Lewis & Peat report fine hard Pará at 8s. 2d. [= \$1.98.7].

SEPTEMBER 10.—The market during the past week has been steady, and a considerable business has been done, and to-day there is an active demand with business done at again higher prices. In plantation rubber, only a small business doing privately, as there is very little on offer. Fine hard Pará for September delivery up to 8s. 2d. [= \$1.98.6]. Next auction on Tuesday, September 21.

SEPTEMBER 17.—The market during the past week has been very excited, and a large business has been done. September hard fine Pará has sold up to 8s. 7d. [= \$2.08.8].

GOOD RUBBER FROM UGANDA.

Forty-five cases fine plantation smoked sheet sold at September auction at 8s. 2¼d. [= \$1.99].

AUGUST PLANTATION YIELDS (IN POUNDS).

	1908.	1909.
Anglo-Malay Rubber Co.....	30,207	47,183
Bukit Rajah Rubber Co.....		20,938
Consolidated Malay Rubber Estates.....	10,177	18,800
Damansara (Selangor) Rubber Co.....		24,600
Federated (Selangor) Rubber Co.....		8,433
Lanadron Rubber Estates.....	16,708	25,636
Ledbury Rubber Estates.....	1,150	6,580
London Asiatic Rubber and Produce Co.....	3,343	6,927
Malacca Rubber Plantations.....	4,000	25,000
Pataling Rubber Estates Syndicate.....	7,002	12,826
Perak Rubber Plantations.....	4,875	10,200
Sumatra Pará Rubber Plantation.....	6,384	9,360

Eight Months, Including August.

	1908.	1909.
Anglo-Malay.....	216,973	316,032
Damansara (Selangor).....	74,183	120,139
Lanadron.....	110,192	160,168
Ledbury.....	14,289	37,200
London Asiatic.....	17,497	40,127
Pataling.....	42,840	87,528
Sumatra Pará.....	42,732	58,470

RUBBER AUCTIONS—ALTERATIONS.

At a meeting of Rubber Brokers and Buyers on September 1 it was agreed that the auctions after this week will take place on Tuesdays, at 11 o'clock, and that catalogues are to be out and samples on show on the Monday previous by 10.30 a. m. Any rubber not shown by sample then, is not to be offered in the auction on the Tuesday.

The first Tuesday's auction will take place on September 14, and thereafter every fortnight.

That Brokers will bracket small lots together as much as possible, and suggest to their importers to advise the shippers not to send less than 2½ cwt. of each quality, now that the trade is so increasing, as small lots can be held back by the planters till they make a fresh shipment.

That the rule be to sell about 100 lots per hour in the auctions, and to advance ¼d. per pound at a time on Plantation rubber. All lots under 2 cwt. to be listed in the catalogue as "Star Lots," and when not bracketed with other lots at the auction, to be offered at the conclusion of the other portion of the catalogues, or sold privately, whichever the selling broker decides.

The auctions will close at 5 p. m. on Tuesdays.

African Rubbers.

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GUTTA-PERCHA

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Vol. XLI. No. 2.

NOVEMBER 1, 1909.

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WHAT HELPS TO KEEP RUBBER DEAR.

NO doubt it would seem reasonable to many minds, if not absolutely certain, that a heavy advance in rubber prices could not fail within a short period to lead to a corresponding increase in the output of rubber. This is the general commercial rule, and consumers of rubber seem generally disposed to apply it to rubber production. In view of present price conditions, however, it may be worth while to consider how the bringing of rubber to market differs from dealing in most other commodities. In the first place, however well systematized the production of rubber may be in portions of the Amazon valley, this condition does not extend to the whole region, and whatever improvement may be attempted, progress is necessarily slow, if for no other reason than the scarcity of population suitable for gathering rubber.

A large percentage of the rubber gatherers in Brazil to-day remain on the ground temporarily, so that each season a fresh immigration is necessary, very much as if the city of San Francisco should plan to lay new pavements six months in every year, and for each new piece of work should send to Italy for laborers, with the idea that most of them would return home after the work was finished. The rubber which is coming into Pará to-day is being got out by *seringuciros* who were employed as long ago, perhaps, as January last, and most of the rub-

ber to come out during the present cutting season will be the result of similar engagements. The fact that rubber is selling at New York for \$1 a pound more than when rubber gatherers were last employed to go upriver naturally, therefore, will have little effect in the way of increasing this season's output. The high price level can hardly have a widespread effect upon the employment of rubber gatherers before next January, and the crop resulting from engagements made then will not all reach market before the summer of 1911.

But other conditions are to be considered than the labor supply. There is a scarcity of local capital. It is necessary for the *seringal* owner, particularly if far from the primary markets, to be equipped with supplies for his working force in advance for the whole season. And not only this, it is necessary to make advances in respect of immigrants from Ceará, for instance, for their families and for transportation and the like, probably not less than 1 conto [= \$62.50] for each laborer secured. It will be seen, then, that the *seringal* owner, in order to increase his present scale of operations, must have considerable capital in order to plan and lay out money practically a year ahead for the purpose. He must apply to the *aviadores* for accommodation, and as will readily be seen these firms are not always able to make larger than accustomed advances.

There are many *seringales* in the lower Amazon districts which for many years have yielded practically a fixed amount of rubber, without regard to the state of the markets. Owing to the habit of many persons in interest in these of living in Europe and drawing on the home houses for funds all the time, there is not always a reserve of capital at home with which to take advantage of new conditions in the market with a view to increased operations if such might prove desirable. It is even less easy to secure means whereby to extend rubber gathering rapidly in more remote districts. Of course, ultimately high priced rubber will lend a stimulant to increased collection, just as the world's growing demand for rubber, without regard to prices, has led to a larger output in nearly every year since the industry had a beginning. But the rate of growth has been too slow to lead to any hope that the increase in prices within the past twelve months will result in such larger production as to reduce prices before very many months to come.

There is to be considered, moreover, the development of new financial conditions on the Amazon, now coming to a head, whereby, with the aid of local banks, rubber may be stored instead of being thrown on the market immediately upon its arrival at Pará, as was so long the case. If this new condition should have any effect whatever upon prices it will not be to make the price to consumers less. This is so plain as to require no argument.

It seems worth while to refer here to an interview which THE INDIA RUBBER WORLD had seventeen years ago with the Pará merchant Vianna, who gained a reputation for putting rubber prices on a higher basis than had before been known, and doing so more than once, though

each time a "slump" followed so quickly as to create a general opinion that attempting to "corner" rubber is bad business. Mr. Vianna said in 1892:

I have handled the rubber business in Pará for years, and although it is generally and absolutely known both in the United States and in Europe that through my constant efforts in this market since 1879 the Pará rubber crops have been sold to a much better advantage for the receivers and producers, still this is utterly ignored by said receivers, most of them believing that I have had nothing to do with the keeping and advancing of prices in the long period, although I have devoted all my attention and ability to such business all this time.

This of course was Senhor Vianna's compliment to himself, and we have no record of how his contemporaries at the time regarded it. But he said further that with few exceptions the rubber producers in those days and the original handlers of rubber as a rule knew nothing about how the rubber business was done abroad, and implied that his lack of local support prevented his doing more in the way of keeping up rubber prices. As he said:

What they know about this business is the difference, when there is one, between the prices offered by two different buyers, and they are smart enough to take the higher price of the two. This embraces all their knowledge about such an important business.

As has been pointed out in these pages, the business of rubber production on the Amazon recently has shown a tendency toward consolidation in the hands of persons with capital and with a broader knowledge of rubber conditions in general than in the past, so that, with the assistance of the banks as referred to, it is possible that concentration and coöperation may be brought about to an extent which would not have been possible in the days of Vianna's former activity in the trade. But the rubber business, back of the primary markets, remains strangely complex, and he would be a bold man who would claim to comprehend all its conditions. It would seem, however, that the conditions here outlined as having a tendency to keep up rubber prices are worthy of study.

RUBBER AND SLAVERY.

THE story on another page of this issue, relating to the conditions of obtaining rubber on the upper Amazon, is worthy of consideration by all users of this material, in that it points to a very important reason why rubber costs so much. It is improbable that any reader of this page would willingly engage in any details of gaining rubber from forest resources in any part of the world. In short, it is a business, or occupation, in many places exceptionally removed from civilized conditions as ordinarily recognized.

The regularly established importers of india-rubber at New York or Liverpool or Hamburg have no money invested in the production of Amazon rubber: they are content to buy whatever is available at Manáos or Pará. Why? Because the conditions of original production are such as to be beyond the capacity, as yet, of other than the people of the rubber producing countries to comprehend—or, at least, to control.

There is no new question of ethics involved here. The world needs rubber and rubber must be forthcoming, the same as ivory and innumerable other commercial commodities, the obtaining of which in the past has involved human slavery. The modern cotton industry depended for years upon human slavery in the southern United States, but it does not to-day, and cotton is now being grown in many parts of Africa—the home of the former American slaves—by willing and well paid natives. Ultimately, of course, the same will be true of rubber, though the progress toward the new conditions may be slow.

The hope of the civilization of the native rubber producing regions, whether in Africa or in equally remote portions of South America, is in the development of such scientific treatment of rubber production as is now in progress in Ceylon, for example, and which the owners of capital ultimately will insist upon being carried out whatever rubber trees worth taking care of may be found.

We congratulate Mr. Labouchere, of London, upon his exposé of the conditions of rubber production in the region beyond Iquitos. In the first place, it will open the way to the correction of undoubted abuses in a specific region. Secondly, it will aid in simplifying the so-called Congo question, in showing that the conditions of rubber production in Central Africa are not, necessarily, due to maladministration in any quarter, but rather to the conditions under which business between civilized and uncivilized races must be done before a mutual understanding is arrived at as to what constitutes right or wrong. Finally—and this point has been stated before in this article—the disclosure of conditions in Peru will help consumers of rubber as a class to understand why rubber constantly becomes more costly rather than cheaper, as is the case of commodities produced under more desirable conditions.

FAILURE OF A "FIFTH WHEEL."

AN editorial in the *New York Journal of Commerce*, headed "Decadence of an Executive Department," relates to the department of Commerce and Labor, at Washington, created some five years ago, in charge of a secretary ranking as a member of the President's cabinet. According to our contemporary, "Ever since the advent of the Taft administration the Department of Commerce and Labor has appeared to be in a condition of decadence, and in the closing days of the past session Congress without thought struck a severe blow at it."

Reference is made here to the tariff commission for which provision is made in the new Payne bill, and which the President has ordered to be organized in the Treasury Department instead of that of Commerce and Labor, although the latter "for a long time has been entrusted with the work of building up our export trade—so far as that can be done by executive or governmental activity—and of making and publishing studies of the tariff question as presented by the action of foreign countries." The same paper remarks that throughout the Taft administration thus far "as soon as some important and significant work appears in sight," which the Department of Commerce and Labor, under the terms of the law creating it, might be supposed to be intended to perform, it is handed over to others, and the mechanism that had been established for these very purposes

is treated as of no worth whatever." The *Journal* does not criticize the attitude of the nation's new chief executive, but its comments which follow are worth quoting:

"There was grave doubt about the wisdom of creating the Department of Commerce and Labor when it first came into existence, and this doubt has been renewed at various moments since then. Originally it was charged that there was no relationship between the bureaus which were gathered in the department, and the problem was then, and has ever since been, whether they could be correlated. But it has constantly been asserted that an important function, peculiarly pertaining to and justifying the existence of the department, was that of extending and studying trade and the working and application of foreign tariffs, as well as the adjustment of our own duties to them. Had it not been for this argument the doubt would probably have been resolved against the creation of the department. It would never, in fact, have come into existence. Now, when there is work of the proposed sort to do, it is placed elsewhere, and the department is even likely to be stripped of its chief distinguishing feature—the bureau of corporations," through which the government may be expected to act in putting into effect the new regulations for taxing corporations.

Undeniably some able men in the new department have striven to serve the public well, but always under the handicap suggested in an editorial in *THE INDIA RUBBER WORLD* January 1, 1903 (page 110), from which we may quote here:

A FIFTH WHEEL NOT NEEDED.

THE proposal now being discussed seriously at Washington, to create a governmental department of commerce, appears to us to be very much in the nature of adding "a fifth wheel to a wagon"—a term widely used to describe an appendage that not only is useless, but is likely to get in the way and thereby impede progress. We are aware that the proposal has the support of men of prominence in business affairs and in political life, but this alone is not proof that the need exists for an additional arm of the government. - - -

It is probable, however, that the new measure has received the serious support of some business men because they believe that a department of commerce would help to extend our foreign trade, but it remains to be pointed out what services in this direction could be rendered by a secretary of commerce sitting in the President's cabinet better than by the existing official bureaus at Washington. In fact, all the claims made for the new department have been most vague and unconvincing, nor are the advocates of the measure agreed as to what powers should be given to the new secretary, or what he should be expected to accomplish. - - - In fact, the proposal now being considered involves little beyond creating a new office to which shall be turned over certain statistics now required by law to be collected by several different bureaus, in which event they doubtless would be made available for the public less promptly than now, on account of passing through more hands.

The manufacturers and others who look to the government, through the creation of new offices, to sell more of their products abroad, labor under a mistaken view of the laws of trade. At home, a manufacturer seeks first to produce an article suited to the needs of possible buyers; he then works to make them familiar with its merits; he next puts it where they can buy it, and if the price appears too high he manages to remove that objection, through decreasing the cost of production, eliminating middlemen's profits, or otherwise, but without once thinking of asking for help from the government. If the same manufacturer should desire to do business in Europe, or Corea, or Patagonia, precisely the same procedure would be necessary, and not one nor twenty new government departments could relieve him of the necessity of making his own markets if he would sell goods.

We should welcome the excision of this superfluous arm of the government, for at least two reasons: To render the public service less complex and costly, and to remove one more temptation to business men to depend upon the government for support instead of standing firmly upon their own feet.

THE ONLY RUBBER MANUFACTURING COUNTRY in the world to place an import duty on crude rubber for consumption is Russia, which country is reported now to tax plantation rubber five fold on the ground that it is a manufactured product. The New York customs authorities, after considering a similar course, decided that plantation rubber was a raw material in the same sense as forest rubber. But it may be that Russia will in time reach the

conclusion that all rubber, in whatever stage, is a manufactured product, since india-rubber, as such, nowhere exists in nature, but is brought into existence with the help of man.

AN IMPORTANT FIRM OF ENGLISH RUBBER MERCHANTS express the opinion, on another page of this paper, that there appears a possibility of a basis of rubber prices being maintained at least until next summer in the neighborhood of \$1.70 a pound. This figure is worth while keeping in mind until some other prophet, able to show better credentials, is heard from.

THE ASTONISHING INFORMATION IS PUBLISHED gratuitously in the able *New Haven Journal and Courier* that "The new crop [of rubber] which only recently began to arrive in this country is not suitable for manufacturing purposes until the rubber has been thoroughly seasoned." How is this for reasonable news?

ANNIVERSARIES.—Concurrently with the *India-Rubber Journal's* attainment of its Twenty-fifth anniversary, our American contemporary, *THE INDIA RUBBER WORLD*, reaches its Twentieth birthday. We congratulate Mr. Henry C. Pearson, its editor, and his staff, and reciprocate the good wishes he extended to the *India-Rubber Journal* in a recent number of the admirable *New York monthly*.—*The India-Rubber Journal (London)*.

THE EXPORTS OF RUBBER GOODS from the United States during the first eight months of this year were greater in value than in any preceding corresponding period, and 60 per cent. larger than five years ago. This is only another straw which shows the wind to be blowing in the direction of prosperity.

THE NEW CORPORATION TAX.

UNDER the law of August 5, 1909, a tax is imposed on the net income of corporations, beginning for and with the year ending December 31, 1909. Returns must be made not later than March 1 next; assessments will be made on June 1, and payment must be made during June. A tax of 1 per cent. is imposed on the net income over \$5,000 of every corporation or joint stock company formed for a business purpose. Messrs. Haskins & Sells, certified public accountants, of New York—and by the way, auditors for the United States Rubber Co.—have issued the following statement, covering suggestions likely to be of no little interest, particularly to manufacturing corporations:

"The Act imposing an excise tax against corporations, etc., recently passed by Congress, prescribes a method for ascertaining and reporting net income radically at variance with accounting methods generally followed by industrial and trading corporations, with those prescribed for public service corporations under federal and state laws, with accounting methods followed by many insurance, financial, and banking institutions, and with principles recognized by students of accounting.

"The language of the law cannot be reconciled with any proper recording in the form of accounts of those factors which necessarily enter into the ascertainment of net income, as it is generally understood, earned in any year. Especially is this so in the case of corporations whose operations require materials and supplies that are not used or consumed concurrently with their purchase; also in the case of corporations engaged in the purchase of raw materials, their manufacture, and the sale of the product. The law undertakes to sever the natural relation which exists between proceeds from sales and cost of goods sold.

"It seems desirable to obtain from the commissioner of internal revenue, as soon as possible, interpretations and ruling as to what will be required in the returns for the year ending December 31, 1909, to the end that the reconstruction of accounts or the compilation of data may be completed in time to avoid penalty."

THE RUBBER PRICE SITUATION.

THE continued high price of rubber, with no indication of an early decline, continues to form the subject of first importance to rubber manufacturers. While there are those who deem the recent fluctuations in rubber merely temporary incidents of the trade, to be dealt with perhaps by an equally temporary advance in decline in the prices of manufactured products, others regard the present situation as having a deeper foundation.

"There is an upward tendency of all prices," said a leading rubber manufacturer to a representative of THE INDIA RUBBER WORLD. "The constantly increasing rate of gold production renders the buying capacity of the dollar less. Hence there must be a general readjustment of values—a new relation of costs and selling prices, wages, cost of living—a gradual approach to a new economic basis. The higher cost of rubber, cotton, and the other raw materials of our industry are only incidental to the new condition that is unfolding throughout the world.

"The present situation in relation to crude rubber is but an illustration of what I have asserted in regard to business in general. It will be admitted by everybody, I believe, that the year 1907 witnessed a reduced volume of business, generally. According to all precedents, there should have been a considerable surplus of crude rubber as a result. But whatever surplus of rubber may have accumulated had disappeared within a year, and we have what is nearer a rubber famine than the trade has ever known. The price of crude rubber today alone is proof of this. With a further improvement of business, the prices of raw materials must be further advanced.

"The trade need not look for rubber at prices as low as prevailed when most of the rubber manufacturers now active entered the industry. Before a long continued decline to the old level can return the production of rubber somewhere will stop. The theory of the upward tendency of prices carries with it the idea of higher cost of living throughout the world, expressed in terms of money; hence should the market price of Amazon rubber decline to the figures of 20 years ago, for instance, the number of rubber gatherers would be lessened, without regard to the amount of rubber available.

"Of course the rubber manufacturers will continue to buy on the best terms possible, and likewise consumers of rubber goods. But both classes will make a mistake if they do not regard the present as the precursor of new permanent conditions, for which preparation should be made by increased economies of production, improved systems and methods of administration, and all that sort of thing."

* * *

TO THE EDITOR OF THE INDIA RUBBER WORLD: The present situation of crude rubber is such as to give serious concern to all branches of the trade—importers, manufacturers, and dealers of every kind; in fact, all interested in any way, shape, or manner in rubber goods. As usual, and naturally, during an epoch of high prices, the importer, in the minds of the manufacturers, is the scapegoat of the situation; and the old hughbear, the combine for bullish speculation, is held to be responsible for the ills that the trade are, or imagine they may be, suffering from.

Doubtless prices, which are at present ruling on crude rubber, have already caused, and will in the future infallibly cause, a still greater loss to many branches of the rubber industry. But those manufacturers who find that the present prices of crude are such as to greatly reduce, if not actually eliminate the possibility of marketing their product at a reasonable profit, would do well to bear in mind that the "survival of the fittest" is the absolute rule in this as in all mundane affairs. Either by chemical or factory research and experiment, by possible improvement in the science of compounding, or by more eco-

nomical factory and selling costs, much will undoubtedly be effected toward meeting the situation created by the increased cost of crude rubber, and the sooner the trade in general recognize the undoubted fact that a permanent materially higher level of crude rubber prices is here to stay, the sooner will the necessary readjustment in the industry be satisfactorily accomplished. Those branches which cannot profitably operate will have to disappear, and those interested in them devote their energies and capital in other more profitable directions.

We are disposed to believe very firmly that the present high prices of crude are the direct result of the "laws of supply and demand," and not of undue speculation on the part of dealers or importers. In fact we are convinced that those laws have more absolutely governed the present situation than at any other period in the past of extremely high or low prices.

So long as the automobile industry continues to develop as at present, so long will the supply of fine Pará be barely adequate for the needs of the world's industry, and while undoubtedly considerable relief will be experienced from the steadily increasing output of the eastern plantations, the increase from them will not be sufficient or rapid enough to prevent a very high level of prices for Pará rubber for several years to come.

The situation on the Amazon certainly is one which does not hold out much hope for lower prices. In one respect this region disproves the almost universally true theory that high prices must inevitably cause a larger production. The labor question there is such that notwithstanding every effort on the part of producers to take advantage of existing prices, the Pará rubber crop for the first three months of the present crop shows a shortage of over 5 per cent. as compared with the corresponding period of last year and the drought which has been experienced there during the past two or three months has kept most of the rivers so low that the crop movement has been greatly retarded. Undoubtedly this drought will cause a reduced flow of latex but this may, at least in part, be compensated for by the greater opportunity for gathering afforded by the dry weather.

To sum up the whole situation, we have every confidence in the intelligence of the rubber manufacturers to meet successfully not only the present but far more difficult emergencies.

New York, October 27, 1909.

AN IMPORTER.

* * *

THE following expressions are from letters from two rubber manufacturers to the Editor of THE INDIA RUBBER WORLD:

"I am short of rubber, and losing money on every contract I fill. I have raised prices as far as I can. Am turning down business right along. Of course I was 'warned' that rubber was going up. Have been warned all my life by those who wanted to sell. Sometimes they were right and sometimes not. I did not have the cash or the nerve to go in largely, and am not a speculator anyhow."

"The goose that lays the golden eggs (the rubber manufacturer) is being slaughtered. It may be that there is no speculation on the part of the wealthy and far-sighted handler of crude rubber, but who profits by the high prices, and who loses? Somebody (the importer?) or something, (the law of supply and demand?) is jeopardizing the trade to an unbearable degree."

THE sale is reported of rubber from the Chilian Exploration and Development Syndicate, Limited—a London company with plantations in the Mexican state of Oaxaca—between January 15 and October 5, of this year, of 6458 pounds of rubber, at prices ranging from 3 shillings [= 73 cents] to 5 s. 4½d. [= \$1.30¾]. The latter price was realized for the first results from the new season's tapping, which began on August 5.

The News of Aerial Navigation.

WRIGHT'S AEROPLANE AT NEW YORK.

THE most notable feat in aviation in America so far was that of Wilbur Wright, at New York, during the Hudson-Fulton celebration. Mr. Wright had agreed with the celebration commission to bring his aeroplane to New York during a specified period, but it was left to his discretion whether he should make a flight, all depending upon weather conditions. He distinctly declined to enter into contests for which prizes were offered.

With the exception of a trial trip encircling the statue of Liberty, in New York harbor—in itself a noteworthy event—his only flight was made on October 4, when he started from Governor's Island, the military headquarters at New York, and proceeded up the Hudson river, passing the international naval fleet at anchor there, and flying over some of the war-ships, then turning and landing again at the point of starting. The *New York Herald* quotes Mr. Wright as saying as he started:

"I'll land there by the end of the rail [the "monorail" 120 feet in length, used in making the ascent]. Have the soldiers keep the crowd away from there. I'll be back in 30 minutes. Let her go!"

The distance from the starting point to where he made the turn up-stream, and back to the start, is 18.6 miles [=30 kilometers], but it is considered that the whole distance covered, by reason of the course followed—he followed the east side of the river going up and the west side on coming down, beside which the curve at the turn is to be considered—was at least 20 miles, or about the breadth of the English channel where crossed by Blériot. The time in the air was 33 minutes 33 seconds, of which 20 minutes 30 seconds were occupied in the outward flight and only 13 minutes 3 seconds

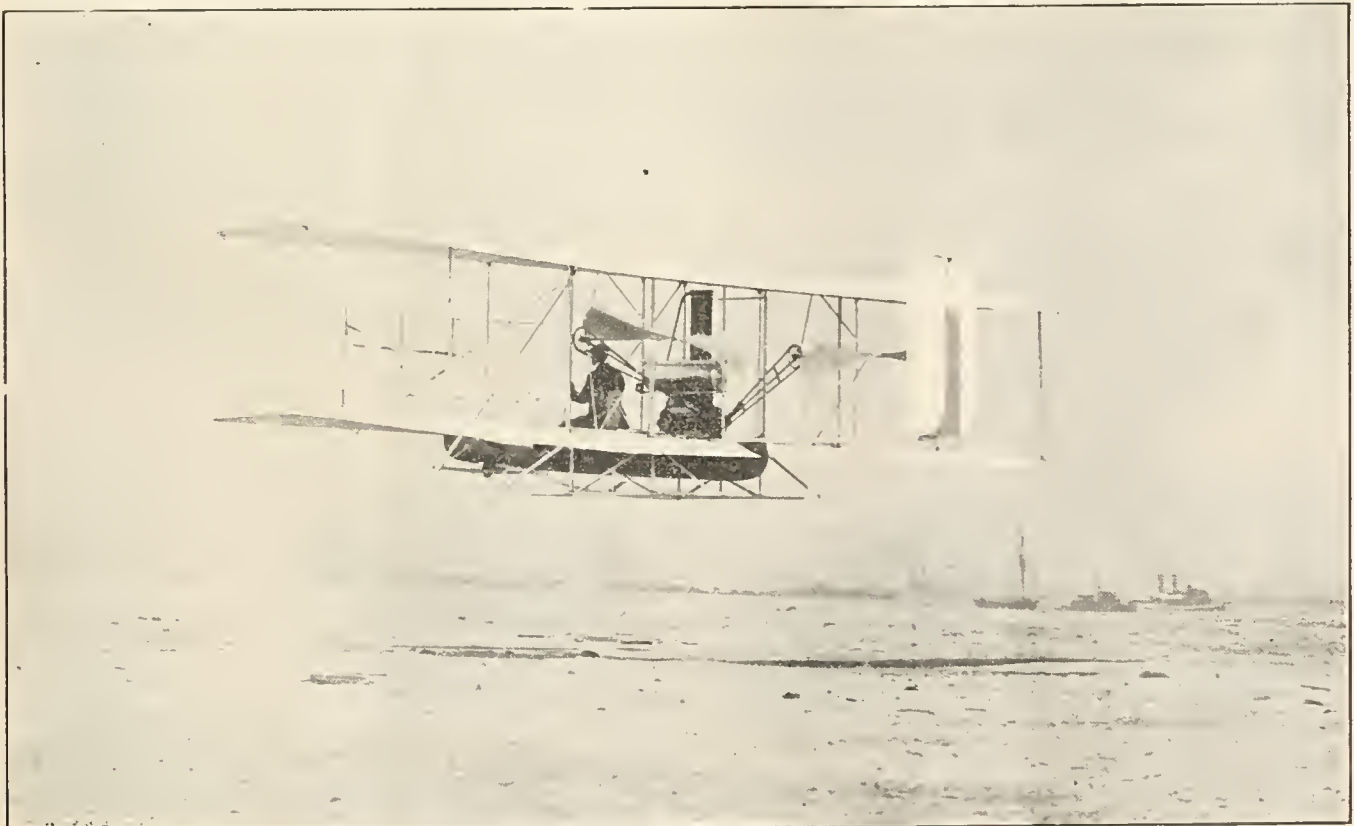
inward, at which time the breeze was in his favor. The experts are agreed that Wright's task was more difficult than that of Blériot, who had open sea and steady winds, while Wright had a harbor cluttered with shipping, besides a thousand disturbing air currents caused by the tall New York buildings and the sea winds sweeping up the Hudson and the parallel East river.

Wright started on his course direct without preliminary circling and landed in the same manner, within a few feet from the spot he had indicated, and practically within his 30 minutes specification. He was encouraged by his success to agree to make a much longer flight later in the same day, but while he was arranging to start, and while surrounded by an enthusiastic crowd, a cylinder head blew out of the motor of his aeroplane, making it necessary to send the machine to the factory, at Dayton, Ohio. This was the last day of his scheduled stay in New York. It is estimated that part of the flight was made at the rate of 50 miles an hour, and the altitude reached varied from 25 to 300 feet. What particularly attracted attention throughout the event was Wright's apparent complete control of his aeroplane.

Admiral Sir Edward Hobart Seymour, of the British navy, and the official representative of King Edward at the Hudson-Fulton celebration, said, according to the *New York American*: "The thing that impressed me most was the steadiness of the machine. After seeing Mr. Wright's exhibition, I am sure that the aeroplane is here to stay."

FLYING MACHINES AND THE CUSTOMS.

WHILE there is no specific provision in the new American tariff law for the assessment of duties on imported flying machines, it is assumed by those interested that such imports



WILBUR WRIGHT IN HIS BIPLANE OVER NEW YORK HARBOR.

Photo. by Brown Brothers.

will be dutiable at 45 per cent. *ad valorem* under the metal schedule. The Payne law provides that a duty of 45 per cent. shall be levied on articles of which metal is the component material of chief value. As an aeroplane consists of the wooden framework, the propeller, and the canvas or balloon fabric planes, in addition to the motor, the latter seems to be the part most valuable, and thus liable to duty under the metal schedule.

MR. FLINT FINANCING THE WRIGHTS.

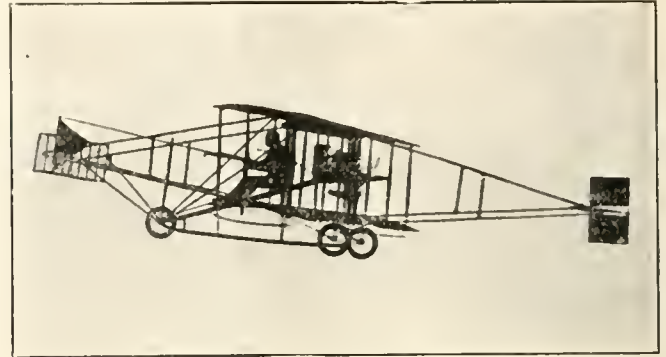
AMONG the American enthusiasts in the matter of aerial navigation high place must be given to Mr. Charles R. Flint, of New York. Mr. Flint was mentioned in the newspapers as being present at all the principal contests in aviation in Europe during the summer, following his careful attention to the trials made by the Wright brothers prior to their sale of a biplane to the United States government last year. During the past month Mr. Flint returned home to New York, after having made plans, it is understood, for an international company for making and marketing the Wright flying machine. It is stated that Mr. Flint has been financing the



CHARLES R. FLINT.

Wright brothers for two years past, but was desirous of not having this generally known until the success of their machine was demonstrated. Mr. Flint, who has great faith in the value of the aeroplane for military use, thinks that the United States government should have bought the secret of the Wright brothers' invention and thereby have obtained control absolutely of the most successful flying machine in the world, instead of forcing the Wrights to go abroad for recognition.

Mr. Flint will be remembered in the industrial and financial world from his connection with the organization of the United States Rubber Co., which, at its inception, was the largest industrial corporation in existence. The company has grown since, but in some other industries, involving more capital, by the application of the ideas on which Mr. Flint based his work, larger corporations have come into existence. Mr. Flint has



GLENN H. CURTISS'S BIPLANE.

[Winner of a Trophy at Rheims.]

long been a student of industrial consolidation, and if the flying machine trust, as some people care to express it, is to be formed, Mr. Flint would appear to be particularly fitted to direct the work, particularly since in late years he has formed important financial connections in Europe.

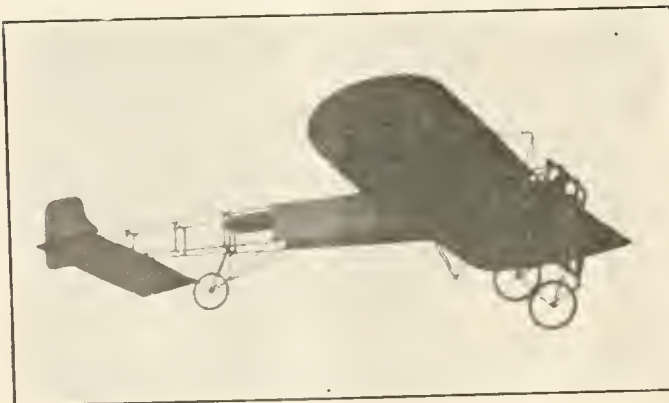
Factories for the Wright machine have been planned or established in St. Petersburg, Berlin, and Paris, as well as in the United States. The Wrights have patents in this country, Europe, Australia, and South America, and Mr. Flint considers that they have a monopoly in the way of a practical biplane. Mention has been made in these pages of the infringement suits brought by the Wright interests against the makers and users of the Curtiss biplane. The Cie. Generale de Navigation Aerienne, owners of the Wright patents in France, secured a technical attachment on all the biplanes on exhibition at the Grand Palais in Paris during the past month, on the ground of alleged infringements.

It is understood that the Wright brothers have decided not to make further flights for exhibition purposes. "Every time we go into the air," Wilbur Wright is quoted as saying, "we make a study of some part of the mechanism or some peculiar weather condition with a view to improving our machine. We could not do that as hired attractions."

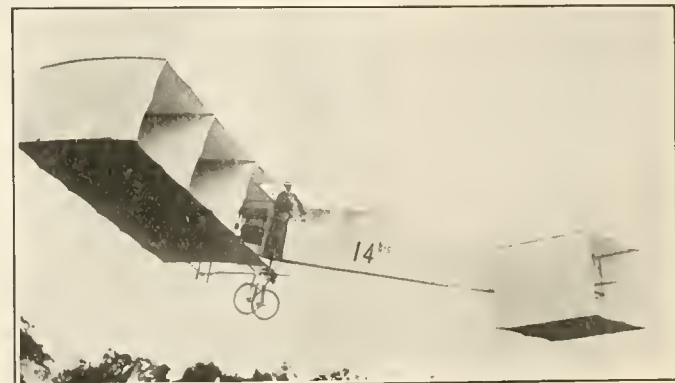
Wilbur Wright was paid \$15,000 by the Hudson-Fulton commission for appearing at New York during the celebration. He went next to Washington to complete his instruction of army officials in the use of his aeroplane sold to the United States government last year. Thence he expected to go to his home at Dayton, Ohio, where his American aeroplane factory is located.

AUTOMOBILING AND FLYING IN THE AIR.

THE close relation in interest as between automobiling and aviation is suggested in part by an expression from Mr. Wilbur Wright on the occasion of his last appearance in New York. It was to the effect that the further improvement of the biplane must depend upon his ability to obtain better motors. Then it



BLERIOT CROSSING THE ENGLISH CHANNEL.



THE SANTOS-DUMONT MACHINE.

may be noted that at the Paris aéro show in the Grand Palais during the past month the principal interest was shown in motors rather than in aëroplanes. The planes for the most part were of standard models such as have been making flights for more than a year and are fairly well known to the public. There were new features in motors, however, and these were closely studied both by professional aviators and those who are looking forward to owning flying machines. It is natural that the manufacturers of automobiles or of automobile motors should be among the first to enter the field for supplying motors for aërial machines.

Another reason why flying machines and automobiles are so often mentioned together is that in the case of the former as well as in the latter the development, at least in the beginning, was largely because a new form of sport was introduced. Automobiling as a sport still has a strong hold in France, but the same element is taking an interest in flying machines, and it is announced that the Automobile Club of France, in addition to its automobile Grand Prix, will undertake the organization of aëroplane races next year. This decision has been arrived at on the proposition of Marquis de Dion, president of the club.

The rubber manufacturers form another class which have reason to be interested alike in the automobile industry and aviation, since rubber is scarcely less essential for balloons and flying machines than for tires and other accessories of motoring.

AMERICAN PROGRESS IN AVIATION.

In the various contests in aviation which have been made during the past few weeks in Europe and in the United States the enterants from the latter country have won a notable share of honors. The Messrs. Wright have attracted much favorable attention abroad, as well as at home, and machines of their construction in the hands of others have made a good showing. During the month some important balloon races have been held, notable one starting from Zurich, Switzerland, in which the chief prize was won by Edgar W. Mix, an American. In connection with the recent centennial of the incorporation of the city of St. Louis, the local aëro club organized a balloon contest, in which some interesting results were attained.

America seems likely to figure largely in next year's events in aviation, since the two most important international trophies, won this year by Americans, must be contended for next year in the United States. The trophies referred to were won by Glenn H. Curtiss, with his biplane, at Rheims, and by E. W. Mix, in the Zürich ballooning contest. The situation is such as to make probable the bringing across the Atlantic of the world's leading aviators, and the best products of Europe in the shape of aëroplanes and dirigible balloons. And all of this will stimulate development in the United States in the same field.

Mention has been made in these pages of the activity of European manufacturers in supplying rubber proofed balloon and aëroplane fabrics. It is true that rubberized fabrics have not been used uniformly for these machines, but one effect of the recent contests would appear to be a growth in popularity of the rubber goods in aviation. And it may be added that in the United States the results attained by rubber manufacturers in this field, although they took up the matter later, are likely to compare favorably with the best that has been done elsewhere.

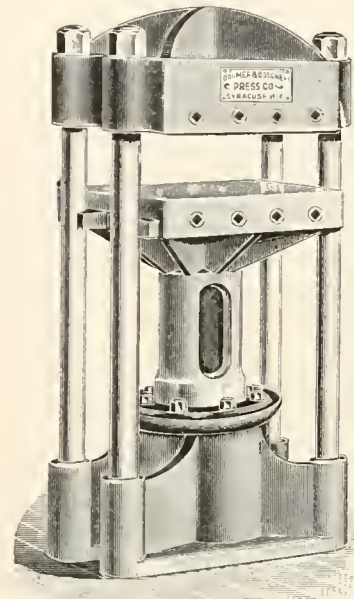
RUBBER TIRES FOR FLYING MACHINES.

A FEATURE of the new interest in flying machines that may prove worth while to the rubber trade ultimately is the use of small pneumatic tired wheels in connection with them. The machines which the Wright brothers are using are not provided with wheels, but are balanced on a monorail and are shot thence into the air by the falling of a weight; but practically every other type has wheels for contact with the earth, and needs tires.

SEND for a free copy of the Index to Mr. Pearson's book, "Crude Rubber and Compounding Ingredients," of which a new edition is on sale at this office.

A NEW STEAM PLATE PRESS.

FOR many years hydraulic steam plate presses have been used in the process of vulcanizing rubber, and it would seem that there could be little chance for improvement in so simple a machine, but the illustration herewith shows a steam plate press that is referred to as having some novel features. The base of the press is a steel casting machined on the bottom, which gives a broad bearing surface on the floor or foundation, and at the same time removes the packing as far as possible from the heat of the steam plate, so that it is kept cool. Leather packings can be used if desired, and can be easily kept lubricated. The gland



A NEW STEAM PLATE PRESS.

holding the packing has a gutter or saucer around the edge to catch and carry off any oil or water, should the packing ever leak, and the packing can be removed without removing the ram from the cylinder. The rods are large, threaded on their lower ends, and screw into the base. The ram is hollow, with the upper end cored out, allowing a free circulation of air. The platen and head are very strongly ribbed, thus making them very rigid. The steam plates are so cored as to drain towards the outlets, keeping them free from condensed water. The workmanship is claimed to be first class and the sizes run from 12 x 12" to 30" x 30", with any number of plates or openings desired. This press is manufactured by the Boomer & Boschert Press Co., Syracuse, New York.

A FELT TRUST IN CANADA.

THE Canadian Consolidated Felt Co., Limited, is the name of a new concern which has come into being by the merger put through at Berlin, Ontario, by D. Lorne McGibbon, president of the Canadian Consolidated Rubber Co., Limited.

The concerns forming the felt combination are the Berlin Felt Boot Co., and the Kimmel Felt Co., of Berlin, and the Elmira Felt Boot Co. The corporation will be capitalized at \$2,000,000. The officers are: D. Lorne McGibbon, president; George Rumpel and A. J. Kimmel, vice-presidents. Oscar Rumpel will manage the Berlin Felt Boot Co. plant and A. J. Kimmel the Kimmel and Elmira plants. T. H. Rieder, of the Merchants' Rubber Co., and H. D. McKellar, of the Berlin Felt Boot Co., are also financially interested in the new concern.

The Progress of Rubber Planting.

VIEWS OF A CEYLON COMPANY'S CHAIRMAN.

A MORE than ordinarily interesting address on rubber planting was made by Mr. Francis A. Govett, chairman of Rubber Plantations, Limited, at the fifth annual meeting of that company, in London, on September 29. It filled three newspaper columns.

He said that Ceylon has recognized that the conditions under which rubber planters work there are not as good as where the rainfall is more regular, and the growth of the trees must necessarily be more slow. He thought Ceylon eighteen months, or possibly more, behind the Straits Settlements and other similar locations in point of growth. But when the trees did become tappable, the yield was just as good. Likewise, the altitude of his company's plantation was less favorable to the early development of rubber trees than lower levels.

Mr. Govett chose to deal with rubber yields per acre rather than per tree. He thought that the yield per acre would be about the same, no matter how many trees were planted; the fewer trees the greater the growth and the larger the yield per tree.

"In any closely planted field," he said, "at least half the trees are going to be behind the other half, while some are liable never to mature at all. You have an example of this in the 31-acre field, where some 3,900 out of 6,400 trees are being tapped. Now these are old trees; nearly nine years old. Of these, 1,500 others are gradually coming into tapping, but the rest will probably never be of any use at all."

The current high prices of india-rubber the speaker regarded as nothing short of a calamity, since the effect was likely to be such a deluge of new capital invested in rubber plantations as to lead to over-production, and consequent smaller dividends on plantation shares. However, he did not think the danger point would be reached earlier than 1915, and it might be that the expansion of the demand for rubber might even then be sufficient to keep prices up.

"I admit," said Mr. Govett, "there are certain safeguards. Many of these companies are sure to be mismanaged. A large portion of the land may not be suitable. Labor is likely to be wholly insufficient. Production is liable to be delayed by premature tapping, and so forth."

As to the tapping system followed on the company's estates, Mr. Govett said: "We have tried full spiral, with the worst results, and half spiral, which is less trying to the tree; but our present method is that which is known as the half-herring-bone-four-year system. The tree is divided into two parts vertically, and one side is tapped up as high as possible at intervals of 12 inches. After 6 inches have been used up, the year's work is done. Next year the other side is tapped. The third year the original side is finished, and the fourth year the cycle is complete."

The company referred to is not yet a large producer of rubber, but has more than 1,800 acres planted, in addition to productive fields of tea and coconuts. The share capital issued to date is £55,000; there were outstanding already £10,000 in 5 per cent. debentures, and at the recent meeting it was voted to issue additional debentures of £11,000, in order to hasten as far as possible the development of the rubber plantation, in order to make it all productive before the era of possible over-production mentioned by Chairman Govett. The name of the company was changed to Dangan Rubber Co., Limited, since the former name was not considered sufficiently distinctive.

CICELY ESTATES AFFAIRS.

THE favorable report of results of the Cicely Rubber Estates Co., Limited, presented at the last annual meeting [see THE INDIA RUBBER WORLD, August 1, 1909, page 399] is supplemented

by some figures presented at a recent special meeting of the company in London. There had reached London from the estates in the Malay peninsula during four months of the new fiscal year 22,595 pounds of rubber, of which 13,815 pounds had been sold, realizing 7s. 2d. [= \$1.74.3], gross and 6s. 9½d. [= \$1.65.2], net, per pound. The company's £1 shares are being split up into 2 shilling shares. The Cicely issues of late have been quoted at more than eleven times their face value. The company has suffered a deep loss in the death of one of their directors, Mr. H. W. Brett.

HERBERT WILFRED BRETT, of London, who died suddenly on September 28, is described by *The Financial News* as "one of the most prominent men in the rubber world," reference being made to his membership on the boards of no less than seventeen rubber plantation companies, some of them—Anglo-Malay, Cicely, and Pataling, for example—being among the most important in existence.

SUMATRA PARA RUBBER PLANTATIONS, LIMITED.

THE company reports net profits of £16,231 4s. 7d. [= \$78,989] for the year ended June 30, after charging to revenue one-half the administrative expenses, although the latter really relates in larger proportion to the portion of the estate not yet productive. The actual cost of producing rubber is stated at less than 6d. [= 12 cents] per pound, against 13.87d. [= 28.1 cents] last year. The average price realized for rubber during the year was 6s. 6d. [= \$1.58.1] gross, or 6s. 1.22d. [= \$1.48½] net. The dividend is 15 per cent. The company have adopted the policy of planting only 100 trees (*Hevea*) to the acre. This they recognize to be the most suitable number, as trees so widely planted probably yield more later, are better grown, and the bark renewal is more satisfactory than on estates where close planting is practised.

AN INQUIRY REGARDING "LANDOLPHIA."

TO THE EDITOR OF THE INDIA RUBBER WORLD: I am greatly interested in a *Landolphia* plantation and I am advised, in view of labor difficulties, that the best means of handling the same is to cut the plants three feet from the ground, remove the bark from the cut portion and by means of a decorticating machine, obtain the rubber, which I am told is better and cleaner than tapped rubber. I am informed that the cut portion will grow again, and that *Hevea* and other trees can be grafted on to the stumps. Is that so? Are there any plantations where *Landolphia* is being cut and is growing again, or where other trees have been grafted on to the stumps, or where the decortication of *Landolphia* has been a commercial success?

S. GOLDREICH.

59, Cornhill, London, October 6, 1909.

[IF any reader is aware of the treatment of *Landolphia* vines as here referred to, whether with successful results or otherwise, THE INDIA RUBBER WORLD will be pleased to have a report on the same.—THE EDITOR.]

CEARA RUBBER IN GERMAN EAST AFRICA.

THE East Africa Rubber Plantation Co., Limited, has been formed in London, with £90,000 [= \$437,985] capital, to acquire three plantations of Ceará rubber (*Manihot Glaziovii*) in German East Africa, now represented to be nearing a tappable stage; also, certain uncultivated land on the adjacent "Lewa" estate, which latter is already producing rubber. "Lewa" estate is the property of Deutsch-Ostafrikansche Plantagengesellschaft A.-G., of Berlin, founded in 1885, with 2,000,000 marks [= \$476,420] capital. The prospectus of the new company states that "Lewa" is now producing at the rate of more than 100 tons a year, and that the product—Ceará rubber—has sold at prices almost equal to fine Pará. At the London auction of September 21 some of it realized over 9 shillings [= \$2.19] a pound. The three

developed plantations to be taken over by the new company are stated to have about 250,000 trees ready for tapping, while the number ready for next year is estimated at 580,000. These plantations are on a railway running from the seaport Tanga, just south of Mombasa, the starting point of the railway which is opening up Uganda.

BRITISH INVESTORS IN RUBBER SHARES.

In a list of shareholders in Rubber Plantations Investment Trust printed in London *Financial News* appear several well-known names connected with the crude rubber trade, and also rubber goods manufacturers. For example:

	Shares.
Heilbut, Symons & Co., rubber merchants.....	10,000
S. Figgis (S. Figgis & Co., rubber merchants).....	1,500
W. Symington (William Symington & Co., Limited, rubber merchants)	1,000
P. B. Cow (P. B. Cow & Co., rubber manufacturers).....	1,100

Some of these have become connected with the Investment trust through their holdings in plantation companies in the East. Among those interested in the Investment trust is H. R. H. Princess Louise, Duchess of Argyll, a sister of the King, credited with 1,000 shares of £5 each. Most of the holdings in the Investment trust are in the names of plantation investors, which leads the *Financial News* to remark that "the rubber share market, like other great departments of city activity, tends to centralization, even where its ramifications are most widely extended."

Most of those mentioned above share in the recent important issue of shares in connection with the Plantations Limited. The latter list includes 1,000 2-shilling shares issued to the Edinburgh Investment Trust, Limited, of Edinburgh, a concern capitalized at £1,000,000 [= \$4,866,500]. At the same time it may be mentioned that £50,000 in shares in the Edinburgh Trust are held by the important Scottish Equitable Life Assurance Society, Limited; that is the Scottish insurance company have become interested in rubber planting shares.

PLANTING PROGRESS IN MEXICO.

THE annual report of the Orizaba Rubber Plantation Co. (Chicago), to the certificate holders, by the president, Mr. J. B. Sanborn, dated October 1, 1909, contains details of the progress made on their estate in Chiapas, Mexico, based upon observations made during his visit in August last. The growth of their *Castilloa* continues excellent, and their condition would appear, judging from the photographic views in this pamphlet, all that could be desired. The company have made a small beginning in the way of tapping, among some of their six year old trees, and a view is given of the rubber produced on the plantation on a commercial basis—a pressed block weighing 60 pounds.

Mr. Sanford mentions that on a neighboring private plantation, near Huimanguillo, owned by Mr. Adolph G. Weiss, tapping will be begun this fall on the eight year old trees. Mr. Sanford reports meeting a Mr. Gonzales, a Mexican planter near San Juan Bautista, with 120,000 rubber trees 14 years old, who is satisfied with 1/2 pound per year from one tapping. "He says he will not take any chances with his trees; that they are too valuable, and it takes too many years to raise, to experiment with them."

ST. PAUL TROPICAL DEVELOPMENT CO.

In connection with a mention of the exhibit of crude rubber by the St. Paul Tropical Development Co. at the recent Minnesota State fair in THE INDIA RUBBER WORLD, October 1, 1909 (page 10), the company state that their exhibit did not embrace plantation rubber of their own production, as they began planting only last year. They have a considerable number of wild trees, however, and have tapped them and sold the rubber. Their exhibit at the fair embraced forest rubber as prepared by the natives, "creamed" rubber from neighboring plantations, and a supply of late, the latter being

used in daily demonstrations of rubber coagulation which were watched with great interest by the public. The company likewise displayed tropical fruits, hard woods, and Mexican curios. A similar exhibit was made by the company at the Northwestern Iowa fair, at Mason City, Iowa. The St. Paul Tropical Development Co. have 300,000 *Castilloa* rubber trees planted on their "El Rosario" estate in Soconusco, Mexico, and intend planting 800,000 next year. Their plantation manager, Mr. L. A. Ostien, is a scientific agriculturist of much tropical experience.

FRAUDS IN THE NAME OF RUBBER.

An illustration of how rubber mad some British speculators have become is found in a story which *Truth*, of London, relates in detail in its issue of September 22. The story has to do with a company registered thirteen years ago as the Rubber Exploration Co., Limited, with a nominal capital of £200,000 [= \$973,300], in £1 shares. Prior to 1901 only 7 shares were issued—one to each incorporator. In that year 98,751 shares were issued as "fully paid" to another corporation, equally unknown to the financial world. There is no record of the Rubber Exploration Co., Limited, having engaged in business in any way, but recently the company began advertising that it was in a position to buy and sell or finance rubber plantations. *Truth* relates that a Stock Exchange broker received commissions from one Mr. Leach to buy the company's shares, amounting all told to 1,000, the broker paying for the same £1,150 2s. 9d. [\$5,597.14]. Mr. Leach failed to pay for the shares, and the broker sued for the amount and obtained judgment. But it does not follow that he will get his money. Meanwhile he had on hand shares which nobody will buy from him. The point, according to *Truth*, is that Mr. Leach assisted holders of shares which represented no investment and no value to realize cash for them. The intimation is that a good many other shares of Rubber Exploration Co., Limited, may have been disposed of in the same way.

RUBBER IN GERMAN COLONIES.

THE following figures relating to the acreage planted to rubber in the German colonies are credited by the *Ceylon Observer* to an official source:

German East Africa (mostly Ceará, lately Maniçoba, and some <i>Hevea</i>).....	7,410
Togo and Kamerun (Ceará, Maniçoba, <i>Ficus</i> , <i>Castilloa</i> , and <i>Hevea</i> ; the latter of late on a large scale).....	4,940
New Guinea (mostly <i>Hevea</i>).....	3,705
Samoa (mostly <i>Hevea</i>).....	2,470
Total acreage	18,525

BRIEF MENTIONS.

THE receipt is mentioned, at the royal botanic garden of Ceylon, from Mr. Frank J. Dunleavy, manager of the Boston and Bolivia Rubber Co., of Sorata, Bolivia, of seeds of a new species of *Hevea* rubber, discovered in the Kaka river region in Bolivia. The seeds are described as being about one-third the size of *Hevea Brasiliensis*.

An actress popular on the New York stage has given to the local press a letter requesting her photograph, signed by the manager of a widely known rubber plantation on the Malay peninsula. The letter states that the writer is an Englishman who has been "boxed up" for some years, "quite cut off from civilization and the world." A picture of the actress appeared in an American periodical which strayed into the rubber planter's hands, and he was filled with a longing to have the lady's photograph to adorn his bungalow wall. It is stated that the coveted photograph was sent, together with "a little note of cheer."

PERSONAL NOTES.

THE correspondent at Buitenzorg of the *Java Bode* reports that Professor M. Treub, director of the department of agriculture, has tendered his resignation. Under his administration a great incentive has been given to the culture of india-rubber and gutta-percha in Java.

“Red Rubber” in Eastern Peru.

THE authors of the most shocking stories of atrocities practiced upon the rubber collectors in the Congo Free State must now feel abashed since the Right Hon. Henry Labouchere, P.C., M.P., has printed in his important London weekly paper, *Truth*, the series of articles headed “The Devil’s Paradise.” He has eclipsed all the narrators of horrors who have gone before. And “Labby” has been dealing with rubber, too. Having in mind that the most bitter critics of “Congo misrule” have been Britishers, like himself, he tells his readers that the real rubber Hades is under British control—not in a British colony, but in an extensive South American domain owned practically by a corporation registered at Somerset House, London, the directorate of which is dominated by English gentlemen.

Whoever buys rubber at \$2 a pound and more may readily appreciate the suggestion that when the stuff is so expensive its production is not work of a kind that is exceedingly pleasant to those engaged in it. Do people rush into the rubber fields of any country—wild or forest rubber fields, that is to say—to become busy in producing “fine” or “coarse” or any other grade? THEY DO NOT. If civilized people anywhere insist upon having automobile tires, or hard rubber combs, or dainty rubber footwear, there will be capitalists ready to provide the necessary rubber—but what about the laborers in equatorial forests who bring the precious stuff to the primary markets? How do they live? How are they induced to go out of their way to gather rubber? What redress have these workers, thousands of miles from civilization, against real or fancied abuses at the hands of their masters, who themselves are on the ground, not through motives of philanthropy, but to fill their own pockets well within the brief time they are willing to be exiled from comfortable homes?

The *cauchero* in Peru naturally is not in the position of a clerk in a Wall street office who is working to become ultimately such a master of finance as was the late Edward Henry Harriman, the railway “king.” This, by the way, was Mr. Hariman’s start in life. The man who gathers rubber up the Amazon is apt to be too poor to be able to leave his occupation at whatever time it may prove uncomfortable. And the manager of a rubber camp is there to GET RUBBER. The point of Henry Labouchere’s story is that he does get rubber, and the devil take the poor fellows who are under his control, in a region beyond the pale of law or government.

THE INDIA RUBBER WORLD has no intimate knowledge of the conditions of which the editor of *Truth* has portrayed in type. But the character of the gentleman named, and of his publication, together with the nature of the evidence which he quotes, all appeal to the man of civilized instincts as worthy of consideration, even if in the end the story may prove to be exaggerated.

There is not space in these pages for even a summary of what Henry Labouchere feels called upon to say about the outrageous treatment of the employés of The Peruvian Amazon Co., Limited, organized in England with £1,000,000 [= \$4,866,500] capital, to take over the business and possessions of the Peruvian firm of J. C. Arana y Hermanos. [See THE INDIA RUBBER WORLD, January 1, 1909—page 146.]

These are the people who are responsible for the important output of *Hevea* rubber nowadays from Peru, the shipment which makes necessary a line of steamers from Iquitos to New York and several European ports. Of late years the growing demand for rubber tires, rubber insulation, rubber hose, and a constantly increasing number of articles of rubber manufacture, has encouraged English and other investors to give their attention to what *Truth* calls “a sort of no-man’s-land” between the upper Am-

azon and Putumayo—a rubber producing area of hundreds of square miles, sovereignty over which is claimed by Columbia, Peru and Ecuador. Peru, however, is in effective possession, and has the advantage of occupying a commanding position at Iquitos, the uppermost port on the Amazon. As *Truth* says, it is “a country where every man is a law unto himself, and there is absolutely no check upon the exercise of his most brutal instincts and passions. The likelihood of such abuse is increased enormously when the earnings of the employés are made dependent upon results.” And “employés” in this sense refer only to company agents, and not to the men who “cut” rubber.

With reference to the requirement that the company agents ship the maximum amount of rubber possible, *Truth* says:

To do this, the Indians have either to be paid or punished. If paid, the payment must be enough to tempt a placid, indolent savage to continuous exertion; if punished, the punishment must be severe enough to extract from his fears what cannot be obtained from an appeal to his cupidity.

Mr. Labouchere does not stand alone as the author of his statements. He names various individuals, including Mr. W. E. Hardenburg, “a young American engineer,” as supplying facts; likewise quotations are given from two newspapers published at Iquitos and one in Manaos.

Well, how does rubber come down to Iquitos? According to *Truth*, the pacific indians of the Putumayo are forced to collect rubber “without the slightest remuneration;” “they flog them inhumanly until their bones are laid bare;” “they do not give them any medical treatment, but let them linger, eaten by maggots, till they die, to serve them afterwards as food for the chiefs’ dogs;” “they mutilate them, cut off their ears, fingers, arms, and legs;” “they torture them, by means of fire, of water and by tying them up crucified head down;” the agents even “souse them with kerosene and set fire to them, to enjoy the desperate agony.” There are other details in *Truth’s* story which, if repeated here, would exclude THE INDIA RUBBER WORLD from the United States mails.

As for the company’s agents, *Truth* would have it understood that they are themselves practically prisoners in the upriver districts, and compelled to follow the customs which have grown up in the collection of rubber by the great company mentioned in this article.

Space has been given here to Henry Labouchere’s story for the reason that England has been the home of the most extreme stories of outrages perpetrated upon rubber collectors in the Congo, and because this particular member of parliament has recognized that Englishmen are not doing better in domains under their own absolute, if not official, control. It is possible that *Truth’s* story will be controverted in full; at the same time Mr. E. D. Morell, of *The African Mail*, may also find himself without support in his criticisms of conditions in the Belgian Congo rubber districts.

IN THE BRITISH PARLIAMENT.

IN the house of commons, on September 29, Mr. Hart-Davies asked the foreign secretary whether his attention had been called to the proceedings of an English company called the Peruvian Amazon Co.; whether any report as to the alleged ill-treatment of British subjects from Barbados had been made by the English consul at Iquitos; and whether he would call for a report on the doings of this company from the local English consul at Iquitos.

Mr. McKinnon Wood, in reply to this and a similar question by Mr. Cathcart Wason, said: “I have not heard of the existence of the company, and have no information about it. I will ask for a report on the subject.”

Mr. Hart-Davies asked whether the honorable gentleman

was aware that the American consul had also made a report to his government on this company, and whether he could see his way to get hold of that report.

Mr. McKinnon Wood: "I was not aware of it."

AN OFFICIAL DENIAL.

THE publication in the London paper of the charges which are here referred to, elicited a communication from the Peruvian *chargé d'affaires* in London, as follows:

TO THE EDITOR OF TRUTH—*Sir*: In the issue of your valuable paper of 22nd inst., appears an article entitled "The Devil's Paradise," in which you narrate the atrocities which are alleged to have been perpetrated against the aborigines of the Putumayo region by the Peruvian Amazon Co., Limited. This legation categorically denies that the acts you describe, and which are severely punished by our laws, could have taken place without the knowledge of my government on the Putumayo river, where Peru has authorities appointed direct by the supreme government, and where a strong military garrison is likewise maintained.

The territory of Putumayo is not a sort of no man's land, as described by you, and is in direct communication, by steamer and other rapid routes, with Iquitos, the capital of the important Department of Loreto. Iquitos, on the other hand, is connected by telegraphic and wireless installations with Lima and the whole of the republic, and it is impossible to admit that acts of the nature described could have been committed without the guilty parties being promptly and severely punished by the authorities. The quotation referred to, from the two local newspapers, *La Felpa* and *La Sancion*, should not be given the least credit, as both papers were started by the same editor, and were short lived.

The said papers published fantastic crimes alleged to have been committed by the employees of the firm of J. C. Arana y Hermanos, and when the employees of this old and well-known house commenced proceedings for libel against the editor he disappeared in order to evade the grave responsibility he had incurred. These facts are well known at Iquitos.

There are other English rubber companies in Peru—as the Inambari company, for instance—who can speak as to the treatment always given to the natives, and who will certainly not confirm the information contained in your article. Besides, is it possible to believe that traders, anxious to secure abundance of labor, should commit iniquitous acts of the nature described, and only conducive to the annihilation of the very hands of which they are in such great need?

I must, therefore, repudiate in the most deliberate manner the accusation contained in the said article, and I protest most emphatically against the suggestions therein made, that soldiers of the Peruvian army could be capable of committing the acts of inhumanity described by Mr. Hardenburg.

E. LEMBECKE, *Chargé d'Affaires*.

Peruvian Legation, London, September 25, 1909.

ALL AMAZON RUBBER NOT "RED."

THERE is visiting in New York a gentleman long resident on the Amazon, at one time a journalist and again in the crude rubber trade, to whom the articles in *Truth* were referred by THE INDIA RUBBER WORLD.

"The details in Mr. Labouchere's articles do not differ materially from reports current on the Amazon not so long ago. I had reason to desire to get at the truth in this matter, but neither principals in the Peruvian company nor representatives of the Peruvian government with whom I came in contact would make definite statements, either negative or affirmative. From my knowledge of the rubber situation, however, I do not doubt that the story in the London publication has a very solid basis in fact.

"Does it follow that Amazon rubber in general is the product of such cruel labor conditions?"

"Oh, no. The greater part of the Amazon production comes from districts in which rubber gathering has become a fixed industry, whereas the development in Peru is recent, and there has not been time for system to be organized.

"But that is not the chief consideration. In Brazil, including the Acre territory, rubber is extracted mainly by workers from Ceará and other southern Brazilian states. Originally they made an annual migration from their homes up the Amazon, returning home at the end of the rubber season. Gradually these workers began to make settlements up the Amazon, so that a permanent rubber gathering population is coming into existence. The Indians of Brazil never have figured much in the rubber interest, and so have not become subject to such outrages as are charged in the Putumayo district.

"In other words, the Brazilian Indians, generally savage, and sometimes cannibals, cannot be brought under control as rubber workers. For that matter the Cearenses—white men—cannot be brought under control. They never lose sight of their rights, and will brook no unfair treatment. From what I have seen on up-river *seringacs*, I should say that the Italian laborer has no such readiness with the *stiletto* as the Cearenses, and it would fare badly with a rubber estate manager who attempted any treatment of them which they might regard as unfair."

"Then how about the Peruvian Indians?"

"They are wholly pacific by nature," was the answer. "They are different in every way. Their country has been invaded by seekers for rubber, in which material they felt no interest before, and they have been placed in a condition of involuntary servitude, as indicated by the London newspaper's articles. The Indians in the rubber districts of Bolivia are also pacific, as a rule, and capable of control to an extent which makes many of them, no doubt, absolute slaves, though no stories of atrocities such as alleged in connection with Peru have been reported from Bolivia. Yet I remember a story of how Nicolas Suarez, to avenge the death of his brother at the hands of the natives, sent his agents out on a punitive expedition which resulted in the death of 300 of them. [See THE INDIA RUBBER WORLD, April 1, 1905.]

"But no outrages are likely to be heard of as being perpetrated upon Brazilian white men—the emigrants from the state of Ceará, for instance—for reasons which I have mentioned already."

LIBEL SUITS IN THE CONGO.

THE American missionary, the Rev. W. H. Sheppard, on trial at Leopoldville, charged with "calumnious denunciation" and libel by representatives of the Cie. du Kasai [see THE INDIA RUBBER WORLD, July 1, 1909., page 345], was acquitted on October 5. The Rev. Dr. William Morrison, another American missionary, was also named as a defendant when the actions were first instituted, but the charges against him were withdrawn. The company sought to recover \$6,000 from Mr. Sheppard. The latter is described by the *Richmond Leader* as a colored man, a native of Virginia and highly respected in the State. He is mentioned also as having done much to create British sentiment in respect of alleged atrocities practised upon native rubber gatherers in the Congo.

A later report is that the Kasai rubber syndicate will appeal from the decision in the Sheppard case.

RUSSIAN DUTIES ON RAW RUBBER.

ENGLISH exporters of raw rubber have, through the London Chamber of Commerce, according to *The India-Rubber Journal*, pointed out to the Anglo-Russian Chamber in St. Petersburg that raw rubber imported into Russia from Africa and the Amazon territories is subject to a duty of 1 rouble 50 copecks per pood—or 1d. per pound—whilst for Ceylon and general Asiatic produce the duty levied is 8 roubles per pood—or 5d. per pound. The difference in the rate is explained, says an official journal, by the fact that Asiatic rubber is counted not as raw, but as wrought material. The English merchants argue that this is an error, for the Asiatic product is just as unwrought as rubber from other parts of the world, and if it happens to be of superior quality that is due only to special selection. In view of the foregoing, since the market value of African and American rubber, on the one hand, and of Asiatic, on the other, is the same, the latter is shut out from Russia, which is known to be one of the largest consumers of raw rubber in the world, and both English merchants and Russian consumers would benefit by an equalization of the duties. The Anglo-Russian Chamber will consider the point on an early date, and will invite representatives of Russian manufacturers of rubber goods to the consultation.

An Official View of Amazon Rubber.

THE formal yearly report on the trade of Brazil for the year 1908, from the British legation at Rio de Janeiro, is signed by Mr. Cheetham, secretary to the legation. It contains some very interesting statements regarding the crude rubber interest in that country.

He says the rubber trade of the Amazon valley is in many respects one of the most remarkable commercial movements in existence. If the value of the product put on the world's markets be compared with the trifling expenditure of human energy involved in its collection the contrast is an extraordinary one. The whole of this valuable trade is gathered, in the first place, by a handful of illiterate, untrained men who, taking their lives in their hands, enter the vast uncultivated wilderness of the upper Amazon forests and, on behalf of distant *aviadores* and nominal forest owners, tap the trees and smoke the rubber that later on figures as the second asset in Brazilian commercial and financial prosperity. Deprived of her rubber output Brazil would lose one-third of her purchasing capacity.

Yet, Mr. Cheetham states, although the source of so large a part of her national income, Brazil as a whole does nothing for her rubber producers, and these, in equal disregard of great responsibilities, do little or nothing for their rubber trees. The whole of the vast wealth of the Amazon rubber output is drawn from the virgin wealth of uncultivated forest products, the product being obtained by the crudest methods from the natural wilderness of rubber-giving trees.

Were the rubber industry of the Amazon valley, Mr. Cheetham adds, established on organized lines of cultivation and scientific development, the number of persons actively employed in rubber production (now officially and inaccurately given as 5,337) would be one of many hundreds of thousands. But the methods of production have shown no advance during a period of twelve years, while the cost of production must have greatly increased. That Pará rubber, he continues, as it is today exploited can continue successfully to compete when once the East India plantations have attained a large area of development seems highly improbable.

The cost of the bare necessities of life, to say nothing of the comforts of existence, has greatly increased, and the absence of these things renders the weary lot of the Amazon rubber extractor one of the most depressing in existence. Half submerged in a swampy forest, he has few or no companions and no social life at all. A stranger from far away, he makes no home, but squats where he can best tap the surrounding trees. The owner of the estate neither resides on it nor pays an absence tax. His ownership restricts itself to taking out papers of registration before someone else has obtained them, and then leasing the right to find and tap what rubber trees the undefined vagueness of this "estate" may afford the hardy Ceará or Maranhão explorer who acts as his tenant.

There is little likelihood of Amazon rubber being exhausted. The area is so vast, the supply of trees so constantly self-renewing, that it is most improbable that while demand continues and profitable prices are obtained the supply from this region will fall off. The real danger to the Amazon industry lies in the competition of cultivated rubber. If this can be shortly produced on a large scale and the demand does not keep equal pace prices must fall.

The Amazon forest on the present lines of Brazilian taxation and expenditure can only be worked if the price of rubber remains high. The expenses are so great, the taxes imposed so onerous, that any permanent fall in the price of rubber would mean not alone the cessation of Amazon rubber production, but a very serious financial problem for the whole of Brazil to meet.

Rubber cultivation in Ceylon, the Malay peninsula, and, no doubt, elsewhere, can be profitably carried out, and by annually improving the methods, at a rate of expenditure that would be wholly insufficient to tap the wild forest trees of the Amazon basin.

Considerations such as these, while they should stimulate rubber production within the British empire, should not be lost sight of (Mr. Cheetham points out) by those who may be disposed to invest money in the purchase and exploitation of so-called rubber estates on the Amazon. The excessive import duties and the heavy export taxes must never be lost sight of; for they affect every aspect of commercial, industrial and individual life in Brazil. While it may be held as unquestionable that Amazon rubber is a wild product obtained by the least expenditure of labor necessary to its crude production, and with no resort to cultivation, there is a growing export from other parts of Brazil of inferior kinds of rubber which may in the near future attain large proportions. This rubber, moreover, is to some extent the product of cultivation.

In five years, the report says further, the quantity of these inferior kinds of rubber shipped from Brazil, has more than doubled, and it is probable that with the largely increased demand and higher prices which have ruled throughout the last six or seven months the export of these lower grades of rubber will show a considerable development in the course of the present year.

The report apparently is the result of much intelligent study of the Amazon rubber situation, and is deserving of attention. At the same time there is reason to believe that a new era in rubber is opening in the region referred to, and that improvement is being made, however slow its progress. The opposite side from what the British official has seen is well stated in Mr. Heinsohn's article in *THE INDIA RUBBER WORLD*, July 1, 1909 (page 347), as the result of an experience of many years on the Amazon.

NEW CONDITIONS ON THE AMAZON.

TO THE EDITOR OF *THE INDIA RUBBER WORLD*: An interesting fact in connection with a recent shipment of india-rubber from Pará deserves mention as bearing upon the new conditions of rubber exportation outlined recently in your paper. For instance, you have mentioned the incorporation of the Alves Braga Rubber Estates and Trading Co., Limited, succeeding a long established Pará firm of *aviadores* and latterly producers of rubber on a large scale. [See *THE INDIA RUBBER WORLD*, September 1, 1909—page 421.] It seems that the company have now engaged in the exportation of other rubber than that produced on their own *seringaes*.

The steamer *Antony*, bound from Manãos to Liverpool, stopped at Pará on August 20, and took on board 282,880 kilograms of additional rubber. This was credited on the manifest to nine firms, including the leading exporters at Pará, but no less than 112,010 kilograms, or about 40 per cent. of the whole, were shipped by the Alves Braga Rubber Estates and Trading Co., Limited. As I wrote in your paper a month ago, the buyers of rubber at Pará were remaining out of the market, as a means of "bearing" prices, and here comes a local, or Brazilian, firm, prepared to buy and ship rubber without reference to the foreign houses. As your readers know, the Alves Braga company are large producers of rubber up-stream, but when they have to do with shipments from Pará it means they have bought rubber there from producers nearer seaboard.

S. CLARK.

October 4, 1909.

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

A STOCK dividend of 100 per cent. was declared at the annual meeting of The Diamond Rubber Co., held at the offices in Akron, on October 19. This increases the capital stock of the company from \$5,000,000 to \$10,000,000. The regular 10 per cent. dividend was also declared on the old stock. In anticipation of the stock dividend, it is stated that shares sold as high as 335 before the meeting. The stockholders reelected the following directors: F. A. Hardy (Chicago), O. C. Barber, A. H. Marks, W. B. Miller, R. C. Lake (Chicago), O. S. Hart, and A. H. Noah. The directors met and reelected the officers, as follows: F. A. Hardy, president; A. H. Marks, vice-president; W. B. Miller, secretary; A. H. Noah, treasurer. The treasurer reported to the stockholders an unusually prosperous year. The directors decided to build new buildings at once, with a view to increasing the factory floor space by six acres. More room is desired for the expansion of the automobile tire, insulated wire, and mechanical goods departments of the factory. The company already have under construction a six-story building 103 x 371 feet, for factory purposes, besides the new office building and laboratory. It is expected to have these buildings ready for occupancy by January 1. Definite plans for the buildings decided upon in the annual meeting have not been announced.

It may interest some readers to have recalled the first mention of The Diamond Rubber Co. in these pages. It appeared as a "Trade Note" in THE INDIA RUBBER WORLD, April 15, 1894 (page 27):

—A new mechanical-rubber concern at Akron, Ohio, is called the Diamond Rubber Co. It was incorporated under the laws of the state on March 26, with \$50,000 capital.

* * *

To help in securing labor, The Diamond Rubber Co. have opened an office on South Main street, in which an employment agent will be stationed at all hours of the day. Heretofore the company have employed men only during a few hours in the morning. Under this plan it was found impossible to meet the demand of the factory for new help.

A new tire sales branch has been opened by The Diamond Rubber Co. at No. 1633 Court place, Denver, Colorado. Heretofore the tire business of the company was controlled through the Overland Rubber Co. as agents. The manager of the new branch is Charles F. Collins, formerly a partner in the Overland company. The branch in the Boston building for the sale of mechanical goods will be continued as before.

The Diamond Rubber Co. have closed a contract with the Maxwell-Briscoe Motor Co. for 7,000 sets of tires for Maxwell 1910 cars. Other large contracts for 1910 business have been secured by the company. The 1909 sales season came to a close with the conference of Diamond branch managers called for November 1 in Akron.

The Diamond Rubber Co. call attention to the fact that the two winning Lozier cars in the Brighton beach races held during the last month were equipped with their tires. The first car broke all former records for a 24 hour race by 20 miles.

Paige L'Hommedieu, chief clerk in the hard rubber goods department of The Diamond Rubber Co., has taken a similar position with the company's New York branch.

* * *

THE Goodyear Tire and Rubber Co. were successful in securing a restraining order from the United States court in Columbus, Ohio, late in October, to enjoin The Rubber Tire and Wheel Co. and the Consolidated Rubber Tire Co. from suing the customers of the Goodyear company. The injunction is a sequel to the litigation involving the Grant solid tire patents, in which both sides have won victories in different courts. Judge Sater, of the Columbus court, in granting the injunction delivered a lengthy opinion in which he laid down a new law of importance

to manufacturers. He held that manufacturers who have defeated a patent may protect their customers from being sued, even though the customer does not buy the complete article from the manufacturer. A decision by the United States supreme court had previously offered the same protection, but only to customers who bought the complete article.

Large orders for automobile tires have been received by The Goodyear Tire and Rubber Co., including an immense contract for the equipment of Buick cars, so that it will be necessary for the company to greatly increase the capacity of their pneumatic department. Mr. Charles W. Seiberling, vice-president of the company, says that the output, which is now 600 tires a day, will be increased before January 1 to between 1,400 and 1,500 a day. In order to bring this about night shifts were put on in a number of departments November 1. Orders have been given for five new vulcanizers, and several washers and mills. Four new tire making machines, like the four already in operation, are in process of construction and more are to follow.

The Goodyear Tire and Rubber Co., after conducting extensive experiments in pumping water from Blue pond, a body of water one mile from their plant, have abandoned the project. The object was to secure pure water, free from substances injurious to engine valves, but it was found, after pumping from the pond, that the water fell rapidly, indicating that the body of water would ultimately be pumped dry.

* * *

THE report of the city board of tax review filed during the last month shows that during the year ending April, 1909, rubber companies have made improvements aggregating in value \$450,000 on their properties in Akron. Nearly two-thirds of this amount is represented by new buildings erected in the course of reconstructing The B. F. Goodrich Co.'s factory. Buildings torn down by the Goodrich company were valued at \$32,000. During that year the Buckeye Rubber Co. constructed a building valued at \$30,000; two others were constructed by the Goodyear company valued respectively at \$44,000 and \$21,000; one by the Firestone company worth \$12,000; four by The Diamond Rubber Co. valued respectively at \$26,000, \$9,000, \$21,000, and \$21,000; additions by the Miller Rubber Co. valued at \$4,500, and by the American Hard Rubber Co. valued at \$1,800.

* * *

DETAILED descriptions of the Goodrich tire making machine, mentioned in this correspondence in the September INDIA RUBBER WORLD, will not be ready for publication until next spring, according to the general manager, Mr. E. C. Shaw, who says that patent arrangements will not be completed before that time. In the meantime the company are adding to their equipment of the machines. Between 30 and 40 are now in use.

* * *

THE following officers and directors of the North Western Rubber Co., Limited, of Liverpool, England, were reelected at the annual meeting of the company, held in the Akron offices of The Diamond Rubber Co., on October 19: Arthur H. Marks, of Akron, president; William Alexander Smith, of Glasgow, vice-president and treasurer; E. E. Buckleton, of Liverpool, secretary and managing director. The additional directors are Ohio C. Barber, of Akron, and Dr. Joseph Torrey, of Liverpool. Mr. Buckleton attended the meeting and expects to sail back November 3. He said that no changes will be made in the business of the company.

* * *

THE Buckeye Rubber Co. have started work on the reconstruction of the building destroyed in their recent fires. Reinforced concrete fireproof construction will be used throughout, and the structure will be built three stories high instead of one and a half as before. It will be used for the mill room, the drying room, and probably for the manufacture of inner tubes. The ground dimensions are 40 x 91 feet.

THE Aluminum Flake Co., of this city, have let a contract with an eastern manufacturing concern for the purchase of sufficient machinery to double the output of the plant. Work has also been started on the remodeling of the buildings, to afford more room. Mr. Frank Reifsnider, general manager of the company, says that he has orders already that will more than double the sales of the company during the coming 12 months, one contract with an eastern concern being for 1,200,000 pounds of aluminum flake.

* * *

THE Goodrich, Diamond, Goodyear, and Firestone companies are preparing to have representatives at the Atlanta automobile show, to be held November 6 to 13. This is the first show of the season, and the first large show to be held in the south.

Mr. E. B. Williams, manager of the tire department of the Stein Double Cushion Tire Co., has resigned, to take a position with the Swinchart Tire and Rubber Co.

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

LOCALLY, the business of the rubber goods houses has been interfered with to a considerable extent by the big Portola festival, which opened on October 19 and continued for a week. There had been so much preparation to make the celebration a success, and so much time was taken up by it while it is in progress, that it put a damper on the city trade. There were big crowds in the city and the festival undoubtedly will have good results for San Francisco. It was in a manner the opening or coming out day for this city, displaying to the world that it has practically recovered from the effects of the earthquake and fire of 1906, is a reconstructed city, and can accommodate all of the visitors who may care to come, with the best and most modern cafes and hotels.

Business conditions have not developed in a manner to greatly elate the coast rubber trade. It is still the same story of waiting for better times to turn up, with indications always favorable for good business. There continues to be sufficient grounds for a flourishing season, the country districts are prosperous, the city is forging ahead in the building line, and there are no obstacles in the way of progress, but the expected never quite happens and the results each month shows a tendency towards better commercial conditions without any great demonstration of activity. Progress is slow, but it is unquestionably sure and all of the firms are doing enough to keep them from being dissatisfied with the trade.

The first organization meeting of the Pacific Coast Rubber Manufacturers' Association was held at No. 168 O'Farrell street on September 21, and the organization was affected. It is in reality a reorganization of the Western Mechanical Rubber Goods' Association, which died with the old city. Mr. W. F. Bowers, of the Bowers Rubber Works, was elected president; Mr. Joseph V. Selby, of the Boston Woven Hose and Rubber Co., vice-president; Mr. H. C. Norton, of the American Rubber Co. treasurer; and George Didion, secretary. The executive committee chosen is as follows: F. T. Sargeant, with the Gorham Rubber Co.; C. F. Runyan, with the Goodyear Rubber Co.; W. D. Rigdon, with the Revere Rubber Co.; and F. S. Winslow, with the Pacific Coast Rubber Co.

Mr. R. H. Pease, president of the Goodyear Rubber Co., states that the advance on all kinds of rubber goods looks serious for the consumer, and yet the only thing left for the manufacturer is to raise his prices to correspond to the increased cost of crude rubber. This the manufacturers on the coast have generally done, and it looks as though the prices would continue, for the above reasons and also owing to the fact that buying has become easier in keeping with the increasing prosperity, and all through the country the demand is strong for

mechanical goods as well as for automobile tires. The business of his firm is better than it has been for a long time, and there is evident improvement in all lines. Like others they are meeting with difficulty in placing goods at the high prices, particularly miners' rubber boots, but they insist on maintaining the present quality and the consumers will gradually come over to the increased price.

Mr. W. J. Gorham, of the Gorham Rubber Co., has returned from his extended trip to Los Angeles. W. B. Heckman, with this firm, has returned from his eastern trip. He came by way of Seattle and spent some time taking in the exposition there.

Mr. W. Henry Sayen, Jr., passed through San Francisco last week, on a tour of the coast. He is treasurer of the Mercer Rubber Co., of Hamilton Square, New Jersey. He will be through this way next April, not so much in the interests of his firm, as it will be his honeymoon trip.

Mr. E. E. Torrey, Pacific coast representative of the Pennsylvania Rubber Co., has returned from his eastern trip, and is again at work with his usual optimism. He has been selling a great deal of garden hose this season.

Mr. Gregory, manager of the New York Belting and Packing Co., Limited, No. 133 First street, states that the manufacturers on the coast are generally raising their prices all along the line. There is a better feeling noticeable in the trade.

A report from the Pacific Mill and Mine Supply Co. shows that the country business is very good, although they cannot say much for the city trade for the past month. They are looking for a gradual improvement in business.

The Gutta Percha and Rubber Manufacturing Co. report that the past month has been a little quiet on account of the Portola activities. Mr. C. H. Brown, with this firm, has been up through the northern territory and met with very satisfactory results, showing that business is picking up, especially from the lumber mills.

The Argus Co., a corporation at No. 110 First street, formed recently for the purpose of recovering typewriter platens, have completed their plant and are now actively at work. It is the first firm of its kind on the coast which does this work exclusively, as heretofore the business of platen covering has been conducted as a side line at the factories. Mr. Bill Reagan, the practical man in charge, covered the first typewriter platens that were covered on the coast, and he is well adapted to accomplish the success which he has achieved for the firm. They are now getting business from all of the coast cities from Seattle to Los Angeles, and are doing very well. As an innovation they are using three colors, green, maroon and a black, for the different grades—soft, medium and hard, and this takes well with the trade.

Mr. C. A. Tracy, traveling for the Sterling Rubber Co., has returned from the Nevada country, where he found business fair, but not what it used to be. In San Francisco it is quiet, but the surrounding country is good, especially through the southern part of the state, where business has shown a remarkable increase.

Mr. E. B. Steers, manager of the Seamless Rubber Co., of New Haven, Connecticut, is now visiting the coast in the interest of his firm.

Mr. J. O. Stewart, with The Diamond Rubber Co. in San Francisco, has returned from a trip through the San Joaquin valley, where he did a big tire business. E. L. Redding has been sending in good reports to headquarters from Portland and the north.

Mr. U. S. Grant, with the Eccles & Smith Co., states that there is reason to believe that conditions will be excellent for the coming season, although as to the present business is only fairly good.

The West American Rubber Co. has been incorporated in Seattle, Washington, with a capital of \$50,000 by V. C. and C. A. Benjamin, W. T. Gothed, and J. D. and L. R. Works.

Some Rubber Interests in Europe.

THE INDUSTRY IN PORTUGAL.

UNDER the heading "A Doubtful Bargain," *La Chronique Coloniale* (Brussels), comments as follows on Compagnie du Caoutchouc, of Lisbon, the reorganized rubber manufacturing company in Portugal:

"Our readers are aware that this recently organized company has acquired for a consideration of 700,000 francs [= \$135,100] in fully paid up shares of stock, the assets of the Compagnie du Caoutchouc, Monopole du Portugal, in liquidation, which latter concern owned the monopoly right for the manufacture of rubber goods in Portugal during a term of 10 years. In this connection we would state that the said monopoly right expired 18 months ago, and that the new company will consequently not derive any benefit from the same.

"This would not in itself be a serious matter, were it not for the fact that manager and chief accountant, vexed by annoyances to which they had been exposed, have recently left the service of the company for the purpose of establishing another works in competition with the same.

"This cannot fail to prove a serious injury to the interests of the Compagnie du Caoutchouc, inasmuch as no one is more thoroughly acquainted with the trade and its requirements than the company's former manager, who is, moreover, an exceedingly capable man. The trade, furthermore, practically ignores the company, since it has been accustomed to deal only with the local representative or representatives of the same, who will retain their custom whatever happens.

"These facts are not likely to serve as a balm for healing the sore spots of the stockholders of Monopole du Portugal who were fleeced in the manner known to our readers."

TRIBUTE TO THE LATE SENATOR DR. TRAUN.

THE Centralverein Deutscher Kautschukwaren-Fabriken has published the following tribute to the late Senator Dr. Traun, signed by Louis Hoff, president, and Dr. Soetbeer, secretary:

"Senator Dr. Heinrich Traun, of Hamburg, senior member of the firm of Dr. Heinr. Traun u. Söhne, formerly Harburger Gummi-Kamm Co., departed this life on September 10. His fellow citizens who conferred upon him the highest position of trust in the Free and Hanseatic City of Hamburg, all of his factory employes, and the entire rubber manufacturing industry, join his relatives in mourning the death of this excellent man. He not only developed his own factory into one of the most prominent rubber works in the world, but also had the common interest of this branch of industry very much at heart and did his best to further it. He was one of the founders of the Verein Deutscher Kautschukwaren-Fabriken (Association of German Rubber Manufacturers) organized on September 17, 1895, and was shortly afterwards elected a director of the same, retaining this office even after the association was consolidated with the Vereinigung Deutscher Gummiwaren-Fabriken (Association of German Rubber Works) under the name Centralverein Deutscher Kautschukwaren-Fabriken (Central Association of German Rubber Works), until his election as Senator compelled his resignation. He was a man of great foresight and extensive experience, of strong character, and kind hearted. He will continue to live in our memory as a noble and commanding personality."

It is announced that the Hamburg firm of Traun, Stürken & Co., importers and exporters, will continue as before the death of the principal member, Herr Senator Dr. Traun. Their business was largely the importation of crude rubber from German East Africa, though not confined to this region.

The firm Heinr. Ad. Meyer, of Hamburg, mentioned in connection with the career of the late Dr. Traun, in the last INDIA

RUBBER WORLD, is still maintained, importing ivory from German Africa.

DISTINCTION FOR A RUBBER MANUFACTURER.

THE late director of Continental-Caoutchouc-und Gutta-percha-Compagnie is now Herr Dr. Professor Prinzhorn. The conferment upon him of the degree of doctor of engineering was reported recently in these pages; his new title of professor is a recognition from the government of his services in the development of the india-rubber industry.

RUBBER GOODS PRICES IN GERMANY.

IN connection with the meeting held on July 7 last in Berlin, the opinion is expressed among rubber goods manufacturers that it would be advisable to hold a further meeting in the near future, for the purpose of discussing the situation of the rubber industry, in view of the high prices asked for crude rubber, and of debating the measures to be taken by the manufacturers to meet prevailing conditions. At the instance of Director General Hoff (Harburg-on-the-Elbe) and Kommerzienrat Seligmann (Hanover) invitations have been sent out to attend the proposed meeting, to be held on November 5 at the Hotel Kaiserhof in Berlin.

THE GUAYULE INTEREST.

CRUDE RUBBER PRODUCED IN THE UNITED STATES.

DURING the past month the production of guayule rubber on a commercial scale in the United States has been definitely commenced. Mention has been made in these pages of the Texas Rubber Co., incorporated April 10, 1907, under the laws of Texas, with \$100,000 capital, to operate a guayule factory at Marathon, Texas, which factory has just begun operation. Mention has been made also of the Big Bend Manufacturing Co., incorporated August 27, 1907, under the laws of Delaware, with \$25,000 capital, which latter company was the successful bidder for all the guayule shrub existing on the state school lands in Texas, under the law of 1907. It is understood that control of these two corporations has been gained by Mr. William H. Stayton, who recently resigned the presidency of the Continental Rubber Co. Mr. Stayton is a former United States naval officer who, on leaving the service, became a member of an important legal firm in New York, in which connection he was led to study thoroughly the rubber situation.

Texas is the home of the guayule shrub as well as Mexico. It may be recalled that the first scientific study of the plant *Parthenium argentatum* was made north of the Rio Grande by an American scientific expedition. A large amount of the guayule rubber produced in Mexico thus far has been the result of the investment of United States capital, and altogether there would appear to be no reason why guayule should not be successfully produced in the United States.

GUAYULE RUBBER BY A NEW PROCESS.

MR. E. DELAFOND, civil engineer, whose excellent work in connection with guayule has long been known, is producing rubber from this shrub by a new "physico-mechanical" process, at the "La Victoria" works, hacienda de Sierra Hermosa, at Catorce, state of San Luis Potosi, Mexico. An analysis, by Jose de Morales, chemist, is as follows:

Pure caoutchouc	88 per cent.
Resin	7 per cent.
Moisture	12 per cent.
Total	100 per cent.

Mr. Delafond, by the way, is experimenting with the cultivation of guayule, it is said, with excellent results.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED SEPTEMBER, 7, 1909.

- N**O. 933,049. Vehicle wheel [with pneumatic tire]. A. E. Beall and C. F. Skellenger, Iowa.
 933,069. Hose rack. H. Gibbs, Chicago, assignor to W. D. Allen Mfg. Co.
 933,110. Tire tread. C. L. Rempes, Akron.
 933,290. Reel operated hydrant. W. J. Clay, Cotton Valley, La.
 933,422. Spring wheel. T. Dee, Randolph, Mass.
 933,464. Nozzle for garden hose. J. G. Kasjens, Peoria, Ill.
 933,490. Syringe. C. Remhof, Brooklyn, New York.
 933,516. Connecting hose for railway cars. E. Witzemann, Pforzheim, Germany.
 933,551. Pneumatic heel cushion. W. L. Gordon, Deal, N. J.
 933,578. Syringe nozzle. J. W. Perkins, Everett, Mass.
 933,715. Pneumatic tire for automobiles and other vehicles. C. A. Lewis, assignor of one-half to W. A. Diboll, both of Denver, Colo.

Trade Marks.

- 30,118. The Mechanical Rubber Co., New York city. The word *Buckeye*. For water bottles and syringes.
 40,424. Turner Brothers, Ltd., Rochdale, England. The word *Permanite*. For packing of rubber and other materials.
 43,356. The Rossendale-Reddaway Belting and Hose Co., Newark, N. J. The words *Black Bird*. For woven or fabric belting and hose.

ISSUED SEPTEMBER 14, 1909.

- 933,748. Tire protector. D. Day, Hume, Ohio.
 933,808. Combined press and vulcanizer. J. K. Williams, Akron, Ohio, assignor of one-half to The Williams Foundry and Machine Co.
 933,947. Inclosed hose rack. W. D. Allen, Chicago, assignor to W. D. Allen Mfg. Co.
 934,103. Closure for jars or vessels. Gray Staunton, assignor to W. S. Potwin, both of Chicago.
 934,125. Piston packing. H. A. Young, Chicago.
 934,130. Truss. G. W. Bell, Kansas City, Mo.
 934,187. Detachable wheel rim. C. Kinderscherf, Hanover, Germany, assignor to the Continental-Cautouchou- und Gutta-Percha Compagnie.
 934,341. Wheel for road vehicles. G. S. Ogiive, Woodbridge, England.

ISSUED SEPTEMBER 21, 1909.

- 934,472. Tire. [Pneumatic with separate solid tread.] J. S. Stevenson, Detroit, Mich.
 934,627. Piston rod packing. H. P. Rhodes, Galveston, Texas.
 934,639. Tire. [Pneumatic with special tread.] E. V. Van Cantford, Akron, Ohio.
 934,773. Vehicle wheel. J. H. Van Arsdale, assignor of one-half to H. Luedinghaus, Jr., both of St. Louis.
 934,862. Removable rim for vehicle wheels. G. S. Van Voorhis, Boston.

Trade Mark.

- 43,445. New York Leather Belting Co., New York City. A blue band. For balata belting.

ISSUED SEPTEMBER 28, 1909.

- 935,033. Vehicle tire. C. H. Knecht, Akron, Ohio.
 935,048. Coupling for the inflating valves of pneumatic tires. C. McNellis, Chicago.
 935,086. Hose construction. C. M. C. Baird, Evanston, Ill.
 935,089. Cushion heel. J. Cairns, London, England.
 935,093. Vehicle wheel tire. H. M. and T. J. Deeth, Toronto, Canada.
 935,126. Tire [protector]. D. W. McLean, Mount Hatt, Methven, New Zealand.
 935,192. Tire. [Solid segmental.] C. F. Dinkle, Carlisle, Pa.
 935,245. Wheel for road vehicles. [With pneumatic tire.] S. M. Brown, High Road, Wood Green, England.
 935,295. Vulcanizer [with clock combined]. H. D. Bultman, assignor to Consolidated Dental Mfg. Co., all of New York city.
 935,330. Anti-skidding device. E. B. Stimpson, assignor to Edwin B. Stimpson Co., all of New York city.
 935,332. Tire protective rivet. *Same*.
 935,396. Tire. [Consisting of alternating layers of fabric, on edge, and rubber.] L. M. Nelson, Douglas, Wyo.
 935,414. Rubber. [As a new article of manufacture, a hard rubber produced by coagulating the sap by a flourin containing substance, said coagulated product being pressed and vulcanized under heat with a mixture of sulphur and litharge, the product being elastic, inodorous and containing no appreciable quantity of sulphide of lead.] D. Sandmann, Berlin, Germany.
 935,613. Tire. [Pneumatic; armored.] G. W. Sharpe, New York city.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of these listed below was in 1908.

* Denotes Patents for American Inventions.

- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, SEPTEMBER 1, 1909.]
 9,683 (1908). Inhaler. G. M. Thomson, London.

- 9,706 (1908). Pneumatic tire. W. B. Hartridge, Seaford, Sussex.
 9,835 (1908). Spring wheel with pneumatic tire, outside of which is a metallic rim carrying a solid rubber tread. H. P. Forster, Johannesburg, South Africa.
 9,956 (1908). Vulcanization process. [Rubber is vulcanized in solution by the addition of an iodine solution, for example iodine dissolved in carbon tetrachloride. It is particularly adapted as a covering for the skin for surgical purposes.] Degen & Kuth, Dürren, Germany.
 9,981 (1908). Solid rubber tire, single or dual, retained by means of metallic insertions vulcanized in the base. H. Kuhnén, Kyffhäuser, Germany.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, SEPTEMBER 8, 1909.]

- 10,234 (1908). Pneumatic tire tread with sheet of chain mail embedded. W. B. Giesen, and E. T. Ryan, Wellington, New Zealand.
 10,322 (1908). Rubber tapping knife. T. H. Hill, Ringwood, Hampshire.
 10,451 (1908). Tire with rubber core. C. Farrer, London.
 10,456 (1908). Resilient tire comprising a wire spiral in a cover of rubber or other material. C. Dore, Hyde, Cheshire.
 10,459 (1908). Puncture preventing band of treated linen for tire tubes. J. Cox, Tutbury, Staffordshire.
 10,482 (1908). Spare rim with pneumatic tire, to be carried with the permanent wheel on an automobile. F. J. Kemp, Birchfield, Birmingham.
 10,500 (1908). Paste for tire repairs. W. H. Paull, Birmingham.
 10,620 (1908). Attachment of detachable rims to wheels. Continental-Cautouchou- und Gutta-Percha-Compagnie, Hanover, Germany.
 10,621 (1908). Process for attaching leather treads to rubber tires. A. Ernst, Langenhagen, Germany.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, SEPTEMBER 15, 1909.]

- 10,724 (1908). Wheel in which a pneumatic tire supports wooden tread blocks guided between side plates. F. Baker, North Brighton, Victoria, Australia.
 10,731 (1908). Substitute for hard rubber obtained from waste horn or other gelatinous materials, pulverized and treated with an alkaline solution. E. Torrini, Courbevoie, France, and two others.
 10,920 (1908). Puncture preventing band for tire inner tubes. W. Leatherbarrow, Earlstown, Lancashire, and two others.
 10,948 (1908). Rubber tire tread built up of segmental pieces of leather or other material, with rubber poured between the segments so as to accumulate in a continuous band around the canvas lining of the tire, the whole then being vulcanized. J. L. Villard, Lyons, France.
 11,015 (1908). Pneumatic tire with leather tread band. A. Bonnet, Paris, France.
 11,199 (1908). Mold for tires. R. and C. H. Wallwork, Manchester.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, SEPTEMBER 22, 1909.]

- 11,342 (1908). Rubber tapping knife. [Supplementary to No. 10,322.] T. H. Hill, Ringwood, Hampshire.
 11,358 (1908). Pneumatic tire with special tread. L. W. Cox, London.
 11,624 (1908). Pneumatic tire. A. M. Wolber, Vailly-sur-Aisne, France.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, SEPTEMBER 29, 1909.]

- 11,774 (1908). Boot waterproofed by means of india-rubber in the space between the insole and sole. J. E. Chater, Northampton.
 11,872 (1908). Spring wheel with sectional solid rubber tire. E. C. R. Marks, London. (M. A. Hodgson, Toronto, Canada.)
 11,049 (1908). Composition for paving, wall covering, and the like. Consists of india-rubber, sulphur, heavy oil of tar, Portland or other cement, and sand, or stone dust; the mixture is rolled between heated cylinders and finally vulcanized. F. G. d'Aloe, Rio de Janeiro, Brazil.
 *11,970 (1908). Wheel with two or more tire rims side by side. E. T. Burrowes, Portland, Maine.
 12,001 (1908). Ink stand. R. Penkala, Budapest, Hungary.
 *12,022 (1908). Puncture preventing fibrous shield for pneumatic tire treads. J. L. Maitland, Garfield, New Jersey, and two others.
 *12,083 (1908). Method of retaining rim for pneumatically tired wheel. H. C. Gibson, New York city.

THE FRENCH REPUBLIC.

PATENTS ISSUED (with Dates of Application).

- 400,817 (March 15, 1906). W. Doyle and J. M. Collins. Vehicle wheel.
 400,823 (June 25, 1908). D. Lance. Elastic tire.
 400,835 (June 26). E. Veil Picard. Elastic tire.
 400,962 (March 11). L. Gaucherand & Co. Tire protector.
 400,967 (March 16). Lecuyer, Piat and Perriche. Rubber cover for hats.
 400,931 (March 17). W. Waegmann. Toy balloon.
 401,025 (July 2, 1908). Bonnet and Lecerf. Protective band for tire inner tubes.
 401,087 (March 22). A. Mans. Wheel tire.
 401,071 (March 20). J. Lick. Process for manufacturing rubber rings.
 401,149 (March 23). H. von Eickey. Tire protectors.
 401,235 (March 25). V. Richer. Elastic wheel.
 401,260 (March 26). G. Ferrando. Elastic tire.
 401,324 (March 19). Cahill and Peraun. Wheel tire and means of attachment to rim.
 401,330 (March 25). J. Buchli. Elastic tire.
 401,303 (July 17, 1908). E. Poizot. Process of manufacture of a spongy core for tires.
 401,493 (March 30). P. G. Legrain. Appliance for footwear.

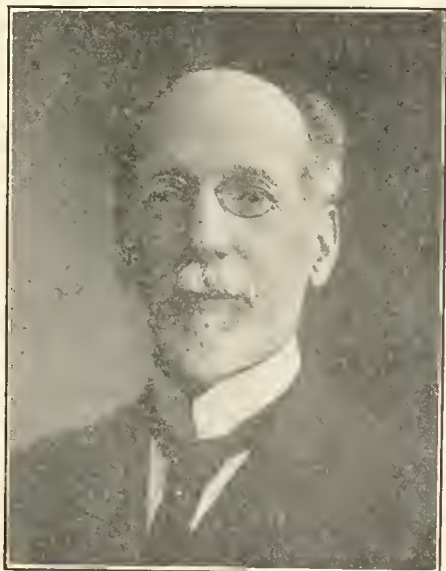
The Obituary Record.

THE LATE CHARLES A. HODGMAN.

A CONNECTION of fifty years with a single important business concern is an experience which falls to few, and one worth making note of. In modern Germany it may obtain a decoration from the Emperor, and, by the way, doing good work for a half century would seem to afford a better reason for honors from a sovereign than most of them have been based upon.

Charles A. Hodgman, who passed away on October 3, was in his sixteenth year when, in 1850, he began work in the rubber factory, at Tuckahoe, near New York, owned by his father, Daniel Hodgman, one of the pioneers in the industry. He remained in connection with the business, taking part in its growth to large proportions, and filling successively every position in the corporation into which it developed.

The story of Daniel Hodgman's beginnings in the rubber in-



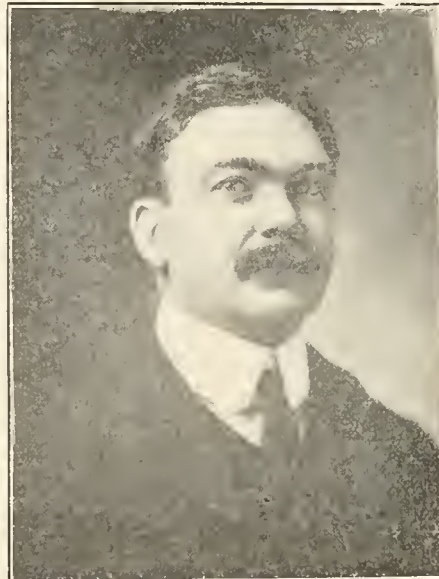
THE LATE CHARLES A. HODGMAN.

dustry and of the success he attained has been told in these pages. When he died, in 1874, his son Charles had had the benefit of association with him in business for fifteen years. It was allotted to the son, when the founder had passed away, to assume control of the factory management, while his slightly younger brother, the late George F. Hodgman, took general charge of the business administration. This division of affairs existed so long as both lived. When the Hodgman Rubber Co. was incorporated, in 1885, Charles A. Hodgman took the office of secretary; on May 16, 1889, he was elected vice-president; and after the death of his brother, in October, 1906, he became president. This position he resigned in January last, on account of failing health, being succeeded by his nephew, George B. Hodgman.

While Charles Hodgman was in charge of the factory, he kept in close touch with the selling and administrative departments of his company's business, by reason of which he came to be considered as one of the best known and most thorough rubber manufacturers in the country.

The subject of this sketch was born September 25, 1843, in New York city—in what would now be called very far downtown. His father has been mentioned; his mother was Margaret De Frate. From the time he entered the factory his residence was in Tuckahoe. During the civil war he enlisted in the Union forces and served in the field for a short while. On December 13, 1865, he married Miss Mary E. Dusenberry, daughter of James Dusenberry, of Tuckahoe. His wife survives, with a daughter, Miss Marie L. Hodgman, and a son, Frederick A. Hodgman, the latter succeeding his father as manufacturing manager of the company, and filling recently the office of vice-president.

In business, outside of the rubber industry, Mr. Hodgman was a director in the Westchester Fire Insurance Co. He was long prominent in Masonic circles. At the time of his death he was a thirty-second degree Mason, a Knight Templar, and a



THE LATE GEORGE M. ALLERTON.

Mystic Shriner. For many years he was treasurer of Bethlehem Commandery, No. 53, K. T., and it was only upon his refusal to accept the office longer that a successor was elected. Mr. Hodgman was active likewise in church affairs, being a trustee of the Asbury Methodist Episcopal Church at Tuckahoe. He long had been a member of the Union League Club, of New York; the American Geographical Society, and the New York Athletic Club.

Funeral services were held at the late residence of Mr. Hodgman on the afternoon of October 8. The interment, which was private, was in Kensico cemetery.

THE LATE GEORGE M. ALLERTON.

THE death of George M. Allerton, at Allerton Farms, Naugatuck, Connecticut, on October 16, followed an illness of several months, which his friends confidently hoped he would recover from during his sojourn during the past summer in the Adirondacks. This hope was not realized, however, and toward the end his constant longing for home led the physicians to decide that it might be best for him to return.

The deceased was born 49 years ago, in New York city, being the son of George Milton and Lois Mabbett Allerton. His father, early in life, had become employed by the Goodyear's India Rubber Glove Manufacturing Co., in their New York store, in Fulton street. He soon had charge of their New York business, and in 1856 took over the management of the company. In 1867 he removed to Naugatuck, where the factory is located, the New York end of the business being taken by John D. Vermeule, who today is president of the company. The elder Allerton was largely instrumental in building up the "Goodyear Glove" company from a small beginning to the most important proportions and standing which it now has. When he died (December 2, 1882), he had been connected with the business for nearly 30 years, and filled the office of president of the company. The elder Allerton was a man of unusual breadth of view. He was active in other business affairs than the rubber industry, as instanced by the mention, in the last INDIA RUBBER WORLD, of his connection with the early manufacture of steam fire engines. An illustration of the enterprising character of Mr. Allerton is to be found in his belief that the rubber trade should have an organ, and with this idea in view, when such a journal was first projected, he spent thousands of dollars in its promotion. *The Rubber Era*, by the way, was the pioneer journal devoted to the general rubber trade. It was established in New York, September 25, 1880, and published weekly for a little more than two years. The rubber trade was small in those days as compared with its extent today, and the paper never had a very liberal support.

George M. Allerton, Jr., worked for some years at the factory of the India Rubber Glove Company, under his father's supervision, and later, going through various departments until he became secretary of the corporation. When the sale of the Allerton interests to the United States Rubber Co. occurred, in April, 1893, he became a director in the latter company, which position he held until the annual meeting in 1896. About that time he sold his shares and bought an interest in the Seamless Rubber Co. (New Haven, Connecticut), of which he was thereafter the active head. Under his intelligent effort the business of the Seamless company grew steadily, until the factory grew to be one of the best equipped in the druggists' sundries branch. At the time of his death Mr. Allerton was vice-president and general manager of the Seamless company. It may be mentioned, in passing, that this company has had a most interesting history, having numbered among its presidents such distinguished members of the trade as the late Joseph Banigan and the late George A. Alden.

Mr. Allerton was connected in an important way with the management of the Newton Rubber Works (Newton Upper Falls, Massachusetts), manufacturers of rubber tires, prior to the merger of this company, in 1899, with others to form the International Automobile and Vehicle Tire Co.

In the organization of the Rubber Sundries Manufacturers' Association, in September, 1898, Mr. Allerton, as representative of the Seamless Rubber Co., took an active part, and he was thereafter an important factor in the success of this organization, serving generally as a member of the executive committee.

Mr. Allerton, on June 20, 1883, married Miss Josephine Webster, of Waterbury, who survives, with two daughters and a son—Mrs. Ralph Bristol, Miss Lois Mabbett Allerton, and George Milton Allerton. He is survived also by two brothers, Charles A. Allerton, of Waterbury, and Robert Allerton, of Orange. Funeral services were held in Hall Memorial Chapel, Riverside cemetery, Waterbury, on October 18, being conducted by the Rev. John N. Lewis, rector of St. John's Episcopal Church, of the same city. The interment was private.

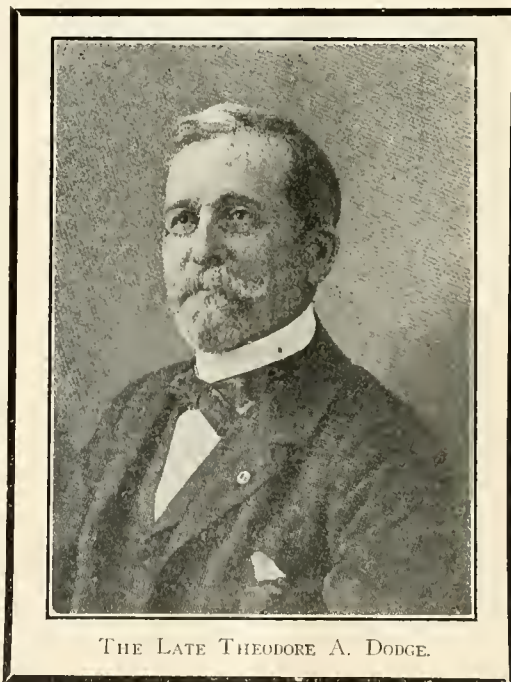
Personally, George M. Allerton gave every one the impression that he was a wonderfully strong man. He was florid, energetic, apparently robust, always in the best of spirits, full of

the joy of life. Few in the trade thought his illness as more than a temporary indisposition and his passing came as a great shock. Warm-hearted, optimistic, friendly, energetic, he leaves a host of friends and sincere mourners.

THE LATE COLONEL THEODORE A. DODGE.

THE death was announced on October 26, at the Chateau des Rozieres, in Nanteuil-le-Haudouin, of Colonel Theodore Ayrault Dodge, one of the foremost figures in the American colony of Paris, in his sixty-seventh year. Colonel Dodge had distinguished himself during the American civil war and in later military service and he was a brilliant historian, besides having had a notable business career.

Theodore A. Dodge was born May 28, 1842, at Pittsfield, Massachusetts. His generation was the eighth in descent from William Dodge, who settled in Salem in 1629. His father was a well-known writer, N. S. Dodge, who went to England as commissioner to the Great London Exhibition of 1851, and for some years remained abroad with his family. The subject of this sketch first went to school in Belgium and later in Berlin, and finished a course at Heidelberg. It was his plan to study law and practice at the American bar, but on his return to the



THE LATE THEODORE A. DODGE.

United States, in 1861, the war having broke out, he volunteered as a private soldier in the army of the Potomac. Young as he was, he had received a military training under Major General Von Frohreich, of the Prussian army, which proved of such advantage that at the age of 21 he was in command of a regiment. He was in every battle in which the army of the Potomac engaged, from Fair Oaks, on; he was wounded at Manassas and Chantilly and lost a leg at Gettysburg. Colonel Dodge received four brevets for gallant service and was finally placed on the retired list on account of his wounds, in 1870.

Colonel Dodge was the foremost American writer on military subjects, his work including an elaborate and scholarly "History of the Art of War," in several volumes. He lectured at Harvard and Lowell Institute, made many public addresses, and traveled throughout the world to view the battlefields of great captains, having crossed oceans more than eighty times. He was also an authority on horsemanship.

In 1870 Colonel Dodge became treasurer and manager of the McKay Sewing Machine Co., and during the ten years that he held that position the company paid dividends of over \$500,000

a year. While he was still treasurer he purchased the patent controlling the Tapley burnishing machines and realized for its owners from royalties on them some \$2,000,000. Indeed, this latter enterprise grew so large that he resigned from the management of the McKay company to care for his own interests. In the meantime, in connection with the late Robert E. Cowen, he had been experimenting with a new process for the manufacture of rubber lined multiple woven cotton hose, at Cambridge, Massachusetts. In 1880 was formed the Boston Woven Hose and Rubber Co., which in 1884 was incorporated as the Boston Woven Hose and Rubber Co., which has become one of the largest mechanical rubber manufacturing concerns in the United States. Colonel Dodge was for several years the active head of this company, during which time it became prominent in the bicycle tire manufacture.

It was in this period that the "single tube" tire was developed, and Colonel Dodge was one of the founders of the Tillinghast Tire Association, the first purpose of which was the protection of the patents on this type of tire. While the litigation which grew up, which was in progress, the patents were in the hands of Colonel Dodge as trustee, and his name appeared as the plaintiff in the principal tire suits. On November 21, 1899, following closely upon the final decision in the Tillinghast suits, the Single Tube Automobile and Bicycle Tire Co., with \$1,000,000 capital, filed articles of incorporation in New Jersey. This company has continued to exist, with Colonel Dodge as president, and with an interest held by the Rubber Goods Manufacturing Co., which concern in 1905 was merged with the United States Rubber Co. Thus the latter, which for four years fought the validity of the Tillinghast patents, came to share materially in the profits of the single tube tire monopoly. Colonel Dodge owned a handsome estate in Brookline, Massachusetts, but when abroad his American address was 42 Broadway, New York. Most of his time for several years was spent in Paris, where he maintained a residence at 96 Avenue Kleber.

The late George Pomeroy Dodge, president of the Mineralized Rubber Co. (New York), who died in 1902, was a younger brother of Colonel Dodge, and like him was educated in Europe. He was connected at one time with the rubber works of Charles Macintosh & Co. Limited, in Manchester, and later established a business for himself in America. He was in a way interested in the tire patent litigation and at one time mentioned to the writer of this sketch having contributed \$90,000 to its expenses.

THE LATE FRANK REIFSNIDER.

FRANK REIFSNIDER, vice-president and general manager of The Aluminum Flake Co., at Akron, Ohio, died on October 27, from a stroke of apoplexy, in the office of his company, aged 64 years. In 1894 THE INDIA RUBBER WORLD said: "Mr. Reifsnider has been connected with the rubber manufacturing business for 20 years, with the exception of a period spent in journalism." In that year The Diamond Rubber Co. was established in Akron, being incorporated on March 26. Mr. Reifsnider was the first president. Connected with him were seven brothers named Sherbondy, three of whom were directors of the new company. The Sherbondys had lately been employes of The B. F. Goodrich Co.—with which Mr. Reifsnider had at one time been connected—and they at once took up the manufacture of tires, in which the Diamond company in time built up so great a business. Two years later Mr. Reifsnider assisted in organizing and became manager of the Akron India Rubber Co., which later was called the India Rubber Co., and finally was merged with the Rubber Goods Manufacturing Co. For the past three years Mr. Reifsnider has been marketing in the rubber trade a compounding ingredient called aluminum flake, for which purpose the company headed by him was formed. The office of president was filled by a brother.

WILLIAM J. CORBETT.

WILLIAM J. CORBETT, proprietor of the Danversport Rubber Co. (Danversport, Massachusetts), died on September 23, of heart failure, at his apartment in Worcester street, Boston. Mr. Corbett was 66 years old. For a great many years he was a prominent junk dealer in the part of Boston known as the South Cove, and a large handler of waste rubber. Some 17 years ago he bought a tide mill at Danversport and started manufacturing reclaimed rubber. In the meantime he moved his junk warehouse to A street, South Boston, his principal business there being in paper waste. Mr. Corbett for many years lived the life of a recluse, rarely seeing visitors outside his office, and shunning all social life. He is said to have left an estate valued at about \$300,000. His immediate relatives are Frederick Barlow, a half brother, John Barlow, of Montreal, Canada, and James J. Corbett, who is at present in the West.

* * *

MRS. CELIA BACHRACH, who died in Brooklyn, New York, on October 25, in her sixty-second year, was the widow of Joseph Bachrach, a former manufacturer of rubber goods in that borough, whose death occurred five years ago. They are survived by three sons, two of whom are lawyers well known in Brooklyn, and three daughters.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of india-rubber and gutta-percha for the month of August, 1909, and the first eight months of five calendar years:

MONTHS.	Belting Packing and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
August, 1909	\$167,840	\$234,984	\$284,971	\$687,795
January to July.....	996,859	637,090	2,393,563	4,027,512
Total	\$1,164,699	\$872,074	\$2,678,534	\$4,715,307
Total, 1908	813,383	927,084	2,371,374	4,111,841
Total 1907	920,715	908,440	2,702,777	4,531,932
Total, 1906	800,245	788,966	2,094,098	3,683,309
Total, 1905	755,988	767,775	1,918,481	3,442,244

RUBBER FOOTWEAR IN PERSIA.

PERSIA is stated to have imported, during the business year ended March 20, 1907, galoshes and rubber shoes of no less extent than 1,222,077 kilograms [= 2,688,569 pounds], credited as follows: Russia, 1,155,022 kilos; Austria-Hungary, 50,500; Turkey, 5,841; France, 2,930; Germany, 1,665; Great Britain, 700; British, 674; not specified, 4,735.

DEMAND FOR RUBBERS IN SAXONY.

THE United States consular agent at Markneukirchen, in Saxony, reports that in that as well as in other mountainous parts of Germany the winters are severe, with snow generally from the end of November until Easter. The sale of American rubber shoes has become extensive and he points out that a larger trade might be done in rubber boots.

RUBBER FOOTWEAR IN SPAIN

A STEADY increase is reported in the importation of rubber footwear into Spain, as indicated by the following figures:

	1906.	1907.	1908.
Weight (kilograms)	6,982	31,041	44,242
Value (pesetas)	118,694	465,615	676,626

These goods are supplied chiefly by the United States, Austria, Germany, France, and Sweden, a very small share coming from Great Britain. The United States, by the way, do not appear to have maintained their standing in the Spanish market for rubber footwear, as indicated by the official figures for exports from this country for five fiscal years ending June 30, 1904—107,704 pairs; 1905—43,541 pairs; 1906—89,344 pairs; 1907—6,984 pairs; 1908—20,816 pairs.

News of the American Rubber Trade.

A RECEPTION TO PRESIDENT COLT.

IT was a notable tribute which the citizens of Bristol, Rhode Island, paid to Colonel Samuel P. Colt, on his arrival in that town on the evening of October 12, after an absence from his home there for more than two years. Within that time Colonel Colt had been very ill, but his recovery had been made evident by his ability again to give active attention to his position of president of the United States Rubber Co.

The reception was one in which all Bristol joined enthusiastically. Without any advance notification to Colonel Colt, a parade had been arranged, the route of which was decorated and brilliantly illuminated, extending from the railway station to Colonel Colt's residence, in front of which was an arch electrically emblazoned with the legend, "Welcome Home." On arriving at Bristol, Colonel Colt was greeted with cheers by the waiting fellow townsmen, after which he was escorted to a carriage in which he rode with his brother, Judge Le Baron B. Colt, of the United States court, followed by carriages containing other leading citizens, and a parade which embraced the greater part of Bristol.

There were town officials, the local militia, and representatives of about all the organizations of whatever kind in Bristol. More than 1,000 employes of the National India Rubber Co., with which Colonel Colt for so long has been identified, marched in companies, representing the various departments. There were also companies of boys from the Colt Memorial High School, founded by Colonel Colt in memory of his mother. All the bands in town assisted in furnishing music.

The parade halted in front of the porch of the Colt school, where the Hon. Augustus O. Bourn—ex-Governor of Rhode Island, and himself a veteran rubber manufacturer—spokesman of the reception committee, made an address of welcome, in the course of which he presented Colonel Colt with a framed picture of the new Memorial School, with an expression of the appreciation of the people of Bristol for this magnificent gift. He extended congratulations upon Colonel Colt's recovery from his illness, and an assurance of the pleasure of the whole town over his return home.

Colonel Colt, in replying, said that words did not suffice to express his feelings upon his return to the home of his boyhood, under such circumstances. While his return had not been planned with this fact in view, this date happened to be the birthday anniversary of his mother, in whose memory the school had been founded. For nearly a half century he had seen in Bristol the rising and setting of the sun, and here he expected to pass the remainder of his days; it was here that his ashes would repose. After Colonel Colt had repeated two stanzas of "Home, Sweet Home," the members of the parade filed by, bowing their welcomes.

Thence Colonel Colt was escorted by the Bristol Train of Artillery, of which he is an honorary member, to the Hotel Belvidere, where a largely attended reception to the business men of Bristol was held.

All Bristol was decorated in honor of Colonel Colt, but mention may be made here of the illumination of the works of the National India Rubber Co., including the words "Welcome

Home," outlined in electric lights. The various officials of the company and the other representatives of the rubber industry in Bristol were active in the reception plans.

It has been an open secret for the last two years that Colonel Colt was far from well. In spite of his magnificent physique, he had always been an exceedingly hard worker, and he went so near to the limit of his strength that his condition for more than a year was serious. The fact that he is really well again and his old energetic, capable, courteous self is something upon which the whole trade may congratulate itself.

THE COMING AUTOMOBILE SHOWS.

THE first American automobile show of importance this season is to be held in Atlanta, Georgia, November 6-13, under the auspices of the National Association of Automobile Manufacturers, or practically the same management as the ninth annual Chicago show, to be held in February next. The fact that an automobile show on a large scale is to be held so much farther south than hitherto, and in a city not in the first rank in the matter of population, is not only a tribute to the enterprise of Atlanta, but an indication of a recent great increase in interest in automobiling in the southern United States. This has occurred hand in hand with a growing interest in good roads, and in actual improvements in roads. Recently the *New York Herald* and the *Atlanta Journal* joined in an automobile survey, so to speak, of the highways between the two cities named, with a view to marking out a good automobile route, and this has been most favorably received in the states through which the route runs. The result can hardly fail to be most helpful to road progress, which of course leads to more automobiles, and more rubber tires.

The earliest "big" show in New York will be at the Grand Central Palace, beginning on New Year's eve. The second, that of the Association of Licensed Automobile Manufacturers, will open a week later at Madison Square Garden. The Chicago show is scheduled for February 5-12, and that in Boston March 5-12.

The Olympia show, in London, is down for November 12-20. Paris will have no auto show this winter.

TIRES FOR THE CARRIAGE BUILDERS.

IN connection with the thirty-seventh annual convention of the Carriage Builders' Association (Washington, October 19-21) was held the customary exhibition of all sorts of parts and accessories for carriage and automobile builders. The leading tire makers were represented by creditable exhibits, in the hands of important members of their staffs. The rubber carriage cloth makers also were represented.

NEW JERSEY CAR SPRING IN CHICAGO.

THE New Jersey Car Spring and Rubber Co. (Jersey City, New Jersey) announce the opening of a new office and sales-rooms in Chicago, at No. 1337 Michigan avenue, in charge of C. G. Race. The company will carry a complete stock of their mechanical rubber goods at their new address, and in addition their new "Carspringo" automobile tire.



COLONEL SAMUEL POMEROY COLT.
[President United States Rubber Co.]

THE GOODRICH NEW YORK HEADQUARTERS.

One of the most admirably equipped buildings in existence for the handling of rubber goods, and especially automobile tires, has lately been completed and occupied by The B. F. Goodrich Co. of New York, at Nos. 1780-1782 Broadway. The structure, erected for and owned by the company, is a notable addition to the business buildings of that neighborhood. The location is on Broadway, near the corner of Fifty-seventh street, and includes an ell of nearly equal extent at Nos. 225-227 West Fifty-seventh street. The illustration here shows the Broadway front in the foreground, as well as the Fifty-seventh street extension. The building includes twelve floors and the basement. Provision is



THE B. F. GOODRICH CO. IN NEW YORK.

made for the storage of tires in great number, for salesrooms, for the receiving and shipping of goods, for the entertainment of customers, for tire repairs, and for the Goodrich mechanical rubber goods and other products of their Akron factory, and of course offices for the manager and salesmen and employes generally. The exterior of the building is white and green marble, with bronze capitals and decorations for the first two stories. Above this the material is pressed brick, with white stone trimmings. Mr. W. H. Yule is the general manager, with Mr. H. C. Miller in charge of the automobile tire department.

SUIT REGARDING RUBBER HEELS.

THE Foster Rubber Co. (Boston) have filed suits against various parties, to test the validity of their patent No. 846,387 covering the manufacture of a rubber heel with a friction plug. The following companies are licensed to manufacture plug heels under this patent: Morgan & Wright, F. W. Whitcher Co., B. & R. Rubber Co., and Elastic Tip Co. Notice is given that any other companies making similar goods will be proceeded against in an action for infringement.

RUBBER GOODS ON THE PACIFIC COAST.

DEALERS in rubber goods at Spokane, Washington, held a meeting recently at the offices of the Washington Rubber Co., when it was agreed to charge higher prices for articles of good quality rather than substitute cheaper grades at the old prices. An agreement was reached as to advances to be made on automobile tires, rubber footwear, surgical goods, mechanicals, and so on. Mr. W. C. Smith, of the Washington Rubber Co., who presided at the meeting, made an address on the causes of the present comparative scarcity of crude rubber and the consequent increase in prices. In addition to the growing automobile tire industry, Mr. Smith mentioned the large requirements of rubber for fire department use, a demand which is constantly growing. He also pointed to the increase in the export of American

rubber goods of 38 per cent. within five years. Mr. Smith said: "In the absence of a rubber combine, the situation looms as one of the natural courses of events and no plausible promise of relief can be given by the big buyers and manufacturers, who are all entered independently in the fight for options on the supply for years ahead."

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for four weeks, ending October 23:

COMMON STOCK, \$25,000,000.

Week October 2	Sales	9,500 shares	High	54 ⁷ / ₈	Low	53 ¹ / ₂
Week October 9	Sales	13,900 shares	High	53	Low	49
Week October 16	Sales	7,550 shares	High	49 ¹ / ₂	Low	46
Week October 23	Sales	2,820 shares	High	49 ³ / ₄	Low	46

For the year—High, 57⁷/₈, Aug. 19; Low, 27, Feb. 24.
Last year—High, 37¹/₂; Low, 17¹/₂.

FIRST PREFERRED STOCK, \$36,263,000.

Week October 2	Sales	3,100 shares	High	122	Low	121
Week October 9	Sales	1,600 shares	High	121 ³ / ₄	Low	121
Week October 16	Sales	1,500 shares	High	121 ¹ / ₂	Low	119 ¹ / ₂
Week October 23	Sales	1,100 shares	High	119 ¹ / ₂	Low	118

For the year—High, 123¹/₂, Aug. 24; Low, 98, Jan. 29.
Last year—High, 108; Low, 76.

SECOND PREFERRED STOCK, \$9,965,000.

Week October 2	Sales	1,010 shares	High	88 ⁵ / ₈	Low	87 ¹ / ₂
Week October 9	Sales	500 shares	High	88	Low	87
Week October 16	Sales	650 shares	High	86 ¹ / ₂	Low	84 ¹ / ₂
Week October 23	Sales	600 shares	High	85	Low	83 ³ / ₄

For the year—High, 89¹/₂, Aug. 23; Low, 67¹/₂, Feb. 25.
Last year—High, 75¹/₂; Low, 42.

SIX PER CENT. CERTIFICATES, \$20,000,000.

Week October 2	Sales	164 certs.	High	105 ¹ / ₄	Low	104 ³ / ₄
Week October 9	Sales	46 certs.	High	105 ¹ / ₂	Low	105
Week October 16	Sales	70 certs.	High	105 ¹ / ₄	Low	104 ³ / ₄
Week October 23	Sales	62 certs.	High	105 ¹ / ₄	Low	104 ⁵ / ₈

* * *

THE directors of the United States Rubber Co., on October 7, declared from net profits the regular quarterly dividends of 2 per cent. on the First preferred and 1¹/₂ per cent. on the Second preferred shares, payable on and after October 30. The disbursement covered \$218,708.75.

SUITS FOR PERSONAL INJURIES.

IN the suit for personal damages of Lola Pierce v. American Hard Rubber Co., at Akron, Ohio, a jury awarded the plaintiff \$12,000. The injury which was the basis of the suit was alleged to have been caused by a hard rubber ball which was being finished in the buffing room striking her in the eye.

In the case of Hamilton v. Boston Rubber Shoe Co., tried in the superior civil court at Lowell, Massachusetts, the jury returned a verdict of \$2,100 for the plaintiff, who alleged a serious injury to one hand, due to negligence on the part of his employers.

EBERHARD FABER—"FAST AND PRESENT."

THE firm Eberhard Faber, in connection with the Hudson-Fulton celebration, distributed to their customers complimentary copies of "Palmer's Views of New York, Past and Present," supplemented with views at different dates of their own plant, at which are now employed 1,000 hands, making lead pencils, penholders and rubber bands and erasers. The pictures of the "past" go back to the time when the present site of THE INDIA RUBBER WORLD—a fifteen-story building on crowded Broadway—was a region of little farms, with Dutch windmills. This same site, by the way, is part of a six-acre tract which, when offered as a gift to Trinity Church Corporation, about 1806, was respectfully declined, as "not worth enough to put a fence about." The growth of the firm of Eberhard Faber, the first lead pencil makers in America, doubtless was helped by the fact that it never had a fence put about it.

THOMAS A. FORSYTH, PRESIDENT.

SOMETHING like forty years ago there came into the rubber business an exceedingly brilliant young man who more than any other was able by invention and industrial foresight to set his impress upon the mechanical goods industry. This boy had a brother who worked with him through all the years of his accomplishment, who was his close friend, counsellor, and loyal assistant. Of the two brothers, James Bennett Forsyth and Thomas A. Forsyth, the former has passed away to the great beyond, his mantle falling upon the one of all others whom he would have chosen to succeed him. As president and general manager of the Boston Belting Co., Mr. Thomas Forsyth brings to the position forty years of experience, during which he was in the closest touch with every phase of the business. In the latter years, to be sure, his brother was almost constantly in the Boston office, while he was at the factory, but every evening at the Touraine, where they lived, factory and office met, so that every detail of the great business was known to both. It is because of these conditions that the new president confidently states that the set and established rules created by James Bennett Forsyth are still in force and will be carried out. The new president of the Boston Belting Co. is very much like the late James Bennett Forsyth. He is fortunate, however, in being a stronger man physically, and while he evinces the same conscientious attention to business detail, his love of art and his knowledge of paintings give him the relaxation that every one needs who successfully administers any great business.

CHANGE IN THE UNITED AND GLOBE.

At the annual meeting of shareholders of United and Globe Manufacturing Cos. (Trenton, New Jersey, October 11), Wellington G. Sickel was elected president, succeeding W. H. Linburg, and Aubrey Love was elected secretary and treasurer, succeeding John S. Broughton. Two members of the new board elected are Stephen B. Elkins, a United States senator from Virginia, and Martin Maloney, of Philadelphia, a director in the Consolidated Rubber Tire Co., and sometime of the Electric Vehicle Co. This enterprise is an outgrowth from the Globe Rubber Co., established at Trenton in 1878 for the manufacture of mechanical rubber goods, and incorporated in 1897. Throughout this period the company have made a specialty of railway supplies, particularly airbrake hose, for which they have now a capacity for 6,000 pieces, and supply some of the leading railway systems of the country. The United Rubber Co. came into existence a little later, not as makers of goods, but as high class jobbers in mechanical rubbers. Their sales were largely of Globe Rubber Co. products, and in 1899 the two companies were combined as United and Globe Rubber Manufacturing Cos., with \$250,000 capital. The growth of the business since the consolidation has been constant and rapid, until the company have today a factory that is among the largest in the country, while none is more modern or complete. Mr. Sickel, who now becomes president, after having filled other positions with the company, is one of the best known men in the rubber trade, having traveled north, south, east and west for the past thirty years. He is likewise a prominent citizen of Trenton, of which city he was at one time mayor.

MEMORIAL TO COLONEL POPE.

A SUGGESTION made by the *Bicycling World* that a memorial be erected in honor of the late Colonel Albert A. Pope seems to

have been favorably received. Several former officials and employes of the Hartford Rubber Works Co., at the time the same was controlled by Colonel Pope, are mentioned as having contributed to the proposed fund. Several of these gentlemen are now in the automobile trade. By the way, Elliott Mason, after a connection with the Pope interest for 30 years, during which time he became so widely known in connection with the marketing of bicycles, and later of automobiles, retired from business on October 1.

THE LATE JOSEPH DAVOL.

At a special meeting of the executive committee of the Rubber Sundries Manufacturers' Association, held in New York, the following resolutions were adopted:

WHEREAS, Mr. Joseph Davol, formerly president of this Association, and an active member of the executive committee for many years, departed this life on July 5, 1909, and,

WHEREAS, His deep interest, able advice and sound judgment in behalf of the Rubber Sundries Manufacturers' Association as presiding officer and a member of the executive committee, and,

WHEREAS, His genial personality and noble character has endeared him in the affection and admiration of all members of this Association, be it,

Resolved, That the members of the Rubber Sundries Manufacturers' Association through the death of their late associate, Mr. Joseph Davol, has suffered a great loss, and be it further

Resolved, That in commemoration of the love and esteem in which he was held by all members of this Association and as evidence of their sorrow and their deep sympathy with the bereaved family, this preamble and resolution be spread upon the Minutes of this Association, and that a copy be forwarded to the family of our deceased associate and beloved friend.

H. C. BURTON, President.

E. E. HUBER, Secretary.

H. E. RAYMOND,

G. B. HODGMAN,

F. H. JONES,

G. M. ALLERTON,

} Executive Committee.

TRADE NEWS NOTES.

THE Marion Insulated Wire and Rubber Co. (Marion, Indiana), with \$100,000 capital, have been authorized to do business in Illinois as a foreign corporation, the capital employed in Illinois being \$5,000.

The estimates for the United States war department for the next fiscal year, to be submitted at the coming session of congress, will not provide for the appropriation of \$500,000 for aeronautics desired by General James Allen, chief signal officer of the army. It is hoped by friends of the cause, however, that President Taft's interest in

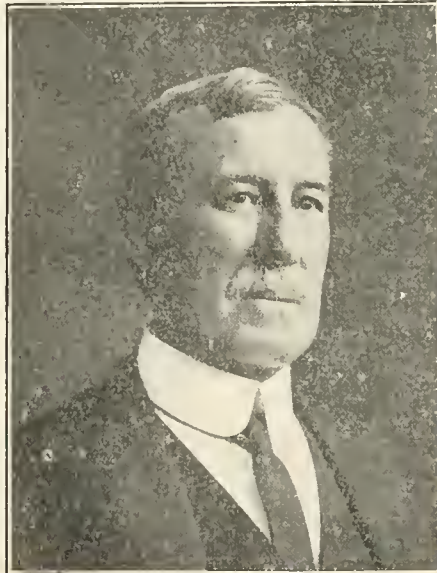
aeronautics may serve in some way to bring the subject before the congress in another form.

The American rubber tire output this year is estimated by Mr. H. S. Firestone, president of the Firestone Tire and Rubber Co. (Akron, Ohio), at nearly \$30,000,000 in value. He predicts for next year an output as large as \$45,000,000 or \$50,000,000.

M. S. Long has been elected secretary, and W. W. Wildman, Treasurer, of the United Rubber Co. (Akron, Ohio), succeeding S. E. Connor, who formerly filled the position of secretary-treasurer.

The Hood Rubber Co. (Boston) are reported to be about to erect a one-story concrete building 80 x 100 feet, being the second building on the land purchased by them between the Boston and Maine railroad tracks and Arsenal street, Watertown.

St. Louis Rubber Cement Co. (St. Louis) have purchased the entire business of the National Rubber and Chemical Co. (Indianapolis, Indiana), together with their good will and contracts taken for next year. The St. Louis have increased their capacity and are putting up a special building for their new department, so as to keep it separate from their shoe cement department.

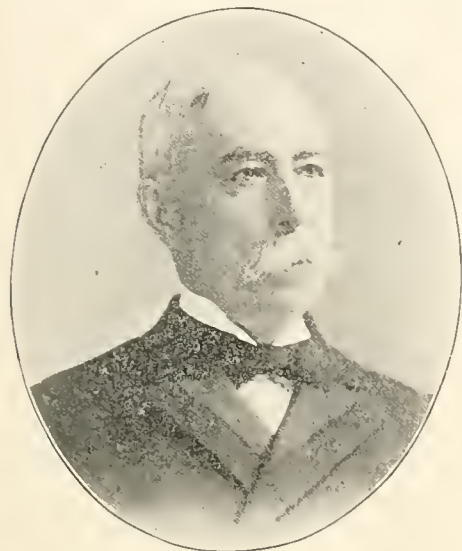


THOMAS ALEXANDER FORSYTH.
[President Boston Belting Co.]

BIRTHDAY OF EX-GOVERNOR BOURN.

THE custom of observing the anniversary of his birthday by the Hon. Augustus Osborn Bourn, ex-Governor of Rhode Island and treasurer of the Bourn Rubber Co., was not overlooked this year. On the evening of October 1, at his home, "Seven Oaks," Bristol, Rhode Island, he entertained a number of prominent citizens of his state at a birthday party. The decorations were the Italian colors and the menu was Italian, including specially imported Italian wines. An Italian orchestra played Italian operatic selections during the dinner. These distinctive characteristics were in remembrance of the host's association with the

United States diplomatic service in Rome for some years. Many congratulatory letters and telegrams were received by Mr. Bourn. Among the guests were Colonel Samuel Pomeroy Colt, ex-Governors George H. Utter and D. Russell Brown; Chief Justice Edward Dubois; Judges William H. Sweetland, Arthur L. Brown, O. L. Bosworth, and John P. Reynolds; Colonel Arthur H. Watson, Colonel



HON. AUGUSTUS O. BOURN.

Alfred C. Landers, Colonel Joseph E. Fletcher, Colonel John Tweedale (Washington, District Columbia), Colonel B. Thomas Potter, Colonel Albert A. Baker, Rev. Edward F. Sanderson (Cleveland, Ohio), Senator Harry H. Shepherd, Hon. Henry W. Hayes, Dr. Alfred M. Merriam, Dr. C. J. Hasbrouck, Hon. F. W. Eastland, Hon. H. A. V. Joslin, Hon. Edward B. Pierce, Captain Augustus O. Bourn, Jr. (New York), Colonel Stephen W. Bourn; Messrs. F. E. DeWolf, Walter H. Barney, H. H. Bedell, and William A. Harris. Governor Bourn became interested in the india-rubber industry in 1855, immediately after his graduation from Brown University, joining the company in which his father, George Osborn Bourn, was interested, and upon the death of the latter, in 1859, became the head of the business. The birthday dinner, therefore, practically marks the semi-centennial of Mr. Bourn's connection with in the industry as a proprietor.

AJAX-GRIEB—INCREASE OF CAPITAL.

At the annual meeting of the Ajax-Grieb Rubber Co., early in the month, it was voted to increase the capital stock from \$400,000 to \$1,000,000. The business of the company during the year was the largest in its history, and they hope to double the business within another year, in view of the increased capital and the extended facilities now being provided for at the factory in Trenton. The officers were re-elected—Horace DeLisser, president; William G. Grieb, vice president; and Harry Grieb, treasurer. The company was incorporated under the present name in September, 1906, with \$400,000 capital. It was the result of the merger of the Ajax Standard Rubber Co., a tire manufacturing company formed in New York in 1905, and the Grieb Rubber Co., of Trenton, which dated back to 1899.

RUBBER FACTORY AT LOS ANGELES.

WEST American Rubber Co., at Los Angeles, California, was incorporated under the laws of that state September 9, 1909; capital, \$50,000. The company has acquired the rubber manufacturing business conducted formerly under the style Gotbed-

Herron Co. John D. Works is president; V. C. Benjamin, vice-president and manager, and William T. Gotbed, who for many years was connected with Morgan & Wright, factory superintendent. The new company will confine its operations to mechanical and plumbers' supplies. Their location is No. 409 East Seventh street.

HOSE IN "CONTINUOUS" LENGTHS.

THE Electric Hose and Rubber Co. (Wilmington, Delaware), referring to a mention in the last INDIA RUBBER WORLD of hose made of lengths of 1,170 feet, say: "This company makes their garden hose in continuous lengths of 1,000 feet always, and have made it 1,500 feet long; this is double fabric hose. We had on exhibition in Atlantic City in June, at the Master Car Builders' convention, a piece of triple fabric 3/4-inch hose 1,250 feet long."

TRADE NEWS NOTES.

At the annual meeting of the Boston Woven Hose and Rubber Co., on October 5, Mr. George E. Hall, who has been general manager of that company since July, 1907, was elected as an additional member of the board of directors.

Mr. Clay Baird, representing the Eureka Fire Hose Manufacturing Co. in the sale of hose of fire departments, has resigned his position as manager of the company's Chicago office, taking effect on October 1. He has been succeeded by Mr. George F. Hand, connected formerly with the Gutta Percha and Rubber Manufacturing Co.

The blowing out of a cylinder head in the engine room of the Fairfield Rubber Co. (Fairfield, Connecticut) occurred while the president of the company, Edward W. Harral, and the chief engineer, Mr. Young, were standing near by, and it is felt that they had a narrow escape from death. The factory is mentioned as being rushed with orders, having been in operation at night for several months.

The Pope Manufacturing Co., since the reorganization on December 24, 1908, the directors report, earned a net profit up to July 31 last of \$482,866.76. Dividends have been paid on the preferred shares. President Albert L. Pope reports that "the prospect of business for the coming year is most encouraging" and that "increased sales of bicycles are looked for."

Mr. A. E. Lumsden, the representative in London of The B. F. Goodrich Co. (Akron, Ohio), after a two months visit to the United States, returned early in October.

The factory of the Converse Rubber Shoe Co. (Malden, Massachusetts) is planned for a daily production of 4,000 pairs of footwear, but they are reported lately to have been producing 5,000 pairs, by working some departments on day and night shifts.

MR. WHITMORE MAKES A CHANGE.

THE news that George P. Whitmore had severed his connection with the Boston Belting Co. of more than 30 years standing

was one of the trade happenings that always come with a bit of a shock. If there were no changes, however, in officers and corporations, the trade would soon become lifeless. Mr. Whitmore left his old company possessed of the esteem of all and with flattering expressions of regret from all, from the president down, and with sincere wishes for success in his new position with the Revere Rubber Co. which he is sure to fill most creditably.



RUBBER FOOTWEAR TRADE IN CANADA.

PRICES of rubber footwear in the Dominion have been advanced at about the same rate as in the United States. The *Canadian Shoe and Leather Journal* comments: "The feeling prevails that with the manufacturing season at its height and the consequent demand for supplies larger than at any other time of the year, there will be no disposition to relax, but the contrary tendency will rather prevail. In the meantime fall orders are being filled and dealers who failed to anticipate their full requirements will have to pay for their shortsightedness. A good snow flurry this month would pretty well clean up stocks of the lighter grades and a good stiff fall would pretty well exhaust the goods ordered by dealers who depend, as a rule, upon supplementing their requirements about November or December. The increased cost of raw rubber seems to be the natural result of the demand largely exceeding the supply."

RUBBER MILLS DISMANTLED.

THE rubber machinery in the factory of the Pará Recovery Co. (Bayonne, New Jersey), has been purchased and removed by M. Norton & Co., dealers in second-hand machinery, at Charlestown, Massachusetts. The Pará Recovery Co. was incorporated May 20, 1905; a receiver was appointed December 9, 1907; and the business was sold by the receiver February 11, 1908.

Norton & Co. have also acquired the machinery belonging to the Lake Shore Rubber Co. (Erie, Pennsylvania), which company was liquidated recently through a receiver.

NEW INCORPORATIONS.

BRIDGE Web Tire Co., licensed to open books of subscription to the capital stock August 16, 1909, under the laws of Illinois; capital proposed, \$2,500. Incorporators: F. H. Drury, S. Lewis, and E. H. Clegg. Location, No. 2962 Prairie avenue, Chicago.

Commercial Rubber Co., August 31, 1909, under the laws of Illinois; capital, \$25,000. Incorporators: William Holmes, E. J. McGinnis, and Frank H. McCoy. Principal office, No. 5614 La Salle street, Chicago.

Continental Rubber Works, licensed to open books of subscription to the capital stock August 5, 1909, under the laws of Illinois; capital proposed, \$1,000. License issued to Fred A. Bangs, No. 522 First National Bank building, Chicago.

MR. WADBROOK HONORED.

MR. ELSTON E. WADBROOK, on taking leave of Boston to assume his new position with Poel & Arnold, in New York—which change was mentioned in these pages last month—was the recipient of many honors. Among them was a dinner tendered by a Masonic lodge of which he was a member; various club luncheons; and a dinner by the Victorian Club, of which he was the former president, where a beautifully inscribed testimonial was presented to him. He was elected an honorary member of the club.

CANTELLA GUM.

A NEW product that is now being put upon the market is known as Cantella gum. It is said to be especially valuable as a substitute for chicle in chewing gum, and can be used in a great variety of rubber compounds where plasticity and adhesiveness are required. The gum is white in color, free from moisture, and thoroughly clean; indeed, it is ready for use in rubber compounds as shipped. The new product is marketed by William H. Scheel, No. 159 Maiden lane, New York.

PERSONAL MENTION.

AMONG recent visitors to the United States was the head of the German colonial service, Herr Bernhard Dernburg, who came to study American methods of growing cotton. He was quoted as saying that the production of cotton, in German West Africa, particularly in Togo, had grown from 165,000 bales in 1906 to 285,000 bales last year. He expressed the belief that cotton growing in the German colonies will be developed until Germany will no longer find it necessary to import cotton from the United States.

Mr. J. Austin Pharaoh, of Worcester, Massachusetts, who for several years, beginning in 1901, was engaged in exploiting rubber in Peru and Bolivia, being at different times general manager for the Bolivian Rubber Co. and the Inambari Pará-Rubber Estates, Limited, is mentioned as the president of the Santo Domingo Mining Co., with Boston headquarters and silver mines in Mexico reported to be very extensive.

Mr. James C. Harvey, one of the best known rubber planters in Mexico, both as proprietor of "La Buena Ventura" plantation, in the state of Vera Cruz, and a recognized expert on *Castilloa* rubber, was a most welcome visitor to THE INDIA RUBBER WORLD offices during the month.

Dr. John C. Willis, F.L.S., of the royal botanic gardens in Ceylon, is on a visit to the United States.

An important social event in Trenton, New Jersey, was the wedding, on October 21, of Miss Emily M. Roebing, daughter of Mr. Charles G. Roebing, president of the John A. Roebing's Sons Co., to Richard McCall Cadwalader, of Philadelphia, in Trinity Protestant Episcopal Church.

Miss Mabel Catherine Gertrude Watson, daughter of Mr. and Mrs. John Jay Watson, of Jamestown, Rhode Island, was married on the evening of October 19 to Mr. Abbott Allerton Chandler, of Hartford, Connecticut. The bride is a sister of Mr. John Jay Watson, Jr., treasurer of the United States Rubber Co., and president of the Rubber Goods Manufacturing Co.

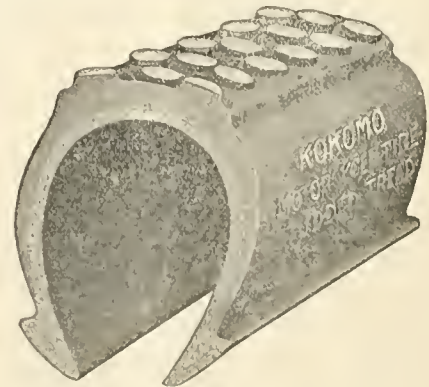
TRADE NEWS NOTES.

THE Ohio Rubber Co. (Cleveland and Cincinnati) have filed with the secretary of state of Ohio a certificate of increase of their capital stock from \$225,000 to \$250,000.

The newly incorporated Rubber Novelty Manufacturing Co., at Ashland, Ohio [see THE INDIA RUBBER WORLD, October 1, 1909—page 27], has been formed for the purpose of making rubber toys.

The Cincinnati Rubber Manufacturing Co., in order to take care of a heavy increase of their business, have been obliged to double their boiler capacity and to make material increases in machinery equipment in several departments, and the outlook for trade with them is very promising.

The B. & R. Rubber Co. (North Brookfield, Massachusetts) on one day during the past month made shipments of 20 tons of rubber heels, matting, and horseshoe pads.



KOKOMO MOTOR CYCLE TIRE.

[This is a new rubber studded tread tire, with considerably more rubber in the tread than the regular type of tire. In this tire four plies of specially woven Sea Island cotton are used, with one extra ply in the tread. Made by the Kokomo Rubber Co., Kokomo, Indiana.]

IN regard to the financial situation, Albert B. Beers (broker in crude rubber and commercial paper, No. 68 William street, New York), advises as follows: "During October the demand for commercial paper has fallen off, as usual, at this season, and rates are firm at about 5½ per cent. for the best rubber names, and 6 per cent. for those not so well known. This condition is likely to continue for the balance of the year."

A REMINDER OF VIANNA.

THE recent high prices of rubber lead to occasional reminders of the "Vianna corner," some twenty years ago, when prices at Pará reached a higher level than had ever been known before. Whether or not João Gonçalves Vianna, holder of the title of Baron de Gondoriz from the king of Portugal, his native country, was or was not responsible for the bold speculative measures in Amazon rubber at the time mentioned it is doubtful whether the series of transactions enriched him very much. For a short time the Baron went to London in the rubber interest, but for several years he has again been in Pará, where he is a member of the important and long-established firm of Mello & Co., *aviadores* and exporters of rubber on an important scale. Vianna's standing in the mercantile community is indicated by the fact of his having been for sixteen years a member of the Pará commercial association. He is also an occasional contributor to the local press on subjects connected with the rubber trade. A sketch published in an earlier number of THE INDIA RUBBER WORLD would indicate his age at present to be about 59 years.

SELF-FILLING FOUNTAIN COMB.

THE invention here illustrated relates to improvements in hair combs, the object being to provide a reservoir in a comb, adapted to contain hair oil, air tonic, and the like. A further object is to provide means for filling the reservoir with hair oil, and also means for ejecting the same as desired by the user of the comb. The body of the comb is cylindrical and each tooth



A SELF FILLING FOUNTAIN COMB.

is provided with a minute perforation to permit access of the liquid or other contents of the comb to the hair of the user. A rubber bulb forms a part of the device. The reservoir is filled or emptied through the nozzle at the opposite end from the bulb. This comb has been patented in the United States and Canada. [Julius Swanberg, No. 1718 Roscoe Boulevard, Chicago.]

A BOOK for rubber planters: Mr. Pearson's "What I Saw in the Tropics."

Review of the Crude Rubber Market.

WHILE quotations at this date are slightly lower than a month ago, the condition of the market remains unsettled, and no indication is apparent of a substantial decline in prices in the near future, at least. It seems unnecessary to go into further details in this column, especially in view of the numerous references in other departments of this issue of THE INDIA RUBBER WORLD to matters having a bearing upon the crude rubber market.

Arrivals at Pará of rubber of all grades (including caucho) since the beginning of the crop season, on July 1, have been less than for the corresponding period for several years past. The figures are:

July-October, 1906	8,630 tons
July-October, 1907	8,480 tons
July-October, 1908	9,005 tons
July-October (to the 28th), 1909.....	7,750 tons

Following are the quotations at New York for Pará grades, one year ago, one month ago, and October 29—the current date—all prices being practically nominal:

PARA.	Nov. 1, '08.	Oct. 1, '09.	Oct. 29.
Islands, fine, new.....	103 @ 104	201@202	185@187
Islands, fine, old.....	... @ 108	none here	none here
Upriver, fine, old.....	109 @ 110	213@214	203@204
Upriver, fine, old.....	112 @ 113	214@215	none here
Islands, coarse, new.....	53 3/4 @ 54	78@ 79	71@ 72
Islands, coarse, old.....	... @ 60	82@ 83	none here
Upriver, coarse, new.....	83 @ 84	131@132	...@124
Upriver, coarse, old.....	none here	none here	none here
Cametá	55 @ 56	96@ 97	84@...
Caucho (Peruvian), ball..	77 @ 78	118@119	115@...
Caucho (Peruvian), sheet..	50 @ 60	90@ 91	...@ 88
Ceylon, fine sheet.....	118 @ 119	none here	none here
Ceylon, crepe .....	.....	218@220	...@220

AFRICAN.			
Lopori, ball, prime.....	91 @ 92	128@130	...@135
Lopori, strip, prime.....	76 @ 77	none here	none here
Aruwimi .....	.....	114@115	121@122
Upper Congo ball, red. ....	.....	125@126	129@130
Sierra Leone, 1st quality...	87 @ 88	123@127	122@123
Massai, red	87 @ 88	126@127	@ 124
Soudan niggers	58 @ 59	112@115	...@109
Cameroon ball	53 @ 54	89@ 90	80@ 90
Benguela	47 @ 48	81@ 82	81@ 82
Madagascar, pinky	77 @ 78	97@ 98	...@102
Accra flake	19 @ 20	23@ 24	23@...

CENTRALS.			
Esmeralda, sausage	69 @ 70	100@102	97@ 98
Guayaquil, strip	54 @ 55	85@ 86	85@ 86

Nicaragua, scrap	69 @ 70	99@100	95@ 96
Panama	53 @ 54	84@ 85	84@ 85
Mexican, scrap	69 @ 70	100@102	97@ 98
Mexican, slab	53 @ 54	84@ 85	84@ 85
Mangabeira, sheet	43 @ 44	82@ 83	82@ 83
Guayule	30 @ 31	50@ 51	50@ 51

EAST INDIAN.			
Assam	86 @ 87	none here	none here
Pontianak .....	.....	...@5 1/4	...@5 1/4
Borneo.....	27 @ 34	52@ 53	52@ 53

Late Pará cables quote:			
	Per Kilo.		Per Kilo.
Islands, fine	8\$400	Upriver, fine	10\$800
Islands, coarse	2\$800	Upriver, coarse .....	.....
		Exchange	15 7/16d.

Latest Manãos advices:			
Upriver, fine	10\$800	Exchange	15 9/16d.
Upriver, coarse	5\$300		

NEW YORK PRICES FOR SEPTEMBER (NEW RUBBER).			
	1909.	1908.	1907.
Upriver, fine	1.00@2.15	.96@1.03	1.06@1.10
Upriver, coarse	1.12@1.32	.60@.73	.88@.90
Islands, fine	1.72@2.02	.90@.96	.99@1.05
Islands, coarse .....	.65@.82	.44@.48	.58@.60
Cametá .....	.83@.96	.51@.53	.62@.66

Para.
R. O. AHLERS & Co. report [October 11]:
As the time of larger arrivals from upriver cannot be very remote now, in spite of low water which prevents the rubber from coming down, the feeling of uncertainty, especially in consideration of the present exceedingly high prices, seems to be gaining ground among buyers, who are expecting a decline and give offers only reluctantly. Unfortunately the cable with Manãos is still out of order, so that the full extent of arrivals from upriver cannot be gauged correctly. Islands rubber has been arriving in satisfactory quantities.

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for car-load lots, per pound—show practically no change since last month:	
Old rubber boots and shoes—domestic.....	10 5/8 @ 10 7/8
Old rubber boots and shoes—foreign.....	10 1/4 @ 10 3/8
Pneumatic bicycle tires.....	— @ 7
Automobile tires	— @ 7 1/4
Solid rubber wagon and carriage tires.....	9 @ 9 1/2
White trimmed rubber.....	10 @ 11
Heavy black rubber.....	6 1/2 @ 6 3/4
Air brake hose.....	4 3/4 @ 5
Garden hose.....	2 7/8 @ 3
Fire and large hose.....	3 @ 3 1/8
Matting	17 1/2 @ 2

Statistics of Para Rubber (Excluding Caucho.)

		NEW YORK.		Total	Total	Total
		Fine and	Coarse.	1909.	1908.	1907.
		Medium.				
Stocks, August 31..	tons	62	94	= 156	129	240
Arrivals, September ...		793	364	= 1157	1166	593
Aggregating		855	458	= 1313	1295	833
Deliveries, September..		793	378	= 1171	1216	660
Stocks, September 30.		62	80	= 142	79	173

		PARA.		ENGLAND.		
		1909.	1908.	1909.	1908.	1907.
Stocks, August 31..	tons	910	305	290	295	375
Arrivals, September....		2020	2100	2230	855	710
Aggregating		2930	2405	2520	1150	1085
Deliveries, September ..		2175	1965	1948	825	800
Stocks, September 30..		755	440	572	325	285

		1909.	1908.	1907.
World's visible supply, September 30.....		1,637	1,831	2,383
Pará receipts, July 1 to September 30....		4,720	4,870	4,720
Pará receipts of Caucho, same dates.....		820	840	610
Afloat from Pará to United States, Sept. 30		none	1,060	383
Afloat from Pará to Europe, September 30.		415	920	705

African Rubbers.

NEW YORK STOCKS (IN TONS).

September 1, 1908	133	April 1, 1909.....	178
October 1	134	May 1	268
November 1	134	June 1	156
December 1	179	July 1	268
January 1, 1909	156	August 1	130
February 1	157	September 1	123
March 1	200	October 1	67

Rubber Receipts at Manaos.

DURING August and two months of the crop season, for three years [courtesy of Messrs. Scholz & Co.]:

FROM—	AUGUST.			JULY-AUGUST.		
	1909.	1908.	1907.	1909.	1908.	1907.
Rio Purús-Acre	400	498	443	768	704	708
Rio Madeira	280	299	300	575	501	482
Rio Juruá	193	97	90	211	140	122
Rio Javary-Iquitos	168	241	269	207	249	243
Rio Solimões	32	39	62	36	50	73
Rio Negro .....	...	...	...	2	...	1
Total	1,973	1,174	1,164	1,799	1,743	1,634
Caucho	302	280	232	616	423	333
Total	1,375	1,454	1,396	2,415	2,166	1,967

Liverpool.

WILLIAM WRIGHT & Co. report [October 1]:

Fine Pará.—9s. 2d. paid for hard fine, 9s. 2d. for smoked plantation sheet; one feels with the costermonger there is no "langwidge" for it.

Present prices and the necessities of the trade seem as utterly opposed as are the two eminent Arctic explorers. There is, however, no use ignoring the fact that at present there is a scarcity of supply, owing to the low state of the rivers; this of course will be rectified in time, but what seems to us more important is the fact that at present discount for future delivery, American manufacturers are buying in quantity, and although we do not anticipate prices will remain at present level throughout the crop, still at present there seems to be a possibility of a 7s. [= \$1.70] basis being maintained. Throughout the month there has been a strong and active market, mostly speculative. At the close there is no indication of a setback in values.

Antwerp.

ZELLER, VILLINGER & Co. report [September 23]:

We have to report record prices paid in to-day's auction here. Never before have such high prices been obtained—for example, Red Java 14.95 francs [= \$2.84], Equateur 14.55 francs [= \$2.76], and Plantation light crepe up to 24.00 francs [= \$4.72] per kilogram. The prices paid average by about 0 per cent. above valuations. Next auction here will be held on October 21, and likely include about 170 tons only, same quantity as offered to-day. As a fact, arrivals from the Congo territories have much lowered lately. Also receipts at Pará will likely remain short for some time to come, owing to the want of water in the Amazon river and its tributaries, whereby a good quantity failing shipping possibly is detained. Under these circumstances, we do not see any chance to expect cheaper prices for next two months or so.

RUBBER STATISTICS FOR SEPTEMBER.

DETAILS.	1909.	1908.	1907.	1906.	1905.
Stocks, Aug. 31..	244,851	874,514	740,514	686,867	558,202
Arrivals in September	408,469	189,424	562,889	318,778	339,575
Congo sorts	334,265	142,743	490,090	259,072	240,891
Other sorts	74,204	46,681	72,799	59,706	98,684
Aggregating	653,320	1,063,938	1,303,403	1,005,645	897,777
Sales in September...	255,866	409,777	584,398	438,962	331,042
Stocks, September 30	397,454	654,161	710,005	566,683	566,735
Arrivals since Jan. 1	3,571,153	3,663,163	4,064,354	4,252,505	4,059,248
Congo sorts	2,659,293	3,095,954	3,476,334	3,257,915	3,152,184
Other sorts	911,860	567,209	588,020	994,590	907,064
Sales since Jan. 1....	3,769,434	4,015,896	4,003,533	4,421,009	4,033,874

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

SEPTEMBER 28.—By the steamer *Justin*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	TOTAL.
Poel & Arnold	300,100	51,600	133,200	23,300	= 508,200
General Rubber Co.	164,500	66,300	83,400	500	= 314,700
A. T. Morse & Co.	77,000	9,400	52,900	20,400	= 159,700
Hagemeyer & Brunn	97,600	9,500	43,800	.....	= 150,900
New York Commercial Co. ..	63,100	16,300	31,500	6,000	= 117,800
C. P. dos Santos	35,700	4,300	29,700	.....	= 69,700
Edmund Reek & Co.	7,500	1,400	3,300	.....	= 12,200
F. Rosenstein & Co.	5,900	.....	.....	1,500	= 7,400
Total	751,400	158,800	377,800	52,600	= 1,340,600

OCTOBER 14.—By the steamer *Ccarenc*, from Manáos and Pará:

New York Commercial Co. ..	185,300	60,300	101,400	14,200	= 361,200
Poel & Arnold	85,700	19,600	166,300	7,300	= 278,900
Henderson & Kohn	153,800	33,700	26,000	.....	= 213,500
A. T. Morse & Co.	37,100	3,800	72,400	700	= 114,000
General Rubber Co.	18,600	2,500	80,900	1,800	= 103,800
Hagemeyer & Brunn	40,000	2,200	27,000	.....	= 69,200
C. P. dos Santos	22,400	3,000	6,300	.....	= 32,600
L. Johnson & Co.	15,500	.....	.....	.....	= 15,500
Czarinkou, McDougal Co....	12,500	.....	.....	.....	= 12,500
Total	570,900	126,000	480,300	24,000	= 1,201,200

PARA RUBBER VIA EUROPE.

	POUNDS.
SEPT. 27.—By the <i>Cedric</i> =Liverpool:	
Poel & Arnold (Fine).....	33,500
General Rubber Co. (Fine)...	51,000
A. T. Morse & Co. (Fine)...	11,000
New York Com. Co. (Fine)...	22,500
New York Com. Co. (Coarse)	22,500
SEPT. 30.—By the <i>Teutonic</i> =London:	
Poel & Arnold (Coarse).....	13,500
OCT. 1.—By the <i>Mauritania</i> =Liverpool:	
New York Commercial Co. (Fine).....	22,500
OCT. 4.—By the <i>Baltic</i> =Liverpool:	
Poel & Arnold (Fine).....	22,500
OCT. 4.—By the <i>Allianza</i> =Mollendo:	
W. R. Grace & Co. (Caucho).....	16,000
OCT. 5.—By the <i>Carmania</i> =Liverpool:	
General Rubber Co. (Fine)...	72,000
Henderson & Kohn (Fine)...	22,500
Poel & Arnold (Fine).....	95,000
Livesey & Co. (Caucho).....	9,000
General Rubber Co. (Caucho)	22,500
OCT. 7.—By the <i>Grant</i> =Hamburg:	
Poel & Arnold (Coarse).....	5,500
OCT. 9.—By the <i>Campania</i> =Liverpool:	
General Rubber Co. (Fine).....	77,000
OCT. 11.—By the <i>Arabic</i> =Liverpool:	
Livesey & Co. (Caucho).....	13,500

OCT. 13.—By the <i>Vaderland</i> =Antwerp:	
Poel & Arnold (Coarse).....	9,000
OCT. 14.—By the <i>Clyde</i> =Mollendo:	
L. Johnson & Co. (Fine).....	5,000
OCT. 16.—By the <i>Pennsylvania</i> =Hamburg:	
New York Commercial Co. (Coarse)....	15,000
OCT. 18.—By the <i>Caronia</i> =Liverpool:	
Poel & Arnold (Fine).....	50,000

OTHER NEW YORK ARRIVALS.

CENTRALS.

[*This sign, in connection with imports of Centrals, denotes Guayule rubber.]

	POUNDS.
SEPT. 23.—By the <i>Proteus</i> =New Orleans:	
K. Mandell & Co.	1,500
Eggers & Heinlein.....	1,500
Manhattan Rubber Mfg. Co.	1,500
SEPT. 23.—By the <i>Joachim</i> =Columbia:	
A. Held	2,000
A. Rosenthal & Son.....	1,500
J. Sanbrada & Co.	1,000
J. Brandon & Bros.	1,500
SEPT. 24.—By the <i>El Siglo</i> =Galveston:	
Continental-Mexican Rub. Co. *100,000	
E. Roehringer	*4,000

SEPT. 24.—By the <i>Manterey</i> =Frontera:	
Harburger & Stack.....	3,500
E. Steiger & Co.	1,500
SEPT. 27.—By the <i>Cedric</i> =Liverpool:	
Rubber Trading Co.	11,000
SEPT. 27.—By the <i>Hugin</i> =Tampico:	
Ed. Maurer	*65,000
New York Commercial Co.	*33,000
Remsche & Helde.....	*9,000
SEPT. 27.—By the <i>Crown Prince</i> =Bahia:	
Poel & Arnold	22,500
SEPT. 29.—By the <i>Advance</i> =Colon:	
S. Brandon & Bros.	15,500
Hy. Mann & Co.	6,000
A. Santos & Co.	5,500
G. Amsinck & Co.	5,000
Andeau rading Co.	4,000
Piza, Nephews & Co.	2,000
Mecke & Co.	1,500
Suzarte & Whitney.....	1,500
Jose J. Julia & Co.	1,500
J. Sambrada & Co.	1,000
SEPT. 29.—By the <i>El Dia</i> =Galveston:	
Continental-Mexican Rubber Co.	*125,000
OCT. 1.—By the <i>Allegheny</i> =Columbia:	
Isaacs & Samuels.....	4,000
J. Sambrada & Co.	1,500

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No. 17. Particularly adapted to softening material for tubing machine. Almost universally used for waterproofing wire.

No. 48. For fluxing pigments in compounding. A valuable adjunct to the manufacture of moulded goods as it DOES NOT BLOW UNDER CURE.

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ELECTRIC INSULATION LABORATORY



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NEW YORK CITY

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Largest Producers of Guayule Rubber, Operating Nine Factories.

G. Amsinck & Co.....	1,000	
De Lima & Cortessa.....	1,000	
Cabello & Blanco.....	1,000	8,500
Oct. 2.—By the <i>Merida</i> =Frontera:		
Harburger & Stack.....	4,000	
Strube & Ultz.....	3,000	
Graham, Hinkley & Co.....	1,000	
General Export Co.....	1,000	9,000
Oct. 4.—By <i>El Monto</i> =Galveston:		
E. G. Churchill.....		*22,500
Oct. 4.—By the <i>Baltic</i> =Liverpool:		
Poel & Arnold.....		45,000
Oct. 4.—By the <i>Alliance</i> =Colon:		
Herzel, Feltmann & Co.....	4,000	
Piza, Nephews & Co.....	2,500	
Demarest Bros.....	1,500	
G. Amsinck & Co.....	2,000	
H. Mann & Co.....	1,000	
Fidanque Bros. & Co.....	1,000	12,000
Oct. 5.—By the <i>Verdi</i> =Bahia:		
J. H. Rossback & Bros.....	57,000	
New York Commercial Co.....	11,500	
A. D. Hitch & Co.....	6,500	75,000
Oct. 6.—By the <i>Yumuri</i> =Tampico:		
Ed. Maurer.....	*160,000	
Poel & Arnold.....	*75,000	*235,000
Oct. 6.—By <i>El Sud</i> =Galveston:		
Continental-Mexican Rubber Co.....		*75,000
Oct. 7.—By the <i>Grant</i> =Hamburg:		
Rubber Trading Co.....		5,500
Oct. 7.—By the <i>Italian</i> =Bahia:		
A. Hirsch & Co.....		38,000
Oct. 8.—By <i>El Norte</i> =Galveston:		
Continental-Mexican Rubber Co.....		*65,000
Oct. 8.—By the <i>Colon</i> =Colon:		
J. Brandon & Bros.....	11,000	
L. Johnson & Co.....	4,500	
Herzel, Feltmann Co.....	4,500	
J. Sambrada & Co.....	3,500	
Piza, Nephews & Co.....	3,500	
Kunhardt & Co.....	2,000	
A. Santos & Co.....	2,000	
Demarest Bro.....	2,000	
Pablo Calvet Co.....	2,000	
G. Amsinck & Co.....	2,000	
L. Hagenars & Co.....	1,500	
A. Rosenthal & Sons.....	1,000	39,500
Oct. 9.—By the <i>Esperanza</i> =Mexico:		
H. Marquardt & Co.....	1,500	
American Trading Co.....	1,500	3,000
Oct. 11.—By the <i>Arabic</i> =Liverpool:		
Rubber Trading Co.....	25,000	
George A. Alden & Co.....	22,000	
Poel & Arnold.....	5,000	52,000
Oct. 13.—By the <i>Cienfuegos</i> =Tampico:		
Ed. Maurer.....		*100,000
Oct. 13.—By the <i>Goyas</i> =Pernambuco:		
A. D. Hitch & Co.....		7,000
Oct. 13.—By <i>El Paso</i> =Galveston:		
Continental-Mexican Rubber Co.....		*90,000
Oct. 14.—By the <i>Proteus</i> =New Orleans:		
A. T. Morse & Co.....	5,500	
Robinson & Co.....	1,500	
A. N. Rotholz.....	1,000	8,000
Oct. 14.—By the <i>Cearense</i> =Ceara:		
Emile Boris.....		38,000
Oct. 13.—By the <i>Siberia</i> =Colon:		
G. Amsinck & Co.....	7,500	
A. Rosenthal Sons.....	3,500	
H. Mann & Co.....	2,500	
Brandon & Bros.....	1,500	
Pablo Calvet Co.....	1,000	
Roldan & Van Sickle.....	1,000	
Graham, Hinkley & Co.....	1,000	18,000
Oct. 14.—By <i>El Siglo</i> =Galveston:		
E. Boehringer.....		*11,000
Oct. 14.—By the <i>Clyde</i> =Colon:		
G. Amsinck & Co.....	3,000	
L. Johnson & Co.....	2,500	
A. M. Capens Son.....	2,500	
Herzel Feltmann & Co.....	2,500	
Piza, Nephews & Co.....	2,000	
W. R. Grace & Co.....	1,500	
Gravenhorst & Co.....	1,500	
R. Gallega & Co.....	1,500	
Demarest Bros.....	1,500	
R. Castillo & Co.....	1,000	19,500
Oct. 18.—By the <i>Mexico</i> =Frontera:		
Harburger & Stack.....	5,500	
H. Marquardt & Co.....	3,500	
J. Sambrada & Co.....	2,000	

General Export Co.....	1,500	
E. N. Tibbals & Co.....	1,000	13,500
Oct. 19.—By the <i>Prins Hüllem</i> =Colon:		
G. Amsinck & Co.....	3,000	
Mecke & Co.....	2,500	
Eggers & Heinlein.....	2,000	
Pablo Calvet Co.....	1,000	5,500
Oct. 21.—By the <i>Oceanic</i> =London:		
George A. Alden & Co.....		33,000
AFRICAN.		
SEPT. 25.—By the <i>Amerika</i> =Hamburg:		
Poel & Arnold.....	30,000	
George A. Alden & Co.....	13,500	
A. T. Morse & Co.....	11,000	54,500
SEPT. 27.—By the <i>Cedric</i> =Liverpool:		
General Rubber Co.....	11,500	
George A. Alden & Co.....	15,000	
Poel & Arnold.....	45,000	71,500
SEPT. 30.—By the <i>Teutonic</i> =London:		
Livesey & Co.....	9,000	
Joseph Cantor.....	5,000	14,000
Oct. 4.—By the <i>Baltic</i> =Liverpool:		
General Rubber Co.....	110,000	
A. T. Morse & Co.....	2,000	112,000
Oct. 4.—By the <i>Cleveland</i> =Hamburg:		
Poel & Arnold.....	40,000	
A. G. Rengh & Co.....	13,500	53,500
Oct. 4.—By the <i>Lapland</i> =Antwerp:		
Poel & Arnold.....	50,000	
Raw Products Co.....	4,500	
A. T. Morse & Co.....	4,500	59,000
Oct. 4.—By the <i>Waldersee</i> =Hamburg:		
Poel & Arnold.....	45,000	
A. T. Morse & Co.....	40,000	
George A. Alden & Co.....	8,000	93,000
Oct. 5.—By the <i>Carmania</i> =Liverpool:		
General Rubber Co.....	45,000	
George A. Alden & Co.....	13,500	
Poel & Arnold.....	13,500	
Rubber Import Co.....	7,000	79,000
Oct. 6.—By the <i>Carolina</i> =Havre:		
George A. Alden & Co.....	38,000	
Poel & Arnold.....	9,000	47,000
Oct. 7.—By the <i>Grant</i> =Hamburg:		
A. T. Morse & Co.....	175,000	
Poel & Arnold.....	35,000	
George A. Alden & Co.....	15,000	
General Rubber Co.....	10,000	
Rubber Trading Co.....	6,000	
W. L. Gough Co.....	10,000	251,000
Oct. 7.—By the <i>Adriatic</i> =London:		
Poel & Arnold.....		25,000
Oct. 8.—By the <i>California</i> =Havre:		
George A. Alden & Co.....		55,000
Oct. 9.—By the <i>Campania</i> =Liverpool:		
Poel & Arnold.....		15,000
Oct. 9.—By the <i>Savoie</i> =Havre:		
W. L. Gough Co.....		11,500
Oct. 9.—By the <i>Victoria</i> =Hamburg:		
George A. Alden & Co.....		10,000
Oct. 11.—By the <i>Arabic</i> =Liverpool:		
Poel & Arnold.....	140,000	
Robinson & Co.....	9,000	
George A. Alden & Co.....	9,000	
Livesey & Co.....	5,000	163,000
Oct. 11.—By the <i>Vaderland</i> =Antwerp:		
George A. Alden & Co.....	30,000	
Poel & Arnold.....	15,000	
A. T. Morse & Co.....	4,500	
Robinson & Co.....	4,500	
W. L. Gough Co.....	4,500	58,500
Oct. 13.—By the <i>Moltke</i> =Genoa:		
W. L. Gough Co.....		9,000
Oct. 16.—By the <i>Pennsylvania</i> =Hamburg:		
Livesey & Co.....	11,500	
A. T. Morse & Co.....	11,500	26,500
Oct. 18.—By the <i>Jesseric</i> =Lisbon:		
A. T. Morse & Co.....		15,000
Oct. 18.—By the <i>Caronia</i> =Liverpool:		
Poel & Arnold.....	50,000	
Robinson & Co.....	11,000	
George A. Alden & Co.....	7,000	
General Rubber Co.....	4,500	
Rubber Trading Co.....	4,500	
Livesey & Co.....	4,500	81,500

EAST INDIAN.		
[*Denotes plantation rubber.]		
SEPT. 27.—By the <i>Minnetonka</i> =London:		
A. T. Morse & Co.....	*9,000	
Robinson & Co.....	11,000	20,000
SEPT. 30.—By the <i>Teutonic</i> =London:		
Poel & Arnold.....	*45,000	
New York Commercial Co.....	*31,000	*76,000
Oct. 4.—By the <i>St. Paul</i> =London:		
Poel & Arnold.....		*35,000
Oct. 4.—By the <i>Drumgarth</i> =Colombo:		
A. T. Morse & Co.....	*5,000	
New York Commercial Co.....	*4,500	*9,500
Oct. 4.—By the <i>Minnehaha</i> =London:		
Robinson & Co.....		10,000*
Oct. 6.—By the <i>Barenfels</i> =Colombo:		
A. T. Morse & Co.....	*25,000	
New York Commercial Co.....	*13,500	*38,500
Oct. 6.—By the <i>Sikh</i> =Singapore:		
Heabler & Co.....	23,000	
W. L. Gough Co.....	15,000	38,000
Oct. 7.—By the <i>Grant</i> =Hamburg:		
W. L. Gough & Co.....		*9,000
Oct. 7.—By the <i>Adriatic</i> =London:		
Poel & Arnold.....	*135,000	
A. T. Morse & Co.....	*27,000	
New York Commercial Co.....	*20,000	182,000
Oct. 11.—By the <i>New York</i> =London:		
Poel & Arnold.....		*30,000
Oct. 13.—By the <i>Vaderland</i> =Antwerp:		
New York Commercial Co.....	*15,000	
Poel & Arnold.....	*8,000	23,000
Oct. 13.—By the <i>Minneapolis</i> =London:		
General Rubber Co.....	*30,000	
A. T. Morse & Co.....	*15,500	
Robinson & Co.....	7,000	
General Rubber Co.....	30,000	82,500
Oct. 14.—By the <i>Majestic</i> =London:		
Poel & Arnold.....		*27,000
Oct. 16.—By the <i>Deutschland</i> =Hamburg:		
Livesey & Co.....		11,500
Oct. 16.—By the <i>Pherson</i> =Colombo:		
A. T. Morse.....		*15,500
Oct. 21.—By the <i>Oceanic</i> =London:		
New York Commercial Co.....	*40,000	
Poel & Arnold.....	*40,000	
A. T. Morse & Co.....	*15,000	*95,000
GUTTA-JELUTONG.		
Oct. 6.—By the <i>Sikh</i> =Singapore:		
Poel & Arnold.....	110,000	
Heabler & Co.....	35,000	145,000
Oct. 7.—By the <i>Minneapolis</i> =London:		
Heabler & Co.....		75,000
GUTTA-PERCHA.		
Oct. 6.—By the <i>Sikh</i> =Singapore:		
Heabler & Co.....		40,000
Oct. 7.—By the <i>Grant</i> =Hamburg:		
E. Oppenheim.....		33,500
BALATA.		
SEPT. 23.—By the <i>Guiana</i> =Demerara:		
George A. Alden & Co.....		10,000
SEPT. 28.—By the <i>Sarawaca</i> =Trinidad:		
G. Amsinck & Co.....	4,500	
Frame & Co.....	2,000	
Middleton & Co.....	1,000	7,500
Oct. 5.—By the <i>Suriname</i> =Demerara:		
George A. Alden & Co.....	33,500	
G. Amsinck & Co.....	18,000	
Middleton & Co.....	5,000	56,500
Oct. 13.—By the <i>Marayye</i> =Trinidad:		
J. A. Pauli & Co.....	3,500	
American Trading Co.....	3,000	
Middleton & Co.....	1,000	7,500

CUSTOM HOUSE STATISTICS.		
PORT OF NEW YORK—SEPT. BER.		
	Pounds.	Value.
Imports:		
India-rubber.....	6,964,933	\$7,049,774
Balata.....	47,855	19,221
Gutta-Percha.....	45,033	19,144
Gutta-jelutong (Pontianak).....	3,891,745	187,393
Total.....	10,949,566	\$7,275,532
Exports:		
India-rubber.....	50,763	\$27,085
Reclaimed rubber.....	104,029	14,842
Rubber scrap, imported....	4,069,883	\$327,341



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APPRECIATION FROM A CONSUL.

THE following unsolicited and unlooked for letter from an American consul who long has fitted creditably a position in the service is evidence of appreciation of very high character. While the letter was transmitted through the department of state, at Washington, it may be better to omit the name of the writer and the location of his consulate. Specimens of this paper have been sent to the planters named who are not already on the subscription list. The letter follows:

TO THE EDITOR OF THE INDIA RUBBER WORLD: I beg leave to inform you that the Universal rubber washer, described and illustrated in your issue of August 1, has attracted considerable attention among rubber planters here, and they are anxious to learn if the machine has been adopted by planters in other rubber

producing regions and if results have been satisfactory. If you can furnish the foregoing information you will confer a favor on rubber planters of this section, who would no doubt employ the washer if it works successfully.

Believing that the opportunity is propitious to interest planters in THE INDIA RUBBER WORLD, I enclose a list of planters and managers of the rubber plantations in this state, and believe it would be to your interest to send them sample copies, calling their attention to such points of interest to them as regularly appear in your publication.

I avail myself of this opportunity to inform you that THE INDIA RUBBER WORLD is regularly received at this consulate, and in view of the extensive and gradually expanding rubber interests here, it has been filed in one of the conspicuous sections of the cabinet installed in this office for catalogues and industrial publications, being thus conveniently accessible to planters and exporters who wish to consult it when they call at this consulate.

Permit me to suggest that by adding a Spanish section to THE INDIA RUBBER WORLD its scope would be materially enlarged, and become an important factor in fostering the rubber interests between the United States and the Latin American republics where rubber or kindred products are cultivated and also be instrumental in introducing manufactured rubber articles for which there is a constantly increasing demand throughout Mexico and Central and South America.

I will be pleased to serve you here or other points in Mexico in any manner you can suggest, consistent with my official duties.

Respectfully yours,

CHINAMEN IN RUBBER.

EUROPEAN investors are not alone in their eagerness to put money into rubber plantations; Chinese capitalists in the Malay peninsula seem equally enthusiastic. At least the Chinese gentlemen around Singapore are active in promoting rubber plantations for other people to put money into. There comes to hand at this writing a prospectus of The United Singapore Rubber Estates, Limited, got up in regulation European style, both as to printing and the contents, which latter have to do with taking over various estates, with and without rubber, and to do further planting. One property—that of Chop Tiang Guan—is referred to as having 800 acres covered with Pará rubber three years old. The capital mentioned is \$1,000,000 (silver). The list of directors follows:

The Hon TAN JIAK KIM, M.L.C., of Panglima Prang, Singapore; merchant.
 LEE CHOON GUAN, Esq., of No. 10 Malacca street, Singapore; merchant.
 CHOA GIANG THYE, Esq., of No. 19 Cecil street, Singapore; opium farmer.
 LIM BOON KENG, Esq., of No. 43 Raffles place, Singapore; physician.
 TAN CHAY YAN, Esq., J.P., of No. 41 Heeren street, Malacca; planter.
 SEAH ENG KIAT, Esq., of No. 13 Boat quay, Singapore; merchant.
 YOW NGAN PAN, Esq., of No. 28 Market street, Singapore; merchant.

The chief mover in this flotation appears to be Tan Clay Yan, who in 1906 sold out a rubber plantation to what has become The Malacca Rubber Plantations, Limited, capitalized at £300,000 [= \$1,459,950], and now producing rubber.

AT La Paz, on September 17, officials of Bolivia and Peru signed a protocol for the settlement of the differences between those republics over the boundary question. This is an indication that there is to be no war over the important rubber district of which a map appeared in THE INDIA RUBBER WORLD, August 1, 1909 (page 397).

If you went into a grocery store and asked the price of sugar, tea or coffee, you would be rather annoyed if the grocer told you that the price was 50 cents per pound, less 10, 5 and 2 per cent. You would expect the grocer to figure out the net price himself. We quote all our goods at net prices.—*A Rubber Footwear Manufacturer.*

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 factory, I can help you. I have
 much experience in straightening
 little difficulties.
K J MAYWALD, F. C. S.,
 CONSULTING CHEMIST,
 St. 'Phone, 823 John. New York.

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NOT A
"Cravenette"
 RAIN COAT

UNLESS THIS CIRCULAR
 REGISTERED TRADE-
 MARK IS STAMPED ON
 THE INSIDE.



INDIA RUBBER WORLD

CAOUTCHOUC

HEVEA BRASILIENSIS

ANCHORS GUTTA

GUTTA-PERCHA

Edited by HENRY C. PEARSON—Offices, No. 395 Broadway, NEW YORK.

Vol. XLI. No. 3.

DECEMBER 1, 1909.

35 CENTS.

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D. LORNE McGIBBON, Vice-Pres. & Managing Director. J. C. NICHOLSON, Manager Mechanical Goods. M. C. MULLARKY, Manager Footwear Dept. E. J. YOUNGE, Sales Manager. LEONARD D. SHAW, Sect.-Treas.

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Dove Machine Company

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Tube Pans, Dies and Cores	Seamless Pouch Blocks
Calender Winders and Trimmers	

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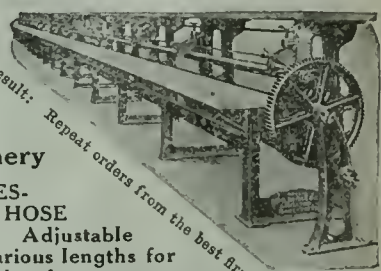
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VERY PRACTICAL OPTIMISM.

OUR congratulations to the directors of the Federated Malay States Rubber Co., Limited, for being able to present to their shareholders the most cheerful yearly business report which it has ever been the pleasure of THE INDIA RUBBER WORLD to review. How many times has one read in the financial papers, in the report of a general meeting of This-or-That Company, Limited, under the presidency of the chairman, the secretary having read the notice convening the meeting, that the chairman, rising to offer a few comments on the accounts, proceeded to explain the lack of more definite information on the ground that certain details had not arrived from America, or Africa, or Asia, and that the shareholders must take it for granted that affairs were in good shape, although the figures presented might be subject to a different construction. Mails had been delayed, or a manager was ill, or returns had not been received for a sale of merchandise, and though the usual dividend could not be declared this year, the prospects of the business were most enchanting.

Not so with the report of the rubber planting company referred to, which has its business domicile in Antwerp and its rubber trees in Selangor. "We have pleasure," the report opens, "in submitting . . . a profit

and loss account largely exceeding our expectations." The figures recording the yield of rubber "exceed considerably our estimate." And so the report runs throughout—the most concrete expression of optimism possibly that ever emanated from a board of directors. And concrete optimism is away ahead of the abstract optimism that is expressed in predictions and promises, rather than distributing a dividend of 24 per cent. to shareholders who never before had received more than 8 per cent. on their shares.

Whatever the future of rubber may be, there is no question today that the holders of shares in productive rubber plantations, under good business management, are exceedingly lucky persons, and there are indications that they have not yet seen their best days. At the same time, it seems in order to point out that just as "all is not gold that glitters," every projected rubber plantation may not yield rubber in the days to come.

To recur to the subject of management, it is interesting to notice in the financial report of the particular rubber company under review that their expenses in Europe for the past business year amounted only to nine-tenths of 1 per cent. of the gross revenue of the company, though it must be mentioned that the directors received a percentage of the net profit, which does not seem to be a bad idea. If they have directed well, they deserve to share in the fruit of their labor.

"RESTRAINT OF TRADE."

A RECENT decision in a federal court in the United States unfavorable to the Standard Oil Co.—the first institution in the country to become known to the general public as a "trust"—cannot fail to revive in the popular mind the discussion as to the effect of trusts upon the general welfare. This is not a place for a review in detail of the decision referred to, if for no other reason than that it is not final; it remains to be reviewed by the United States supreme court. It will suffice here to mention that the unanimous opinion of the court of appeals in the eighth circuit, sitting at St. Louis, is that the Standard Oil Co., as a holding company for numerous petroleum refining companies, capitalized at \$100,000,000, and with a recent market value for its shares of over \$700,000,000, is a combination "in restraint of trade" in the meaning of the Sherman "anti-trust law" of 1890.

It remains to be seen whether the highest court in the land—and we believe that the United States supreme court is held universally not to be excelled in dignity and ability by any other body of men in existence—will confirm the decision of the learned court at St. Louis, one of the nine courts of appeals, in different districts, which pass upon important cases before they reach the final court at Washington, if they ever do. That is to say, the ultimate decision may

be that in the case under review there has been no violation of the federal law identified with the name of the late Senator Sherman. But more than this, the supreme court, when confronted by the basic question in concrete form, may hold the Sherman law itself to be incompatible with the constitution of the United States, which is the prerogative of the court. While John Sherman was among the ablest statesmen America has produced, the legislation of any era is but the crystallization of popular sentiment at the time, and liable (1) to be repealed by a reversal of the voice of the people, (2) to become a "dead letter" through neglect, or (3) to be invalidated by a decision of the supreme court.

THE INDIA RUBBER WORLD holds no brief for the Standard Oil Co.; it confesses to not having read the St. Louis decision, or the testimony and the briefs upon which the decision is based. All of this will come out later. But there can be no doubt that the act of which the late Senator Sherman was the author had for its object the prevention of such evils as were aimed at by the ancient English statute of monopolies. In this view, the existence of a monopoly is opposed to public policy, and as we look at it the question whether any existing combination in trade should be dissolved depends upon whether its operation constitutes a true monopoly.

The question of combination is another matter. The original thirteen English colonies in North America combined for the common good; does any publicist in the world hold today that the welfare of the United States would be enhanced by a dissolution of the Union into its component parts? Or that, instead of railway systems which permit a passenger to travel direct from the Atlantic to the Pacific without change of cars, it would be sounder policy for the traveler to be forced to buy one railway ticket—as originally—from New York to Harlem (now in the same municipality), another from Harlem to Albany, and so on across the continent? The new rubber régime, to which the whole industry is looking, involves the production of the raw material, not in hundred-pound lots by people without credit, here or there, but in hundred ton lots, or thousand ton lots, by forest exploitation companies on the Amazon, or by plantation companies in the Far East, based upon financial arrangements which will enable responsible producers to contract for supplying rubber for a year in advance at a fixed price. In no other way can the world's supply of rubber ever be produced at a minimum cost and the present disastrous unsettled condition of prices be done away with. Don't the banking systems of today furnish the business world with better accommodations than if loans had to be made from any Tom, Dick or Harry who happened to have a spare \$1,000 or so to let his neighbors use? And the same rule holds good with manufactured wares of whatever kind, in large demand, and of a standard size or cost.

We repeat that we do not know what will be the result ultimately of the St. Louis decision in the oil case. But courts are man made and made up of men, and as the world moves the ideas upon which they are based are subject to change. And otherwise the world could make no progress. The world has abolished imprisonment for debt and the death penalty for stealing sheep. Two successful lawyers or two rag pickers are allowed today to form a partnership if they wish, and if popular opinion in the end shall prove favorable to co-operation in the manufacture or sale of commodities which are common necessities, even the courts must bow to that opinion.

"Monopoly" in the ancient sense has ceased to exist; and it is a rare thing for a sane business man to work for "restraint of trade." Who is there who doesn't want to see his business grow every year?

RESURRECTION OF MR. LEXOW.

IT is now several years since the Hon. Clarence Lexow, then a senator of the state of New York, on reading his morning newspaper one day, learned that there were trusts in the land, and became horror stricken. Whereupon he moved for the appointment of a legislative joint committee for investigating the evils of trusts and framing laws for combating them. Appointed chairman of such committee, he brought his fellow investigators to New York, and with power to compel the appearance of persons and papers, he forebore not for many days to delve into corporate wickedness; but are not all the evidence he uncovered, and his recommendations in regard thereto embodied in Senate Report No. 40, Session of 1897?

The text of Senator Lexow's investigation was that "combinations of capital in the form of trusts" are "creating monopolies, shutting out competition, displacing labor and driving the citizen of moderate means out of business, with the effect that production and price are not regulated by the natural laws of supply and demand."

There is no intention here to inflict upon the readers of THE INDIA RUBBER WORLD a review of Senate Report No. 40, of 1897. It is enough to say that corporate wickedness was uncovered at every step of the investigation. What became of it all, however, we fail to remember. But one paragraph in the Lexow report illustrates the temper of that voluminous document. It related to

that contemporary and companion of the corporate monopoly—the department store. The passage of this recent commercial invention across the mercantile field is marked by the ruin of numerous previously prosperous tradesmen and the desolation of an army of employés. There is no need and no place for such an institution in the commercial economy of our State.

There is no record of the department store having gone out of existence, in New York or elsewhere, since the Lexow exposure. But even more space in Senate Report No. 40 was devoted to the American Sugar Refining Co., the wickedness of which was dilated upon with great vehemence by Mr. Lexow—and here is what gives point to his resurrection.

It happens that at this time the American Sugar Refining Co. also are receiving the attention of the federal courts. On November 22, before a United States circuit judge sitting in New York, former Senator Lexow appeared as counsel for the defendants and pleaded for a change of venue, urging as a reason the "inflamed state of public opinion" in regard to trusts. Can it be that Senate Report No. 40, after twelve years, still influences the people against trusts?

THE FACT THAT THE PNEUMATIC TIRE has been officially recognized as just having come "of age"—and before the advent of the pneumatic the now great automobile industry was non-existent—may very properly be regarded as encouraging to the latter day pioneers in aviation, a field in which rubber is hardly less important than in motoring.

JUST AS "THE RACE IS NOT ALWAYS TO THE SWIFTEST," the trade may come to realize that the best rubber may, for certain purposes, have to give way to inferior brands. Not that balata gum is an inferior material, when properly known, but for half a century it could not hope to compete with fine Pará.

"BRAZIL FOR THE BRAZILIANS" seems to be the motto of the people who have developed the rubber trade of the Amazon regions. Seeing how generally outsiders have failed to exploit rubber there successfully, it is hard to see how anybody can object to the motto.

IT MAY BE, AFTER ALL, that the frenzy of the Britishers to put capital into any sort of company that has rubber planting as its avowed object, is not less well based than the American susceptibility to invest in anything which may be advertised as a gold mine.

THE PROMINENCE OF HEELS in the British rubber trade suggested a brief article on our transatlantic brethren being "well heeled"—an expression we have heard somewhere—but the office dictionary fails to supply a satisfactory definition for this term, and the article will have to be postponed.

IT SEEMS THAT THE CONGO NATIVES are to be given the choice, ultimately, between paying their taxes in money or in rubber. Since they have complained so strenuously against having to go to the "bush" to collect rubber for this purpose, they probably have cash hidden in their stockings with which to meet the claims of the tax gatherer.

THE AMAZON RUBBER SYNDICATE.

TO THE EDITOR OF THE INDIA RUBBER WORLD: On September 28 there was held in Pará the first meeting, after their installation, of the associates of the Rubber Syndicate "A Productora Amazonica" [see THE INDIA RUBBER WORLD, September 1, 1909—page 422]. The firms represented were: Mello & Co., Freire Castro & Co., Rocha, Silva & Co., Costa & Menezes, Velhote, Silva & Co., Alves-Braga Rubber and Trading Co., Barboza & Tocantins, Cerqueira Lima & Co., B. F. da Silva, Silva, Bastos & Co., A. Motta & Co., and Silva, Ribeiro & Cie.

The president of the board of directors, Barao de Souza Lages, of the firm Mello & Co., presented a motion that the syndicate should immediately go into operation, notwithstanding the fact that the government has not yet granted them the privilege of the 4 per cent. duty rebate on the export of rubber.

Mr. Simao da Costa, representing The Alves, Braga company, in a well elaborated speech, tried to encourage his associates by explaining that according to the federal and state laws everybody concerned in the rubber industry can belong to the organized syndicate—i. e., not only the proprietors of rubber estates and the *aviadores*, but even the brokers, salesmen, or clerks of the firms which handle rubber. He gave a description of the great services which a syndicate organized in such a manner can render to its associates.

To formulate the rules of the syndicate, Messrs. Simao da Costa, José da Rocha Fernandes, and Barreiros Lima were elected.

This report corroborates the article of Gustav Heinsohn, published in THE INDIA RUBBER WORLD [July 1, 1909], stating that the Pará government had not passed the duty reduction law

with the view of excluding the foreign exporters from the Amazon market, but only to encourage the producer to export rubber directly to the foreign buyer.

The fact that many of the associates of the syndicate are only wholesale provision merchants and consequently cannot comply with the established law of being direct producers of rubber, excludes the syndicate, even if all of them should be Brazilian firms, from the right of exporting the rubber at a lower rate than is exacted under the general rule. From this is evident that the Pará government is entirely reliable. If any organization should get the benefits of this duty reduction law, it will only be one of direct producers, and there will be no speculation.

S. CLARK.

A GERMAN VIEW OF OUR "OPTIMISM."

[FROM THE "GUMMI-ZEITUNG," BERLIN.]

IN an article on the business situation on the other side of the ocean, THE INDIA RUBBER WORLD, of New York, says, among other things:

The country is prosperous again. The country has been prosperous for a long time. This country cannot be otherwise than prosperous, with so many millions of honest and intelligent people working constantly to improve their condition—materially and morally. Would it not be a great blow to civilization if such concentrated effort by so many millions did not yield favorable results? . . . Business conditions in America, measured by every recognized standard, show an improvement over what has prevailed for a year or more past. In other words, business is approaching the normal American condition—that of continued improvement, keeping pace with the constant growth of a population that has a huying capacity not equaled in any other country, in any age.

Would it not be well for us here in Germany to become imbued with some of the healthy optimism shown in this conception of the situation? We assuredly are not unwarranted in doing so, for all indications are scarcely less favorable for us, and conditions are at once immeasurably improved when belief in an upward trend becomes prevalent.

RUBBER IN THE NEWSPAPERS.

THE able Minneapolis (Michigan) *Journal* has discovered why some producers of rubber tires can sell for less money than others, the reason being that—

"The larger manufacturers were able to buy thousands of dollars of crude rubber when prices were lower. The smaller manufacturers, however, could not afford to buy enough rubber to stock their gum cellars, so they have been forced to make prices from 5 to 15 per cent. higher than more popular and older competitors."

Is rubber really scarce? The able Boston *American* says: "In the forepart of August Elmer L. Corthell, direct from Pará, said that there was an abundance of crude rubber in that district, but that the producers of it were in despair at the prices offered by foreign buyers. The people were told by agents from this country that the panic here had so restricted the use of automobiles that there was scarcely any demand for rubber tires."

How does the able Elizabeth (New Jersey) *Journal* happen to know this? "Rubber for overshoes is very scarce for various reasons. - - - For this reason a pair of rubbers will cost about the same this year, but their quality will not be as good."

Under the heading "Boat Mill to Shut Down" the Boston *Post* of November 5 reported, under a Millville date line: "The United States Rubber Co.'s boat mill here will be shut down next week for an indefinite period for the purpose of curtailing production." Didn't know before that the company named were making too many boats.

RUBBER CONTRACTED BY HEAT.—Rubber is strongly contracted by heating, and Professor S. P. Thompson suggests that it would be possible to construct a heat engine to be driven by the contraction of rubber instead of by the expansion of water or air.

THE RUBBER CLUB OF AMERICA.

THE development of the New England Rubber Club, after ten years of successful existence, into The Rubber Club of America, as determined upon at the last midsummer outing [see THE INDIA RUBBER WORLD, August 1, 1909—page 393], has now been accomplished, the last formality being the incorporation of the Club, under its new name, in the state of Massachusetts. It may be of interest to the general reader, as well as the members of the Club, to see a transcript of the official certificate of incorporation, which follows:

THE COMMONWEALTH OF MASSACHUSETTS.

BE IT KNOWN, That whereas Henry C. Pearson, J. Frank Dunbar, George H. Mayo, Arthur W. Stedman, Costello C. Converse, Ira Foss Burnham, Frederic C. Hood, L. Dewart Apsley, Elston E. Wadbrook and Frank D. Balderston have associated themselves with the intention of forming a corporation under the name of *The Rubber Club of America*, for the purpose of social intercourse among gentlemen connected with the rubber industry and the furtherance of educational and scientific research in India Rubber production and manufacture, and have complied with the provisions of the statutes of the Commonwealth in such case made and provided, as appears from the certificate of the

President, Treasurer, Secretary and Executive Committee of said corporation, duly approved by the Commissioner of Corporations and recorded in this office:

NOW, THEREFORE, I WILLIAM M. OLIN, Secretary of The Commonwealth of Massachusetts, do hereby certify that said Henry C. Pearson, J. Frank Dunbar, George H. Mayo, Arthur W. Stedman, Costello C. Converse, Ira Foss Burnham, Frederic C. Hood, L. Dewart Apsley, Elston E. Wadbrook and Frank D. Balderston, their associates and successors, are legally organized and established as, and are hereby made, an existing corporation under the name of

The Rubber Club of America,

with the powers, rights and privileges, and subject to the limitations, duties and restrictions, which by law appertain thereto.

WITNESS my official signature hereunto subscribed, and the Great Seal of The Commonwealth of Massachusetts hereunto affixed, this fourth day of November in the year of our Lord one thousand, nine hundred and nine.

[SEAL]

WM. M. OLIN,

Secretary of the Commonwealth.

A NIGHT WITH THE AERONAUTS.

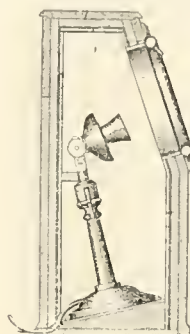
THE winter dinner of the Rubber Club of America, known for so many years as the New England Rubber Club, will be held in December, the date being the 13th, and the place of meeting the Algonquin Club, Boston. The executive committee have in prospect what will be one of the most interesting and unique entertainments that the club in its ten years' history has ever enjoyed. Appreciating the worldwide interest in Aeronautics, they have induced the secretary of the Aéro Club of America, Mr. Augustus Pest, himself an aeronaut for many years, to show some moving pictures of aeroplanes in flight—notably one operated by Glenn H. Curtiss when he won the Hammondspont prize. These pictures are wonderfully graphic and give one a clearer idea of the graceful and thrilling flight of an aeroplane than any ever taken heretofore.

The speakers of the evening are Professor William H. Pickering, of Harvard University, president of the Aéro Club of New England; Professor A. Lawrence Rotch, professor of meteorology in Harvard University and director of Blue Hill Observatory; Professor Robert W. Wood, the brilliant and witty young physicist of Johns Hopkins University, Baltimore; and Edgar Beecher Bronson, aeronaut, explorer and *raconteur*. Mr. Bronson, by the way, has just returned from hunting big game over the very country which ex-President Roosevelt is still traversing. Other speakers of note have been invited. After the speaking those who are interested will have an opportunity to see a remarkable set of lantern slides showing different types of aeroplanes, dirigible balloons, and the like, which will be explained by Mr. Post.

BOSTON AND PROSPERITY.—In a review of the existing prosperous condition of the United States, the *Boston American* credits the use of Boston capital and the influence of the financial leaders of that city with an important share in the development of the country at large. The writer says, by way of illustration: "The United States Rubber Co., another example, is controlled and managed by Boston men, and all through the list of directors it will be found that Boston is playing a large part in commercial and financial affairs."

NEW TELEPHONE ATTACHMENT.

TO prevent the overhearing of telephone conversations, the transmitter of a desk telephone is enclosed in a box provided with a sound proof lining and with an aperture bordered by a rubber tube, against which the face of the speaker is pressed while talking. The receiver may be hung, as usual, on the switch arm on the transmitter standard, and may be removed for use through the talking aperture or through a door; or it may be hung on an arm connected to the switch arm through a U-shaped rod which encloses one of the sides of the sound proof box. The aperture at which this rod enters the box is closed by a flexible membrane, to which the rod is attached. The rubber tube which borders the speaking aperture is provided with a smaller tube for inflation purposes. The sound proof lining of the box may consist of two layers of felt separated by a layer of india-rubber. Invented and patented by E. F. Hutton, No. 35 New street, New York.



TELEPHONE ATTACHMENT.

A New York newspaper says: "Hanging on the wall behind the desk at the Holland House is a mahogany box about 2 feet long by 1 foot wide and deep, with an oval shaped hole in it lined with rubber. If you wait long enough you will see a clerk fit his face into the hole. This is one of those new telephone booths—one of the few that are to be seen about New York, and which it is said the telephone company is fighting. Talking into one gives you an ostrich-like feeling compared with the booth of the cupboard variety, but at the Holland House they say that the result is just as satisfactory as the other kind, and the 'ostrich' booth takes up no room."

MR. INGERSOLL RETIRES.

IN mentioning the appearance of the first automobile journal, THE INDIA RUBBER WORLD (December 10, 1895—page 87) said: "Should the motor carriages ever become popular it evidently will be a matter of interest to the rubber trade, since most of the specimen machines made up to date are provided with pneumatic tires, indicating that this is expected to be an important feature." The motor carriages have "become popular," and what an "important feature" the pneumatic tire has grown to be is the most striking fact in modern rubber history. All of which indicates that Ernest P. Ingersoll, when he founded *The Horseless Age*—that was before people talked about "automobiles"—he doubtless builded better than he knew. During the fourteen intervening years the paper mentioned has been conducted ably and successfully by Mr. Ingersoll, who during the month past disposed of it, with a view to devoting attention to his health. Before starting *The Horseless Age* Mr. Ingersoll had come into contact with the rubber trade as advertising manager for the Mechanical Rubber Co. (New York). It was at that time that he became familiar with the pneumatic tire and impressed with its

HAD \$30,000,000 TO SPEND.

IN a sketch of Mr. Charles R. Flint, the *Boston Globe* says: "No single American is today better known in South America. His relations with Chili have existed since the beginning of his business career. He has held many positions of confidence under Chili, and has been its secret agent in many a deal involving the growth of its navy. Russia also has great confidence in Mr. Flint, and when, at the opening of the war with Japan, it wished to strengthen its navy, Mr. Flint was made its purchasing agent, and was handed \$30,000,000 to spend in its behalf."

Mr. du Cros and the Dunlop Company.

THE PNEUMATIC TIRE IS OF AGE.

AN event of more than passing interest to the tire and motor trades was the banquet tendered to Mr. Harvey du Cros at the Hotel Cecil, in London, on the evening of November 19, to celebrate the "majority" of the commercial application of the pneumatic tire. In other words, it is just 21 years since the issuance of the first of the patents which formed the basis of the great Dunlop tire company, with which Mr. du Cros has been identified in so important a degree.

It is true that a patent was granted to Thomson for a pneumatic tire as early as 1844, but his tire never met a practical application. John Boyd Dunlop, who obtained a patent in 1888, so far as is known, developed his invention without being aware of the work of Thomson, and though his tire was of a more practical character than Thomson's it was soon recognized that the earlier inventor had anticipated Dunlop's idea to an extent which rendered a patent on the latter of doubtful validity.

The company formed to manufacture the Dunlop tire were fortunate in securing other important patents which were brought out soon after the practicability of the pneumatic tire was assured, and these were the real foundation of the Dunlop Pneumatic Tyre Co., Limited, which attained so much success under the management of Mr. du Cros. Some very prominent cycle and motor traders participated in the celebration at the Cecil, where accommodations were arranged for 450 persons. The chair was taken by H. S. H. Prince Francis of Teck, chairman of the Royal Automobile Club. Mr. du Cros was presented with a solid silver gilt casket and a signed address of congratulation.

This banquet recalls to mind another at the Hotel Cecil. On the evening of September 16, 1904, a company numbering over 400 assembled on the invitation of the Dunlop company "in honor of the expiring of the Welch patent"—one of the most important owned by them. Mr. Harvey du Cros, the chairman of the company, presided at that dinner. At midnight the patent was silently consigned to the flames, and Mr. du Cros asserted that it was with great satisfaction, since the company were no longer to be annoyed by having to protect the patent.

MR. HARVEY DU CROS.

EVERYBODY KNOWS the Dunlop tire and that, of course, suggests Harvey du Cros, or as our English friends write it, "Harvey du Cros, Squire of Howbery Park, Wallingford, and Member of Parliament from Hastings." What Mr. du Cros did in the tire business makes him of interest to the whole rubber trade—not that we want to know in detail all that the English journals have published about him, or rather about his forebears who were signeurs, nobles, and soldiers of the old regime of France. What is really interesting is something about the present Du Cros, and here it is:

He was born in Dublin in 1846 and is part French and part Irish. He was educated at the Kings Hospital, Dublin, and after a short preliminary commercial experience in the firm in which his father was a partner, entered into business relations with a Scotch firm of paper manufacturers and soon became the head of a large wholesale business in Ire-

land. He made money and made it fast, for at 43 he retired from business, and being an athlete spent his time training his six sons, all of whom are experts in boxing, fencing, and general outdoor sports. It was through their cycling interest that Mr. du Cros became interested in tires and in the rubber business.

The story of how he secured the Dunlop rights, how the small factory in Dublin grew to a business of great dimensions, and how he established in Coventry and Birmingham, and in France and Germany, great rubber works, are all a matter of history. Our interest, of course, centers in Mr. du Cros's rubber triumphs, but he has also helped build the automobile industry, and is a large stockholder in some very profitable motor companies. Besides he is interested in extensive mines in Spain which are worked by his own capital.

Personally, Mr. du Cros is below middle height, compactly built, rather quiet, but very alert. He has shown wonderful capacity for detail, and is an excellent judge of character, which perhaps was why he dodged the writer of this sketch and turned him over to a polite and courteous secretary.



HARVEY DU CROS, J.P., M.P.
[Managing Director of the Dunlop Pneumatic Tyre Co., Limited.]

THE GREAT DUNLOP COMPANIES.

THE history of the Dunlop Pneumatic Tyre Co., Limited, is written too fully in the pages of THE INDIA RUBBER WORLD to make it necessary to recall the details at this time. It is worth mentioning, however, that at the last annual meeting of the company, on December 17, 1908, Mr. du Cros stated that the company had paid in dividends, since the organization under the present name, £1,595,720 [=\$7,765,571], besides which he might have dwelt upon the important business which has been based upon the earnings from the original capital not distributed as dividends. In other words, the Dunlop Pneumatic Tyre Co., founded with the sole purpose of profiting from the ownership of tire patents, came in time to consider what should be their course after the expiry of the patents, when it was decided to build up a manufacturing business which should be enduring, and this has been accomplished. Their tire patents no longer exist, but their

eminence in the tire trade is still a great asset, besides which the company figure in the manufacture and sale of miscellaneous rubber goods to a very large extent.

The corporation already named is only one of several embraced in the Dunlop system. Their manufacturing business is carried on at Birmingham, under the name of the Dunlop Rubber Co., Limited, which is a separate corporation, with net assets stated recently at £832,000 [=\$4,048,928]. The average annual profits of the Dunlop Rubber Co. for three years have amounted to £257,758 [=\$1,254,379]. In addition to the businesses here named, the Dunlop interests embrace a tire factory in France, one in Germany, one in Canada, and one in Australia, and they profit from the manufacture and sale of the Dunlop tire in the United States, not to mention the sale of the Dunlop tire elsewhere, in countries where it is not manufactured. Recently they have been planning to establish a factory in Japan.

It is to be kept in mind that none of these enterprises to-day is based upon the holding of any patents; they are only results of the momentum gained by the Dunlop business machine when it really was based upon a patent very essential to it, the validity

of which was confirmed by the British house of lords.

Characteristic of Mr. du Cros was a passage in his address at the last meeting of shareholders of the Tyre company (that is the way they spell it in England): "Another valuable asset this company has is the board of directors, where there has never been a note of dissent—a board of directors who pursue a settled policy; it is continuous and that continuity is one of the best assets that this company possesses." Mr. du Cros could hardly have been expected to say so himself, but another might very well have suggested that he is practically the author of the company's policy, and the power which carries that policy into execution. He did mention in his address, by the way, his ownership of one-fifth of the share capital of the Tyre company, but he doubtless controls directly a much larger proportion.

DUNLOP INTERESTS IN FRANCE.

THE separate company which since 1896 has controlled the Dunlop tire interest in France—the Société Française des Pneumatiques Dunlop—is to be liquidated, its business and undertaking to be acquired by the Dunlop Rubber Co., Limited. The latter company will issue "income stock" to the shareholders of the French company at the rate of £2 for each £1 share now held, whether preference or ordinary, a minimum income of 5 per cent. being guaranteed. The trading profits of the French company for the year ending July 31, 1909, including interest on investments, amounted to £56,019 [= \$272,616.46], which permitted of dividends of 6 per cent. on the preference and 30 per cent. on the ordinary shares.

The sale of the French company to the English company was sanctioned at a special meeting of the shareholders of the former in London on November 7. The solidarity of the Dunlop interests is indicated by the fact that the managing director of the French company is Arthur du Cros, J.P., M.P., son of Mr. Harvey du Cros. The capital of the French company is £159,807 [= \$777,722.77].

The object of the change is to bring about certain economies through consolidation; also to open the way for the introduction into France of other Dunlop rubber products than tires. Under the terms existing hitherto the Société Française des Pneumatiques Dunlop, Limited, had the sole right to trade in France under the name "Dunlop," but by acquiring the good will of the French company the parent company, in England, may trade in France as freely as at home, especially since, by taking over a factory in France, they will not be liable to customs charges on whatever mechanical goods they may market in that country.

THE DUNLOPS AND THE DINNER.

THE veteran cyclist, R. J. McCredy, who helped so much in popularizing the pneumatic tire, and who is now editor of *The Motor News*, of Dublin, wrote in his issue for November 13:

"Everyone will be delighted to know that Mr. J. B. Dunlop and his son (J. B. D., junior) will be amongst the diners at the Pneumatic Tyre majority celebration banquet on the 19th inst. Nothing could possibly be more appropriate than the presence of the inventor of the tire and its first user, upon this historic occasion. It was feared that Mr. Dunlop would not be able to travel, because he is a delicate man, and a journey to London in the depth of winter is a rather formidable undertaking for a gentleman of his age and delicate health. However, he has decided to travel over specially for the functions, and we think that his presence upon the occasion will form the coping stone to the work of the committee. Every one of the directors of the original company will, therefore, be present to do honor to the occasion, and incidentally to Mr. Harvey du Cros, the present chairman of the company."

DUNLOP BRIEFS.

THE Dunlop Rubber Co. (Far East), Limited, have opened a branch in Singapore, at 7, Collyer quay, for the sale of tires of every class, and other rubber goods. The manager is Mr. Thomas Sibray, for many years with the Dunlop company in

England. The company are reported to have an extensive trade in the Malay peninsula.

In these days of registration of trade marks generally, it is rather odd that the Dunlop tire trade mark was not registered in the United States until October of the present year.

The promotion of the present Dunlop Pneumatic Tyre Co., Limited, made Ernest Terah Hooley famous, his profit from the transaction having been commonly reported at \$10,000,000, for only two or three days' work. The most recent newspaper mention of Mr. Hooley was in connection with the reported purchase by Mrs. Hooley of an estate in Northamptonshire for nearly £100,000.

In connection with the invention of the pneumatic tire, one of our British exchanges mentions that Mr. H. Thomson Lyon, chairman of the highways committee of the Westminster city council, which forms part of the municipal government of London to-day, is a son of Robert William Thomson, who patented the first pneumatic tire in 1844, though his invention at that time was termed an "aërial wheel."

THE UNITED STATES PATENT OFFICE.

THE number of letters patent granted by the United States patent office during the year ended June 30, 1909, was larger than in any preceding year, the number being 34,332. The number of patents expiring during the year was 22,779, leaving a net increase in the number of effective patents of 11,553. The total number of patents issued, from the establishment of the office to June 30 last, was 926,719. The office has always been self supporting, and the total of receipts over expenditures from 1836 until now is \$7,060,547. The commissioner of patents is desirous of having the government devote part of this surplus to the erection of a new building better fitted for its purposes than the present patent office. The commissioner reports continued improvement in the condition of affairs in the office, permitting a better service to be rendered to applicants for patents. Commissioner Moore has been designated to represent the United States at a meeting in Switzerland next year of the International Union for the Protection of Industrial Property, to discuss agreements in respect to the reciprocal protection of patents in different countries. It is a singular fact that in 6,763 cases where patents were ready for issue the same were withheld on account of the non payment of final fees, although six months are allowed for making such payments after the inventor is informed that his application has been allowed.

A MILLION DOLLARS FOR WRIGHTS.

UNDER title of the Wright Co., the aeroplane business of Wilbur and Orville Wright has been incorporated under the laws of New York, the papers having been filed on November 22. The capital, \$1,000,000, has been paid in. The directorate, it is announced, is to include Cornelius Vanderbilt, Howard Gould, August Belmont, Allan A. Ryan, Theodore P. Shonts, Morton F. Plant, Edward J. Berwind, Andrew Freedman, Robert J. Collier—all New York men of affairs—and Russell J. Alger, of Detroit. One of the Wright brothers, it is stated, will be president, and the other vice-president. The Wrights will give their personal attention hereafter to the aeroplane factory already erected by them at Dayton, Ohio. The company have opened offices in New York and are prepared to accept orders for machines. An important object of the new company is the protection of the Wright patents in the United States and Canada, for which work some noted attorneys have been retained. A dinner in honor of the Messrs. Wright, in New York, on the evening of November 23, was largely attended by enthusiasts in aviation from all over the country.

Other details regarding the development of aeronautics will be found elsewhere in these pages.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

IF all rubber goods consisted solely of rubber instead of in so many cases containing only a modicum of it, there is no doubt that a considerable depression would have to be reported. As it is, the factories continue pretty busy, in spite of the addition to the price lists. That the situation is a perplexing

THE STATE OF TRADE.

and difficult one goes without saying, but it cannot be called acute, or even serious. Of course, in this manufacture as in others, the putting of a 10 per cent. or other rise on the price list does not mean that the manufacturer suffers no loss from the abnormal market conditions, because the rise which is put on never takes effect until its cause has had time to operate to the producers' disadvantage. In other words, prices cannot be put up the same day that the raw material is bought at an enhanced price. Perhaps the feature of the greatest novelty in the situation is the fact of rubber being sold six or eight months ahead. A manufacturer of 36 years experience tells me that in the whole of his connection with the trade he has never seen anything like the recent Liverpool transactions for delivery six or eight months ahead. The customary procedure of the past has rarely exceeded two months. The general trade of the country is undoubtedly improving, with the exception of the cotton industry, and the navy extensions recently decided on will mean augmentation of the usual admiralty contracts.

A COMPANY referred to in the local papers as the Rubber Regenerating Co. of America is at the present time erecting a large factory in Trafford Park, Manchester, where the reclaiming of rubber by the alkali process is to be carried on on the large scale. I have not been able to come in contact with any official in a position to give me any details, but the company is said to be established at Chicago or thereabouts under the management of Mr. R. B. Price. In this connection I may mention that on September 13 a private company called the Rubber Regenerating Co., Limited, was registered in London. The capital is £1,000 in £1 shares, the business being that of planters and manufacturers of and dealers in rubber, balata, and other gums. The first directors are R. B. Price, H. Kidson and L. D. Kidson. The Trafford Park business, then, may be more than a European branch of the American factory. It is more than probable that the paragraphs in the local papers referring to the effect of the regenerating process being to make old rubber quite equal to new are not verbatim reports emanating from the officials. But allowing for newspaper inexactitude, this second invasion of American reclaimers into Lancashire is not without interest and importance. The former instance is, of course, the Northwestern Rubber Co., Limited, at Litherland, Liverpool. With regard to the site of the works, I may say that Trafford Park was, from the days of King Canute until recent years, the ancestral home of the De Trafford family. Now, however, it is the property of the Trafford Park Estates Co., Limited, and is being opened up for manufacturing purposes. The area is about 1,700 acres, and the position, just in the outskirts of Manchester on the banks of the ship canal, to say nothing of railway facilities, offers exceptional advantages. Among the works already established there are the Westinghouse Manufacturing Co. and W. T. Glover & Co., Limited, the cable makers.

THE fact that one of the recently bought out companies has arranged to return its capital to the shareholders because the statements in the prospectus have been found to be erroneous is indicative of the rush there is at present to get properties on the market while rubber remains at its high prices. It

RUBBER PLANTING.

takes time to get a report from an independent expert, so presumably in some cases promoters have been satisfied with information probably not altogether unbiased. With regard to the relative merits of the new Ceylon and Malayan companies, it has been said that the latter are the best investment, because the trees come to the producing stage sooner than is the case in Ceylon. I am inclined to think that this is not quite correct as a general statement. Certainly it is borne out by past experience, but this may be attributed largely to the fact that the earlier Ceylon plantations were on ground previously exhausted of its nutritious properties by crops such as coffee, while the Malayan rubber was planted in virgin soil. Now that the use of artificial manure is becoming more common in Ceylon this disparity may be expected to disappear, and further, the new plantations are to a great extent on soil which has not been exhausted by previous cultivation of crops. So far one hears of no great shortage of labor in the plantation regions, while this remains the crux of the situation in South America. In this respect, indeed, matters are tending to become worse, because occupation of a more desirable kind is increasing—for instance, harbor developments.

With regard to speculation in rubber shares, this is rapidly increasing. Probably the shares are used more as gambling counters than as legitimate investments, to judge by the continuous queries one hears as to whether it is time to get out. The persistence of the high price of rubber is proving a source of embarrassment to speculators, who, naturally, don't wish to sell until top prices have been reached.

WIDESPREAD notice has been attracted to this solvent by the newspaper reports of the proceedings connected with the death of Miss Horn-Elphinstone-Dalrymple while having a dry shampoo at Harrod's stores in London. After a protracted hearing, the charge of manslaughter instituted by the Crown against the shop assistants was abandoned before its final stage, but it was announced that any similar case in the future will be very serious for the operators. It is not surprising to hear that the liquid is not to be used again at Harrod's stores for this purpose. A noteworthy point about the prosecution was that the medical experts had just read up the subject, and knew practically nothing about the large trade application of tetrachloride. Still, as the medical evidence went to show that it had long been known as a strong and rather dangerous anaesthetic, it is as well that the rubber, oil-extracting and dry cleaning trades, where it is now extensively used, should take every precaution against accidents. In all probability, if Harrod's had employed assistants thoroughly familiar with its properties the fatal result would not have ensued, though even a trained anaesthetist does not necessarily know anything about the purity of his chemicals. It was mentioned in these notes a few months back that commercial tetrachloride generally contained a certain amount of carbon bisulphide as an impurity, and this was found to be the case in the material used for the shampoo, thus increasing its toxic effects. It may be taken for granted that we have not heard the end of the case, and in all probability the employment of tetrachloride in any way will shortly be hedged round with government restrictions. In another more recent fatality where two persons lost their lives, an explosion of petrol took place when a dry shampoo was in progress. The hair dresser said at the inquest that he held no license for petrol, which was in increasing use by ladies. It rather looks as if the whole business of dry shampooing, if the demand does not die out after these results, will have to be forbidden in stores and shops and carried on solely in premises

CARBON TETRACHLORIDE.

subjected to inspection and by certificated operators. Anyhow, the home secretary in answer to questions put in Parliament, has said that the operators will be indicted for manslaughter in the event of any further fatalities with carbon tetrachloride. It therefore behooves rubber manufacturers to take all possible precautions in this connection.

WITH reference to this topic, mentioned in the October number of THE INDIA RUBBER WORLD, I don't know that it is quite accurate to use the term "whiting" for a natural product. It is usual to limit the term whiting to the product which is obtained from chalk by elutriation in water, whereby the gritty particles, sand, and the like, are removed by subsidence. Of course, the new Mexican discovery may be of a purity hitherto unknown, but as a refining plant is being put up it does not look as if it was so very superior to the ordinary chalk of England and France. To the best of my knowledge the English whiting is not obtained, as stated in the article, from a very hard limestone, but from the soft chalk which belongs to quite a different geological horizon. I do not know personally of any refining works on the chalk dips of Albion, but across the water in the same chalk strata Taylor & Son, an English firm, are proprietors of the Carrier du Mont de Caux, near Dieppe, where there is a large purification plant. The price paid by rubber works for their whiting is much less than it was in days I can recall, and the margin of profit cannot be large. Of course, entire absence of grit is a most important desideratum, the color also being a gage of quality.

**WHITING
IN MEXICO.**

MR. JAMES E. BAXTER has retired from the board of the Leyland and Birmingham Rubber Co., Limited, and Mr. R. T. Byrne has been elected chairman in his place. It will be remembered that Mr. Baxter, to whose initiative and energy is due the great development of the Leyland factory from a comparatively insignificant concern, retired some years ago from the active control, but resumed his position at a later date by the express desire of the shareholders. Lest there should be any misapprehension on the point, I may state that Mr. Baxter's withdrawal from the board is due to the multiplicity of his interests and engagements. These include directorships in two or three rubber planting companies, on the boards of which he can, of course, speak with a knowledge of the trade in all its bearings.

**MR. BAXTER'S
RETIREMENT.**

THE death of Mr. Herbert Wilford Brett, reported in the last INDIA RUBBER WORLD, was a shock to his many friends, though he had been by no means in robust health of late. The end came very suddenly, when he was playing billiards with Mr. H. de Conrey Hamilton, at his own house at Newbury, Berkshire. Mr. Brett, who was a clergyman's son, is said to have amassed a fortune in connection with rubber planting companies, being on the boards of a large number.

**PERSONAL
MENTION.**

Mr. Hamilton, a relative of General Sir Bruce Hamilton, has had a long experience as a planter, notably in the West India islands. He is now a director of three or four rubber planting companies, and has just left England for Ceylon and Sumatra in connection with their interests.

Lord Kingsale, who appeared as chairman on the prospectus of the Ivory Coast Rubber Estates, Limited, is the premier baron in the Irish peerage, the creation dating from 1187, though some authorities put the date of the actual patent some forty years later. He has the hereditary privilege of keeping his hat on in the presence of royalty. Certain statements in the prospectus and the previous newspaper paragraphs have been somewhat severely criticized by competent authorities, but those who know anything about company flotations will attribute these statements to the actual promoters rather than to the directorate.

Mr. Harvey Du Cros is to be entertained at dinner and have a presentation made to him on November 19, at the Hotel Cecil,

London, to commemorate the twenty-first anniversary of the introduction of the pneumatic tire. This date is the first day of the Stanley Cycle Show.

AMERICANS IN SCOTCH RUBBER MILLS.

IN the official *Daily Consular and Trade Reports*, published at Washington, in the issue of November 15, appears the following report by the United States consul at Edinburgh—Mr. Rufus Fleming—in regard to the introduction of American men and ideas into Scotch factories:

"One of the important industries in this district is the manufacture of india-rubber goods. The estimated value of the products of this industry (chiefly overshoes and waterproof coats) in the calendar year 1907 was \$5,800,000. The principal market for these goods is the United Kingdom, but for many years the manufacturers have made large sales abroad, principally in Russia, China, Germany and France.

"The leading article exported has been footwear. American and other foreign competition in the British market and abroad, especially in light-weight rubbers, has had a serious effect upon the Scotch industry, as indicated by the fact that the exports of rubber manufactures at Leith, the port town of Edinburgh, fell from \$1,095,390 in 1907 to \$464,731 in 1908. For the most part this drop in the export trade was due, I am informed, to a decline in the demand from the Far East. Although the home trade did not suffer nearly so severe a reduction, there was a marked decline, owing to the general financial depression last year as well as to outside competition.

"One of the results of this unsatisfactory condition is observed in the efforts of manufacturers to reorganize the industry on American lines. To this end they are employing American experts to take charge of the principal departments of manufacture. A prominent rubber company in this city recently engaged three men of long experience in New England mills, at salaries much higher than the British standard. This enterprise of Scotch manufacturers makes it clear that they recognize the necessity of organizing their establishments on the American plan, if not of copying the American styles of goods."

The following note from THE INDIA RUBBER WORLD of October 1 may be reread with interest in connection with the report above:

MR. ALEXANDER JOHNSTON, general works superintendent of the North British Rubber Co., Limited, of Edinburgh, was a visitor to the United States during the past month.

THE RUBBER INTEREST IN JAPAN.

RECENTLY issued official trade statistics of Japan show the value of imports of crude india-rubber and gutta-percha to have been as follows, the figures indicating yen [1 yen = 50 cents, gold]:

	1907.	1908.
From Dutch East Indies.....	133,486	335,545
From Straits Settlements.....	315,265	205,161
From Great Britain.....	97,684	184,293
From United States.....	145,841	101,291
From British India.....	53,106	35,720
From Germany.....	11,357	8,022
From other countries.....	13,975	16,546
Total.....	770,714	886,758

The imports of two lines of manufactures involving more or less rubber were as follows, values being stated in yen:

	1907.	1908.
Submarine and underground wires.....	1,333,144	420,277
Insulated electric wires.....	1,129,568	1,446,852

Under these heads the largest share came from Great Britain, with the United States second and Germany third.

The establishment of a rubber reclaiming plant is being considered by an important firm in Japan.

Some Rubber Interests in Europe.

REPORT OF THE HARBURG-VIENNA COMPANY.

THE directors of Vereinigte Gummiwaaren-Fabriken Harburg-Wien (vormals Menier—J. N. Reithoffer), Aktiengesellschaft, reporting for the thirty-seventh business year of the company, ended June 30, 1909, call attention to the unfavorable trading conditions of the preceding year, which to a certain extent have continued. Particularly, the weather was not such as to favor the sale of rubber footwear. On the whole, the sales from their three manufacturing plants were 15 per cent. less in money value than during the previous year. The profits, however, were larger, due to the fact that most of the manufacturing difficulties encountered since the disastrous fire [see THE INDIA RUBBER WORLD, December 1, 1905—page 55] had been fully recovered from before the beginning of the year under review. They were, moreover, able to make goods for part of the year from raw materials which had been purchased at comparatively low prices. The Austrian *Kartell* (trade agreement) operated satisfactorily, although prices in the dual monarchy still suffered through foreign competition. The report contains some interesting particulars regarding the "participation" of the Harburg-Vienna company in other corporations:

I. Internationale Galcith-Gesellschaft Hoff & Co., Harburg and Paris.—This company started in the beginning of the business year manufacturing operations in all the departments of the new Harburg works, located near the wharves. The generally prevailing unfavorable business conditions likewise affected the company's business to some extent, and the total sales consequently have not reached last year's figures. However, the business produced satisfactory results, because the improved technical arrangements exerted a favorable influence on the profits. Although ample contributions were made to the sinking fund, the dividend declared for the current book year again amounted to 10 per cent. Business showed increased activity during the present year, and the outlook for the company's business may consequently be considered favorable.

II. The Compania Explotadora de Caucho Mexicano, of Mexico, was this year again unable to declare a dividend, the output of guayule rubber having been smaller than last year, in consequence of the necessity of stopping the manufacturing plant on various occasions. The adoption of a new chemical process failed to produce the expected results, and the old process has consequently been used exclusively. In view of these circumstances, we consider it necessary to contribute a considerable amount to the sinking fund of the Participation Account, and propose that 200,000 marks [= \$47,642] of the profits carried forward to new account be used for that purpose.

III. Kautschuk-gesellschaft Schon & Co., Harburg.—On account of our participation in this company, we have paid into the said concern, up to July 1 of the current year, the sum of 400,000 marks [= \$116,722.90]. The works have been in operation for the past five months, and as they are making a product of good quality, we consider the outlook of this company to be favorable.

IV. Harburg and Vienna India Rubber Co. (of Great Britain), Limited.—This company, into which our former London agency has been converted, has likewise suffered from the generally prevailing unsatisfactory business conditions, as appears from the decrease in sales. The company's operations, nevertheless, produced satisfactory results.

It will be remembered that last year the company paid no dividend, but devoted the year's profits to strengthening their position in various ways made desirable by the result of the fire and the consequent interruption of trade. This year the net profit is 541,220.90 marks [= \$128,816.57], and is dealt with as shown in the next column, including dividends aggregating 6 per cent. on the entire capital.

The company's assets on June 30 amounted to 20,769,301.87 marks [= \$4,943,093.85]

Net profit this year.....	M 541,220.90
Dividend 5 per cent. on the entire capital.....	300,000.00
	<hr/>
	M 241,200.90
Less 10 per cent. commission to the directors.....	24,122.00
	<hr/>
	M 217,098.90
Dividend 1 per cent. on the entire capital.....	60,000.00
	<hr/>
Balance to 1909-10.....	M 157,098.90

The report concludes: "The business done by our works showed in a general way a slight improvement during the first few months of the current business year. Our orders for export, more especially, again showed an increase, and we may expect, therefore, that sales will not fall below last year's figures. We are meeting, however, with considerable difficulties due to the abnormally high prices of crude rubber. Fine Pará has advanced to 9 shillings per pound, and there has been a proportional advance in the medium grades. We consider it doubtful whether there will be within the comparatively near future any material decline from the present abnormally high rates, inasmuch as the world's consumption of rubber, which last year amounted to 62,376 tons, was 71,989 tons during the year covered by our present report, having consequently increased by about 9,600 tons, while the world's production was increased only from 66,379 tons to 70,587 tons, the increase being, therefore, about 4,200 tons. In accordance with these figures, the world's supply shows a material decrease. On June 30, 1909, the total supplies amounted, in fact, to only 5,024 tons, while they were 8,035 tons on June 30, 1908. To what extent we shall succeed in adapting our selling prices to the prevailing rates asked for the crude material will depend on the success of our efforts to establish, in conjunction with our more prominent competitors, adequately advanced selling prices for the staple goods having a large consumption. It would, however, at all events be impossible to establish advanced prices for a number of articles before January 1, 1910."

VIEW OF A GERMAN RUBBER WORKS OFFICE.

The illustration on this page shows the interior of the private office of the managing director of Vereinigte Berlin-Frankfurter



"FINE UPRIVER PARA" AT A GERMAN RUBBER WORKS.

[Managing Director Spannagel, of the Vereinigte Berlin-Frankfurter Gummiwaaren-Fabriken, at the right.]

Gummiwaren-Fabriken, at Gross-Lichterfelde, near Berlin. This gentleman is Mr. Emil Spannagel, of whom a sketch appeared in THE INDIA RUBBER WORLD March 1, 1906 (page 186.). On his right is the technical manager of the company, Herr Kroedel, and they are supposed to be "celebrating the record price of Pará at 9s. 2d." The specimen of rubber shown, weighing over 150 kilograms, represented a value of over \$750. This rubber is especially prepared for the Berlin-Frankfurter company in the upper Amazon region, for their use in the manufacture of certain of their specialties, including the famous "Veritas" billiard table cushions. The lettering on the ball of rubber includes the trade mark of the producer, and the initials of Mr. Spannagel's company.

The premises long occupied by the Berlin-Frankfurter company at 70-71 Mühlenstrasse, Berlin, and which they vacated for the purpose of finding more room in Gross-Lichterfelde, have been leased for a long term to Actiengesellschaft Metzeler & Co., of Munich, who intend to erect an asbestos weaving and spinning mill on the property, and to the Chemische Fabrik G. Meyer, Jr., of Einbeck.

THE HARD RUBBER INDUSTRY IN GREAT BRITAIN.

THE liquidation of the Scottish Vulcanite Co., Limited (Edinburgh, Scotland), under a resolution of the shareholders dated September 12, 1907, has now been practically completed. The various properties involved are to be taken over by a new company with the same name, of which the managing director will be Robert B. Black, long and extensively known in the British rubber industry. The history of the Scottish Vulcanite Co., Limited, which, by the way, was formed by Americans and at the beginning sustained close relations with the North British Rubber Co., Limited, was given in some detail in THE INDIA RUBBER WORLD December 1, 1907 (page 75). On the whole, the company had a profitable experience. The net profits for 34 years are stated to have averaged 13 per cent. on the share capital employed, which varied from £25,000 to £70,800. The new company are starting with £50,000 [= \$243,325] capital, in ordinary shares of £1, of which 40,000 have been offered for subscription. Mr. Black, who has been mentioned, was connected for a number of years with The Clyde Rubber Works Co., Limited (Glasgow, Scotland), of which he was secretary as early as 1886. He left this connection in 1897 to found The Rubber Co. of Scotland, Limited (Stirling), of which he was managing director. Since the closing of the Scottish Vulcanite works there has not been in Great Britain any factory devoted exclusively to the hard rubber industry. Mr. Black is convinced, however, that the demand for hard rubber justifies the restarting of the works, and that the former customers show a disposition to revive their patronage. The ground, buildings, and machinery are valued at £63,328 and the whole property has been kept in good order. As in the past, the manufacture of celluloid will be carried on in connection with hard rubber goods.

GERMAN RUBBER MANUFACTURERS IN SESSION.

[FROM THE "GUMMI-ZEITUNG," NOVEMBER 5.]

A MEETING of the German rubber manufacturers was held today at the Hotel Kaiserhof, in Berlin, a large number being present. The principal purpose of the meeting was to consider the precarious condition of the crude rubber market, a fact well known in trade circles.

The exceptionally large advance in the price of crude rubber, compelling manufacturers to agree on a general advance in their prices, has in the meanwhile become even more pronounced. Further advances in the prices of some of the principal manufactured products are declared to be necessary, considering the state of the crude rubber market, and it is the consensus of opinion of the assembled manufacturers that further advances must be made in the prices of all rubber goods.

Dr. Voss, the commercial expert of the German consulate general in Rio de Janeiro, and Mr. D. Sandman, member of the

Berlin Chamber of Commerce, gave a detailed exposition of crude rubber production and the condition of the rubber plantations. Close attention was paid to their remarks, and these gentlemen received a vote of thanks from the meeting.

THE GERMAN BALLOON FABRIC INDUSTRY.

THE Vereinigte Gummiwaren-Fabriken, Harburg-Wien, mentioned in THE INDIA RUBBER WORLD, September 1, 1909 (page 427) as prominent exhibitors of rubber balloon stuffs at the recent exhibition at Frankfurt o/M., supply this paper with some further information in this connection. They have made balloons for several years at their factory in Wimpassing, Austria, besides which they have made at their factory at Harburg a/d Elbe the following balloons:

Alfa	1260 cu. meters	[=39,458 cu. feet].
Hanse	945 cu. meters	[=29,594 cu. feet].
Barmen	1680 cu. meters	[=52,611 cu. feet].
Sleipner	945 cu. meters	[=29,594 cu. feet].
Ilse	600 cu. meters	[=18,790 cu. feet].
Harburg	1260 cu. meters	[=39,458 cu. feet].

Besides, the Harburg-Vienna company mention having constructed the hull of a motor air ship lately completed at Elberfeld, and shortly to make a trial trip.

The Continental Caoutchouc- und Guttapercha-Compagnie, of Hanover, are supplying the balloon sheeting for the aeroplanes in course of construction at Pau, France, for the Wright brothers.

DEATH OF GUSTAV HEYSE.

ON October 1/14 Mr. Gustav Heyse, manager of the Russian-American India-Rubber Co. "Treugolnik," peacefully departed this life in St. Petersburg, after a brief illness. Mr. Heyse had been connected with the company since its organization, in 1860, and held the office of general manager of the works 47 years. The title of *Manufakturrat* was conferred upon him by the government in recognition of his beneficial efforts. As a member of the board of directors of various other large enterprises, Mr. Heyse was highly appreciated by all his associates as a business man of wide experience. In his intercourse with the factory hands under his charge, he always showed a kindly spirit, and they are indebted to his loving care for many humanitarian innovations. We have lost in him a man of rare kindness of heart and great ability, and his death is mourned as a serious loss by all who knew him.—*Gummi-Zeitung*.



RUBBER SAMPLE ROOM, WEISE & Co., ROTTERDAM.

[The establishment from the interior of which this view has been obtained was described in THE INDIA RUBBER WORLD, December 1, 1909—page 90.]

Balata and Its Applications.

GROWING USE OF BALATA BELTING.

BALATA belting, first used in Europe in sugar beet factories, has gained ground, until it is found in nearly every form of industrial establishments. Its use has also extended to the United States, where it is asserted that several millions of feet are in use, either for driving machinery or in conveying plants. The waterproof character of balata and its capacity for resisting acids give belts treated with this material a great advantage under conditions where leather or canvas would be impracticable. Advantages are also claimed for balata belting over rubber for various purposes. The impregnation of a cotton duck belt with balata involves the solutionizing of the balata, and in this form the gum is forced into the fabric, after which it is allowed to dry. The belts are not vulcanized. Balata belting is in use to-day in very many large factories throughout the United States, in a wide variety of industries—shoemaking, hat making, bleacheries, breweries, wood working, dye houses, slaughter houses, tanneries, and so on. For conveying purposes balata has found a wide use, in mines particularly. For the most part the balata belting used is imported. The European balata industry was reviewed in THE INDIA RUBBER WORLD, February 1, 1908 (page 150).

THE MERITS OF BALATA BELTING.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The occasional appearance in your pages of references to balata belting for machinery suggests to us that perhaps your readers would be interested in something further on the subject.

Being probably the largest importers of this type of belting into the United States, the firm now writing you naturally would like to see the widest possible sale of the class of goods referred to. Yet it must be admitted that all the makes of balata belting have certain limitations. For instance, if balata belting be run into a room where there is more or less steam present, it disintegrates the plies. Balata should not be used in temperature over 100 degs. to give the satisfaction and secure the length that this belting should give.

Doubtless users of every make of balata belting imported into the United States have had trouble at some time or other for the following reason: Many American manufacturers seem to think that a belt is a belt. They put it on any old machine, in any old place, and if it doesn't last as long as some other belt specially adapted for the machine, they say the belt is no good. Every belt, the same as every other article in industrial use, is best adapted for certain conditions, and when properly chosen will give better service than any other belt. In many places a balata belt, for example, cannot compete with leather or rawhide; in many other places a balata is far superior to leather or rawhide.

Such balata belting as is now made in Europe we find has a great tensile strength, and such belting, owing to the balata compound with which it is impregnated imparts a surface to the pulley which makes it one of the finest pulling belts in the world. We have made the claim many times that if a customer would take into consideration the increased efficiency caused by the balata belting giving an extra amount of pulling power from the main shaft to the machine, this element alone would be found almost to cover the cost of the belt.

Owing to the balata compound working constantly through the belting the latter clings to the pulley, so that it is the finest running belt that can be found. We have had a balata belt run at a very high rate of speed on 100 feet centers without the slightest waver. One advantage of the balata belt lies in the fact that while there is any belt left no dressing is required, as the balata compound keeps the belt soft and pliable until it

is worn out. Most other kinds of belting require a large amount of dressing.

For such places as dye works, acid works, ammonia works, and the like, balata belting stands absolutely at the head of the list, for the reason that extreme cold or dampness does not affect it.

AN IMPORTER.

New York, November 12, 1909.

BALATA RESOURCES OF BRITISH GUIANA.

Nor only does British Guiana hold first rank in the production of balata gum today, but there are indications that the balata interest in this colony is on the eve of an important development. In answer to the question why British Guiana has not been better developed in respect of balata and india-rubber, it is pointed out that up to the end of 1907 *concessionaires* for collecting balata in the forests were only granted licenses practically from year to year, or at the utmost for three years. Naturally capital hesitated to embark in enterprises dependent upon a tenure of this description.

The laws since have been altered so as to grant rubber and balata licenses for 15 years, and as these licenses are renewable, with the approval of the government, which approval is not likely to be refused, this constitutes practically a freehold tenure. Already an increased output of balata has resulted. Whereas, formerly the exports did not exceed 500,000 pounds in a year average, they have been during the last three fiscal years 634,242 pounds, 973,269 pounds, and 1,090,405 pounds, respectively.

In view of the improved conditions of land tenure, mentioned already, and encouraged by the evident growing demand for balata in the industries, the extraction of this material is now being planned under a better system than formerly, through the consolidation of the producing interests, permitting the work to be carried on on a larger scale. A notable new enterprise in this connection is The Consolidated Rubber and Balata Estates, Limited, registered lately in London, with £250,000 [= \$1,216,625] capital. The purpose has been to acquire the balata concessions held by a number of going concerns, some of them long established, including—

Garnet's Balata Co., Limited, who produced 218,112 pounds of balata in 1908; S. Davson & Co., Limited, 150,396 pounds; McKinnon & Co., 141,050 pounds; Downer & Co., 114,256 pounds; The New Essequibo Exploration Co., Limited, and The Balata and Rubber Corporation, Limited, formed recently to acquire the licenses held by six other companies. The latter corporation gathered during the year about 67,000 pounds of balata and over 6,000 pounds of rubber. In the aggregate the balata production of the combination to be effected by the new company was, for 1908, nearly 690,000 pounds, and their plans look to the production next year of more than 1,000,000 pounds.

Among the statements of interest in the prospectus of The Consolidated Rubber and Balata Estates, Limited, is that the balata tree grows in belts, instead of being scattered generally through the forest. Some of the belts are very small in extent, while others embrace tens of thousands of trees, which grow to an enormous size. The tree is best tapped only once in five years, but the yield is 40 or 50 pounds in one season.

It may be added here that the terms of the licenses granted include regulations in respect of the method of bleeding the trees. No tree may be tapped which does not measure 36 inches in girth at 4 feet from the ground. A fine of \$48 is imposed for any violation of the tapping regulations.

Without doubt a great deal of native *Hevea* rubber exists in British Guiana, and the new company expect to develop an important rubber interest. There is a disposition to engage in planting rubber, which is encouraged by the new land laws.

Forward Sales of Plantation Rubber.

THE subject of the forward selling of rubber, as now engaged in by leading planting companies in Ceylon, has been widely discussed in the press of that colony. The practice and its possible results is one of widespread interest, as having a bearing upon the question whether ultimately rubber consumers may be able to depend upon covering their wants at a fixed price for months or even a year ahead—something which in the past never has been practicable. On this page appear some extracts from *The Times of Ceylon*, published at Colombo.

First is a letter addressed to the editor, which is self explanatory; it appeared in the issue of July 24 last:

FORWARD SELLING OF RUBBER—ANOTHER COMPLAINT.

SIR: I think it is high time that shareholders protested against directors making forward contracts for the sale of companies' rubber crops. What right have directors to speculate with shareholders' property? For it is just as much speculation to sell, because you think that prices may fall lower, as to buy because you think prices may go up. The proof that it is not legal, or considered the correct thing, is furnished by the fact that English companies don't do it; and I fancy that the directors of some of the Ceylon companies would find themselves in a very awkward position if recalcitrant shareholders took steps to enforce their directors making good the loss the companies sustain by such forward sales.

Buyers of rubber in large quantities would not be likely to enter into these forward contracts unless they were pretty sure that the prices were going to be higher, and I fancy American experts know more about these things than Ceylon Directors. Yours, etc.,

A DISCONTENTED SHAREHOLDER.

Up-country, July 23.

* * *

The next article appeared as the leading editorial in *The Times of Ceylon* of October 1, being suggested by a letter from New York which, while unsigned as it appeared in print, evidently is from the leading American firm buying Ceylon rubber on forward contracts. The article is given below in full, including the New York letter referred to.

* * *

FORWARD SALES OF RUBBER.

[FROM THE CEYLON PAPER'S EDITORIAL.]

We have received from the American firm whose Ceylon agents, Messrs. C. W. Mackie & Co., put through the contracts for the sale of the 1910 crops of several Ceylon estates, an interesting communication in reply to a letter, condemning forward sales, which was published on July 24 in our columns. The grievance of our correspondent was against the Ceylon directors who made contracts forward, and he questioned whether they could not be compelled to make good to shareholders any losses which such forward selling might cause. He contended that the fact that London did not go in for forward contracts supported his opinion that it was not good business, whilst he thought that the purchaser of the crop forward was bound to be satisfied that he was making a very good bargain. The letter from the American buyer is as follows, name and address being omitted:

TO THE EDITOR, TIMES OF CEYLON. *Dear Sir:* Referring to the complaint of your correspondent who, writing July 23 last, used the nom-de-plume "A Discontented Shareholder," I beg to state that purchasers of next year's rubber crops have been actuated mainly by the desire to secure supplies. The demand appears to be in excess of the supply, and New York houses have had the prudence to lay in stocks in time. Of course, in so doing they have had to take chances of decline in the market, but thereby they have eased the risk of the planters. As a matter of fact, the rubber has not been bought by speculators to hold, but has either been bought to cover sales actually made to manufacturers, or has at least been turned over to manufacturers immediately after purchase, and that at a price just sufficient to clear charges and give the purchaser a fair commission. As the larger part of the American purchases of 1910 rubber has been made through my agency I am in a position to speak with some authority. At the same time if planters will refuse to sell forward it will make business much easier for us. It is much easier to sell rubber for prompt shipment at

market prices than to sell futures without knowing what will happen in the commercial world in the meantime.

New York, September 2, 1909.

This, so far as we are aware, is the first statement of the situation from the point of view of the buyer of crops forward, and it is a thoroughly satisfactory and straightforward one. In the United States, as well as in the United Kingdom and on the Continent—because the sale of Ceylon rubber crops for 1910 has not been confined to one country—manufacturers have for some months past had serious misgivings as to the supply of rubber being equal to the demand in 1910, and they have accordingly taken steps to guarantee their own needs being satisfied. This explanation, we are quite well aware, will not be acceptable to a good many people who are firmly convinced that natural causes are playing a comparatively small part in the present state of the rubber market, whilst speculation is the principal factor.

But, even allowing that far seeing operators on the rubber market foresaw the possibilities that lay ahead when the United States recovered from its financial prostration, and thus managed to some extent to control the situation, there is still an admitted shortage of available rubber, and the manufacturer who takes the long view and buys ahead can defend his action by sound reasoning. They fully realize that there is a chance of the market being a cheaper one next year, but prefer to take that risk and be sure of having the stock they require than to stay with the market and stand what they consider to be a considerably greater risk.

The concluding sentences in the above letter point out the risks which the buyer of forward crops runs, and there is a curious suggestion that it is the wicked planter who is responsible for forward contracts, and that, if he would only refuse to sell crops forward, the buyers of rubber would be delighted, as they are not in love with "futures."

* * *

THE "discontented shareholder" wrote again to the *Times*, pointing out the difference between results of one company this year and what they might have been, had not the company's directors sold rubber ahead, instead of waiting to sell at current prices. The final comment by the editor was:

"That sellers of the crops did not do so badly is well brought out in our correspondent's argument, for his whole grievance appears to be that one Ceylon company will only earn 100 per cent. for the year, instead of 150 per cent., upon which calamitous state of things it is clear that the shareholders are entitled to our deepest sympathy."

THE RIVAL RUBBER MARKETS.

THIS is from a leading article in *The Times*, of Ceylon: "Everything points to the rapid growth of the Colombo rubber market, as the advantages on the side of selling in Colombo are in many respects identical with the case of tea. The claims of London in the matter have disappeared with her monopoly of distribution. It is now accepted by a majority of producers that they can get better prices for their tea in Colombo, where it is brought on orders from London, Australia, America, and Russia, than in London. Since rubber is already being shipped direct to Antwerp and New York from Colombo there is the same likelihood of a healthier competition here, while the inconvenience and cost of transshipment and, above all, the excessive agents' charges in London, are saved. For the present the growth of the market has been arrested by the large amount of forward selling on contract, but it is bound

to take a leap forward as soon as the supplies increase and the market settles down to its normal state."

The entrance of plantation rubber upon the Antwerp market is due to the importance of the investments of Belgian capital in Malaysian plantations, the products of which as naturally find their way to Antwerp as British grown rubber to London. At the November Antwerp auction 36 tons of Malaysian rubber was offered.

But as has been seen, not even London attracts plantation rubber from Ceylon when it is to the interest of planters or merchants there to ship direct to America, as is now being done extensively. The Ceylon papers print regularly details of shipments of rubber direct to New York, and it does not appear improbable that before many years large estates in the Far East will be selling rubber direct to consumers, in whatever country they may be found, without reference to London.

And now comes Mr. W. Shakespeare, one of the Ceylon commissioners to the London Rubber Exhibition, who says in *The Times of Ceylon* that "there is every probability of the establishment of a plantation rubber auction" in Liverpool, in opposition to that in London. The freight from Colombo to Liverpool is the same as to London.

MORE FORWARD SALES.

The Periyar Rubber Co., Limited, of Ceylon, have contracted for the sale of their 1910 crop up to 50,000 pounds, for Colombo delivery at 5.40 rupees [= \$1.75.2] per pound. The estimated crop for this year, which is not being sold on contract, is 32,500 pounds; next year's crop is expected to reach 100,000 pounds. No dividend has been paid yet, but in view of the facts here stated the company's 100 rupee shares lately were being quoted at 530, with sales at that price.

The Grand Central Rubber Co., Limited, have sold their second grade crop of 1910 to a local house at 4.50 rupees [= \$1.46].

The Uva Rubber Co., Limited, of Ceylon, have contracted for the sale of their 1910 crop of best biscuit, or sheet rubber, Colombo delivery, up to 10,000 pounds, at 5.05 rupees [= \$1.63.8].

Mention is made of a sale of rubber at Colombo on September 20 at 6.10 rupees [= \$1.98]. *The Times of Ceylon* (September 30) said: "Locally, there is a very strong demand for rubber in small parcels or large. No 1911 crops have as yet been sold, but this development is soon expected."

The Klanang Produce Co., Limited, are reported from London to have sold their 1910 crop of sheet rubber at 7s. 8d. [= \$1.86.5] and crepe at 7s. [= \$1.70.2]—the highest figures for forward sales yet quoted.

WHAT "SYNTHETIC" RUBBER LACKS.

A RECENT issue of *The Financier* (London) contains a communication from which this pointed extract is made:

"I venture to think that people who talk so glibly about the danger to the rubber-growing industry, owing to the fears of a 'synthetic' rubber being discovered which will compete with the natural product, have overlooked several important points in connection with rubber which do not apply to other articles that have been imitated successfully by chemists. In the case of indigo, for instance, that was merely a dye, and it was only the color which the indigo plant gave which rendered it so valuable, until a substitute was discovered. I have talked this matter over with two leading analytical chemists of large experience, and they both agree, that, while it is possible to imitate chemically almost any natural substance that is known, yet that, in regard to rubber (even if the cost were not prohibitive), there are mechanical qualities essential to the successful imitation which cannot be put in artificially, and are only the result of nature's growth. Rubber, to be a commercial success, requires tensile strength, resiliency, elasticity and durability; it is the combination of these qualities which makes rubber so important in the manufacturing world. So far, I understand, none of the sub-

stitutes hitherto discovered meet these requirements to any great extent."

THE VISCOSITY OF INDIA-RUBBER.

BY PHILIP SCHIDROWITZ, PH.D., F.C.S.

IN January of this year I published, in collaboration with Mr. H. A. Goldsborough, a paper under the heading "The Viscosity of India-Rubber and India-Rubber Solutions" in the *Journal of the Society of Chemical Industry*. The paper had special reference to the bearing of viscosity of india-rubber solutions on the strength of "nerve" of rubber. Since this paper appeared we have carried out a further extensive series of experiments, full details of which will be published later on, but the subject is of such practical importance to the producer of raw rubber and to the manufacturer, that I may be excused for stating briefly the general trend of the further results obtained.

In the first place, I may say that the opinions which I expressed regarding the probable practical aspect of testing raw rubber by the viscosity method has been amply confirmed, and the application of the viscosity test in the commercial examination of crude rubbers has become a matter of everyday occurrence in my laboratory. I have no longer the slightest doubt that this method is practicable in its application and practical in its bearing. In regard to most crude rubbers, and particularly in regard to the new varieties or forms which are constantly appearing on the market, it is in my opinion the only method which enables one rapidly to ascertain the relative strength or "nerve" of the samples. This is obviously a matter of importance to the middleman or to the manufacturer, who has either not the facilities or not the time to carry out satisfactory vulcanization experiments.

Again we have found the method to be of considerable practical value where there is a question of differentiating between various methods of coagulation in the case of the raw product, and of selecting the most suitable method. Here again the viscosity method is the only one which permits of a rapid and practical estimate of nerve. In cases where such determinations can be amplified by vulcanization experiments, so much the better, but in the majority of cases arising in practice I have found that this is out of the question. Again I have found that the test is useful to indicate how washed or crude rubber in stock is behaving, i. e., whether it is improving or deteriorating. The method should, I think, also be of aid to the producer of raw rubber for the purpose of controlling his manufacture.

There appears to be a distinct variation between different species of rubbers as regards their viscosities; for instance, whereas we obtain from the finest Brazilian specimens of *Hevea* viscosities not ranging higher than 14,000, clean African *Funtumia*, if properly prepared, will range as high as 20,000. It is possible that the reason for this is that as Harries has suggested, the actual rubber molecule is different in different species. For the present I think it is advisable in regard to judging crude rubber by the viscosity method from the point of view of ascertaining the strength of the final vulcanized product, to compare only varieties of the same species and not different species with one another, although even as between species and species it will probably hold good, broadly speaking, that rubbers showing high viscosities will give stronger goods than those which give lower viscosities. In addition, I should like to point out that the viscosity numbers given in the first paper on this subject (see above) are, for reasons already indicated there, too low. Roughly speaking, I expect for good Brazilian *Hevea* a viscosity of 10,000 to 12,000; plantation *Heveas* range from 4,000 up to about 11,000; good class *Funtumia* will give from 15,000 to 20,000. Further details regarding the matters referred to in this brief note will be published later on.

London, October 29, 1909.

Some Sources of Crude Rubber.

AN AMERICAN FIRM IN THE PARA TRADE.

THE president of Brazil has signed a decree authorizing the operation in that republic of Leite & Co., Incorporated, a corporation under the laws of Delaware, one of the United States of America. The purpose of the company is to acquire and take over the business of Joaquim M. Leite and Angelo A. Leite, constituting hitherto the firm of Leite & Co., merchants at Pará Brazil. The initial capital stated is \$3,100, in shares of \$100. The duration of the company is not stated. The name of Leite has long figured importantly in the rubber trade on the Amazon, and it may be mentioned that during the last business year the firm of Leite & Co. stood tenth in a list of 101 receivers of rubber taken into account at Manáos, some 620 tons being credited to them. A recent volume of Amazon views shows two steamers, which the firm keep employed in their trade on the Amazon, of 322 and 338 tons respectively. It was through this firm and on one of these steamers (the *Eurico*) that was shipped the enormous piece of rubber mentioned in THE INDIA RUBBER WORLD, May 1, 1909 (page 298). Leite & Co., originally and still owners of *seringaes* upriver, and particularly in the Acre district, have become important *aviadores* as well; they are thus producers of rubber to a large extent, and in a position to export rubber on the best terms possible under the Brazilian customs regulations. In other words, their position is comparable with that of the Alves Braga Rubber Estates and Trading Co., Limited, another Amazon firm lately registered as a public company under the English laws. Firms and corporations wholly Brazilian are not required to secure the sanction of the federal government to do business in Brazil; this requirement exists only with regard to companies having a legal domicile abroad, as in the case of Leite & Co. and the Alves Braga company. The amount of capital mentioned in the initial papers (\$3,100) of course bears no relation to the scope of the business of Leite & Co.

PROFITS OF THE ALVES BRAGA COMPANY.

THE statements which appeared recently in THE INDIA RUBBER WORLD regarding the new régime in the Amazon regions, under which the crude rubber interest is becoming concentrated and more systematic methods adopted, have further confirmation in the statements made public at the first annual meeting of the Alves Braga Rubber Estates and Trading Co., Limited (London, November 9). This is now an English public company, formed to acquire and continue a long established business on the Amazon [see THE INDIA RUBBER WORLD, September 1, 1909—page 421]. The authorized capital is £440,000 [= \$2,141,260], of which practically no shares have been issued except on account of purchase of the business of Alves Braga & Co. The amount issued or to be issued on this account is £300,000 [= \$1,459,950], no cash being paid for the property. The members of the original firm are, therefore, the practical owners of the new company. Some figures in the recent report may be of interest as showing the magnitude of the company's operations. The book cost of the *seringaes* (rubber estates) owned by the company is £61,426, and their area 215,000 acres, with *estradas* opened up on which are nearly 300,000 rubber trees. The company hold mortgages to the amount of £170,919 on other *seringaes*, to cover advances of goods or cash, the mortgages carrying with them the exclusive right to handle the rubber produced. The mortgaged estates are valued at £220,000, and cover 504,125 acres. The company are also *aviadores* (consignees) to estates extending over 460,000 acres, so that they have facilities for obtaining rubber from more than 1,000,000 acres [= 1,562 square miles, or largely more than the area of Rhode Island]. The company own several Amazon steamers.

The company owed in Pará on June 30, £91,214 for goods bought for *seringaes* upriver, and to be liquidated out of the next crop proceeds. There was also charged to rubber estates agents, as advances, £43,303.

The average profits of Alves Braga & Co. for six years, 1903-1908, are stated to have been £32,274, with rubber prices ranging from a minimum of 2s. 9d. to 5s. 9d. per pound.

DE MELLO TO BE REORGANIZED.

THE results attained to date by the largely capitalized De Mello Brazilian Rubber Co., Limited, registered in London in July, 1906, to acquire from S. F. De Mello and carry on what was reported to be an extensive business in rubber trading in the Acre district, have been far from satisfactory. At a special meeting of shareholders in London on September 23, the chairman pointed out that from the beginning there had been a lack of working capital, due to which large loans had been necessary, at a heavy charge for interest. In consequence all their expenditures had been at an abnormally high rate. At the same time rubber had fallen very low at one period, so that business had been done at a loss. *The Financier's* "Rubber Share Handbook" mentions that the accounts for the business year ended June 30, 1908, although 390 tons of rubber were traded in, showed a loss of £28,500 [= \$138,695.25]. The accounts for the last year have not been made public, but the chairman asserted that, in view of the advance in rubber, a considerable profit would be shown.

The object of the meeting was to consider proposals whereby funds would be supplied for paying off the debts of De Mello Brazilian Rubber Co., after which it would be liquidated, the business then to be reorganized. The sense of the meeting was that this would be the wiser course, and arrangements have been begun for creating the proposed new company.

BALATA AND RUBBER ON THE ORINOCO.

THE rubber forests of Venezuela are the subject of a report by the United States consul at La Guaira. The native rubber tree is described by him as the *Castilloa elastica*, and found principally in Sucre and the Amazonas territory. Besides there is balata, in the districts of Jeres and the Orinoco delta. Both rubber and balata are conveyed to Ciudad Bolivar on mule back or in ox carts. The price paid per pound in Ciudad Bolivar is 32 to 40 cents for balata and 65 cents to \$1.10 for india-rubber. These materials are found solely upon government lands, to work which concessions can be obtained.

RUBBER EXPORTS FROM BOLIVIA.

THE output of crude rubber from Bolivia continues to show a slight increase, the rate of which is expected to advance upon the completion of the Madeira-Mamoré railway, when better transportation facilities will exist. The exports for two years past are reported by the French legation at La Paz at 4,027,128.6 pounds in 1908 and 3,606,664.6 pounds in 1907. Bolivian official figures for certain preceding years were: 2,906,274 pounds in 1903; 3,456,481 pounds in 1904; 3,720,908 pounds in 1905.

LESS RUBBER FROM MADAGASCAR.

THE hopes which at one time existed that Madagascar would become an important producer of rubber, it seems, are not likely to be realized, in spite of the abundance of plants on that island capable of yielding rubber of a good quality. The maximum production of rubber in Madagascar was reached in 1906, when 1,264,764 kilograms were exported, representing a value of 7,511,332 francs. In 1907 the exports fell to 812,930 kilograms, with a value of only 5,249,462 francs. For the first five months of 1908 the exports reached only 121,206 kilograms.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED OCTOBER 5, 1909.

- N**O. 935,629. Water nozzle. A. Allbright, New York city, and G. G. Scudder, Babylon, N. Y.
- 935,837. Valve for pneumatic tires. F. T. Clayton, Sandwich, Mass.
- 935,849. Apparatus for washing caoutchouc, gutta-percha, and similar substances. F. Kempter, Stuttgart, Germany.
- 936,008. Means to connect tires to rims of wheels. E. R. Merigoux, Paris, France.
- 936,142. Metallic elastic tire for vehicles. G. Magaldi, Buccino, near Salerno, Italy.

Trade Marks.

- 30,116. The Mechanical Rubber Co., New York city. The words *Warranted 2-X-L*, on a section of belting across the diameter of a wheel. For rubber water bottles and syringes.
- 44,266. Apsley Rubber Co., Hudson, Mass. The word "Deliverer." For rubber footwear.

ISSUED OCTOBER 12, 1909.

- 936,416. Tire. [Comprises a plurality of compression members.] W. B. Connell, assignor of one-third each to J. J. McGraw and A. A. Sbideman, all of Chicago.
- 936,468. Process of reclaiming devulcanized rubber. [The process of depolymerizing rubber waste, which consists in first devulcanizing the same by treating it with a mixture of two solvents, the one of which is a rubber solvent, while the other is not, and finally treating it with a neutral resinous soap at a temperature in excess of 120° C. and under pressure in excess of atmospheric pressure.] E. E. A. G. Meyer, New Brunswick, N. J.
- 936,537. Spraying nozzle. A. B. Hull, Gasport, N. Y.
- 936,566. Hose coupling. N. M. Rosendahl, Chicago.
- 936,627. Hose coupling. A. A. Hill, New York city.
- 936,635. Apparatus for washing caoutchouc and similar substances. F. Kempter, Stuttgart, Germany.
- 936,658. Packing. [As a new article of manufacture, a sheet of packing comprising a central body or base of asbestos, a rubber coating upon said base, a fabric cover cloth adjacent said base, having a rubber coating upon the side next thereto, and a coating of heat resistant material upon the outside of said cloth.] D. S. Paterson, Philadelphia.
- 936,810. Elastic tread for boots and shoes. P. W. Pratt, Boston, assignor to C. F. Brown, Reading, Mass.
- 936,837. Tire. [Pneumatic; clincher rim.] H. L. Walbridge, assignor to The Chandler Co., all of Springfield, Mass.
- 936,886. Hose coupling. E. J. Hannold, St. Louis, Mo., assignor to C. M. Clay.
- 936,888. Horseshoe calk. J. E. Dolan, Geneseo, N. Y.
- 936,994. Wheel. [with annular pneumatic tubes]. A. C. Gillan, Hicksville, Ohio.
- 937,021. Braided fabric and process of making it. H. Z. Cobb, Chelsea, assignor to Revere Rubber Co., Boston.

Trade Marks.

- 41,882. Shawmut Tire Co., Boston. The representation of an owl. For rubber tires.
- 44,032. L. M. Rumsey Mfg. Co., St. Louis. The word *Resmur*. For rubber hose, packing, and valves.
- ISSUED OCTOBER 19, 1909.
- 937,186. Tire for vehicle wheels. F. A. Seiberling, Akron, Ohio.
- 937,405. Hose coupling. A. W. Abraham, Oskosh, Wis.
- 937,425. Cushion heel for shoes. J. G. Daubert, Loudonville, Ohio.
- 937,437. Hose coupling. H. Halstead and L. Nicksch, Hobart, Ind.
- 937,528. Grip tread for vehicle wheels. F. Holan, Niobrara, Nebr.
- 937,535. Heel. W. C. Kempton, San Francisco, Cal.

Trade Marks.

- 26,471. The Hartford Rubber Works Co., Hartford, Conn. For tires.
- 28,180. The New York Belting and Packing Co., Ltd., New York city. The words *The Car*. For rubber belting and hose.
- 42,580. Empire Rubber Mfg. Co., Trenton, N. J. The initials *O. and S. P.*, beneath a semi circular line. *Oil and Steam Proof*, and over the name of the company in a straight line. For rubber packing, belting, and hose.

ISSUED OCTOBER 26, 1909.

- 937,787. Tire construction. G. E. Garon, Manchester, N. H.
- 937,808. Vehicle wheel [with pneumatic tire]. E. Hopkinson, East Orange, N. J.
- 937,812. Tire armor. R. E. Johnson, Caledonia, Minn.
- 938,095. Hose coupling. F. Vlach, Chicago, Ill.
- 938,311. Pneumatic tire armor. L. W. Galloway, Norwood, Colo.
- 938,371. Detachable tread for automobile tires. T. M. Davey, Buffalo, N. Y.

Reissues.

- 13,028. Resilient tire. H. Klingler, Sitterdorf, Switzerland.

Trade Marks.

- 43,441. The Hartford Rubber Works Co., Hartford, Conn. The word *Daniop*. For rubber tires.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of these listed below was in 1908.

* Denotes Patents for American Inventions.

- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, OCTOBER 6, 1909.]
- 12,319 (1908). Pneumatic tire tread. G. C. Taylor, Helsby.
- 12,356 (1908). Spare wheel carrier. J. A. Flewitt, Aston, Birmingham.
- 12,448 (1908). Mold for plates for heel pads. J. O'Brien, London.
- 12,480 (1908). Puncture preventing non skid band for tires, of leather and rubber or other materials. J. G. Patterson, Darlington.
- 12,497 (1908). Detachable rim for pneumatic tires. V. H. Riebl, Antony, France.
- 12,578 (1908). Protector for the toe portion of boots. E. Jay, London.
- *12,637 (1908). Inner and outer wooden rims, one or both of which may be surrounded by sbrunk-on metal bands separated by solid or inflatable india-rubber cushions, and connected at the sides by flat suspension rings of india-rubber. J. Liddle, Glasgow. (R. W. Sewell, Brooklyn, New York.)
- 12,705 (1908). Regulation of the supply of gas to a vulcanizing mold. A. M. Woodward, Bournemouth.
- 12,707 (1908). Laceless football. S. Williams, Oswestry.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, OCTOBER 13, 1909.]
- 12,860 (1908). Fabric for pneumatic tires. C. M. Gautier, London.
- 12,861 (1908). Fabric for pneumatic tires. *Same*.
- 12,873 (1908). Tire inflating device operated by the working of a motor car. R. Barnfather, Croydon.
- 12,940 (1908). Pneumatic tire, the inner tube of which has a safety chamber on the tread side. F. L. Ochs, South Croydon.
- 13,032 (1908). Pneumatic tire cover. Michelin et Cie., Clermont-Ferrand, France.
- 13,040 (1908). Pneumatic tire with studded tread. G. Hookham, Birmingham.
- 13,042 (1908). Tire composed of a helical spring enclosed in a cover of leather rubber. A. L. C. de Carlshausen, Millau, France.
- 13,102 (1908). Tire of the helical spring type with leather or rubber cover. *Same*.
- 13,138 (1908). Wheel with two or more pneumatic tire carrying rims side by side. W. R. Hughes and P. Cave-Moyle, Belmont.
- 13,140 (1908). Device for keeping pneumatic tires cool by means of water tanks and nozzles carried by the vehicle. Michelin et Cie., Clermont-Ferrand, France.
- 13,176 (1908). Tire tube cored to prevent collapse when punctured. H. Munslow, Vancouver, Canada.
- 13,182 (1908). Tire of the helical wire type enclosed in leather or india-rubber. A. L. C. de Carlshausen, Millau, France.
- 13,205 (1908). Tire of wood tread blocks supported upon a bed of rubber. G. Sosnowski, London.
- 13,241 (1908). Pneumatic tire having a protective pad of sponge rubber between the air tube and tread. B. E. D. Kilburn, London. (Neue Automobil-Reifen-Fabrik Gesellschaft, Berlin.)
- 13,251 (1908). Solid rubber tire. A. T. Collier, St. Albans, and Reilloc Tyre Co., London.
- *13,284 (1908). Protective non slipping tire cover, including metal sections. C. C. Cook, Bertrand, Nebraska.
- *13,285 (1908). Horse shoe pad. J. Dillon, Hackensack, New Jersey.
- 13,302 (1908). Pneumatic tire with means for preventing side slip. G. S. Sayner, Harrogate.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, OCTOBER 20, 1909.]
- 13,350 (1908). Pneumatic tire with non-slipping studs. L. A. Noël, Paris, France.
- 13,365 (1908). Pneumatic tire with leather cover. W. Jones, Stoke-on-Trent.
- 13,375 (1908). Pneumatic or other tire with tread formed of a fabric on edge. S. Z. de Ferranti, Grindleford Bridge, Derbyshire.
- 13,467 (1908). Tire of laminated leaf springs enclosed in leather or rubber. C. Simon, Chatellerault, France.
- 13,483 (1908). Pneumatic tire with metallic tread sections, holding wooden blocks. I. Henson, Quarndon, Derbyshire.
- 13,489 (1908). Method of attaching single or twin tires and their rims to the felloes. R. Reid, Polmadie, Glasgow.
- 13,531 (1908). Pneumatic tire the cover of which is filled with a resilient composition in which are embedded solid or hollow balls of raw Pará rubber. W. P. Mulie, Leiden, Holland.
- 13,599 (1908). Rubber reclaiming. In regenerating waste rubber and vulcanite with the aid of heat and pressure air is exhausted from the mold or other apparatus in which the operation takes place. W. H. Hyatt, Crockham, and P. D. Penn, South Croydon.
- 13,606 (1908). An emergency brake which in the case of rubber tired wheels may serve to prevent side slip. G. J. Robbins, Gathurst, Lancashire.
- 13,864 (1908). Pneumatic tire having a removable filler between the air tube and cover. T. J. McBride, Christchurch, New Zealand.
- *13,882 (1908). Solid rubber tire supported by a series of springs in sockets in the rim. W. Muller, Philadelphia.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, OCTOBER 27, 1909.]
- *13,984 (1908). Pneumatic tire with protector of leather bands. O. A. Eastman, Platteville, and I. J. D. Fairhurst, Janesville, Wisconsin.

- 13,997 (1908). Pneumatic tire. E. Kempshall, London.
 14,053 (1908). Sole and heel protector. A. Neurath, Pressburg, Hungary.
 14,062 (1908). Method of painting golf balls. A. Powell, London.
 14,088 (1908). Heel protector. H. Fairbrother, London. (E. Clark and two others, Victoria, Australia.)
 14,121 (1908). Electrically heated portable vulcanizer, for tire repairs. J. Hay, Hagg Crescent, Johnstone, and two others.
 *14,122 (1908). Manufacture of a rubber boot. J. J. Mulconroy and E. S. Morris, Philadelphia.
 14,125 (1908). Non skid device for tires—strips of cotton belting steel studded placed on the tread at intervals. A. E. J. Smith, London.
 14,308 (1908). Sole and heel protector. R. H. Sibley, Northampton.
 14,354 (1908). Tire tread constructed with fabric bases provided with loops of coir yarn. G. D. Rose, Manchester.
 14,388 (1908). Pneumatic tire with puncture proof tread. G. Inrig, London.
 *14,430 (1908). Spring wheel with elastic tire. J. S. Cushing, Norwood, Massachusetts.
 14,435 (1908). Spring wheel with inner pneumatic cushion. V. G. Delgado y Olazahal, Madrid, Spain.

THE FRENCH REPUBLIC.

PATENTS ISSUED (with Dates of Application).

- 401,481 (April 1). M. Gerono and J. B. Pauwels. Tire protector.
 401,644 (April 3). H. L. Owen. Machine for insulating wires.
 401,619 (April 3). F. Gratierna. Rubber tubing.
 401,573 (March 26). Boyowitch. Metallic tire protector.
 401,585 (July 30, 1908). L. Wackernie. Pneumatic tire.
 401,632 (Aug. 1). G. Marbach. Pneumatic tire.
 401,606 (April 6). A. Warchalowski. Process for replacing tubes in pneumatic tires.
 401,547 (July 28, 1908). Hoffmann, Benoist and Torrini. Substitute for ebonite and like materials.
 401,753 (Aug. 8, 1908). C. E. Veil Picard. Pneumatic tire filled in part with sponge rubber.
 401,758 (Jan. 25, 1909). L. Liáis. Pneumatic tire.
 401,770 (March 12). A. Maury. Protective tread for pneumatic tire.
 401,776 (March 27). Société Française du Trurit et du Caoutchouc and M. Brémant. Application of asbestos to the manufacture of pneumatic tires.
 401,843 (April 8). C. L. Baldwin. Closure for tire puncture.
 401,901 (Aug. 13, 1908). A. Jacqz. Puncture proof tire.
 401,959 (Feb. 10, 1909). Société Générale des Etablissements Bergougnan et Cie. Removable tire rim.
 401,965 (April 10). The Republic Rubber Co. Vehicle tire.
 401,682 (April 13). E. Kempshall. Pneumatic tire.
 402,008 (April 16). Société Générale des Etablissements Bergougnan et Cie. Vehicle tire.
 402,192 (April 19). H. de la Valette. Electric cable.
 402,414 (April 26). Société Debortier et Cie. Fabric for pneumatic tires.
 402,419 (April 26). P. Colliard. Tire protector.
 402,512 (April 29). A. W. Carpentier. Pneumatic tire.
 402,380 (April 8). Perrin, Zahn and Schallier. Heel pad.
 402,612 (May 1). J. Csik. Wheel and pneumatic tire.
 402,602 (May 4). G. M. Badger. Elastic wheel.
 402,730 (Sept. 4, 1908). Bonnet and Lecerf. Non puncturable tire.
 402,765 (May 6, 1909). J. Spyker. Elastic wheel.
 402,766 (May 6). J. Spyker. Construction of elastic wheel with pneumatic chamber.
 402,780 (May 7). C. Troquet. Construction of elastic tires.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bebet, Ingenieur-Conseil, 16 avenue de Villier, Paris, at 50 cents each, postpaid.]

CEYLON.

SEALED UNDER THE INVENTIONS ORDINANCE, 1906.

- 1,018. George Smith Brown, Talawakele. For cutting and paring or shaving the bark or cortex of india-rubber trees or plants in the process of obtaining the rubber latex therefrom. Sept. 16, 1909.
 1,087. Wilmot Arthur de Silva, Colombo. A latex extractor. Sept. 16, 1909.
 1,086. Alexander Cameron and David Stuart Cameron, Nawalapitiya. Tapping rubber trees for latex, and other trees for their exudations, entitled latex releaser. Sept. 23, 1909.

COMMISSIONERS from the federal district of the Acre recently visited Rio de Janeiro for the purpose of laying before the government the claims of this territory to statehood. The resident population is estimated at 70,000, and is increasing constantly as a result of the settlement of the rich rubber regions there from Ceará and other drought affected states. In 1904 Brazil paid Bolivia as indemnity for the Acre region 32,000 contos [= \$9,600,000] and up to June, 1909, the government had received in export duties on rubber from this territory 62,000 contos [= \$18,600,000] or double the amount paid, in addition to several thousand contos in revenue derived from import duties.



ST. KATHERINE DOCK, LONDON.

[Exterior of the India-rubber and gutta-percha warehouse of the London and India Docks Co.]

STORAGE OF RUBBER IN EUROPEAN PORTS.

THE commerce in india-rubber and gutta-percha these days has come to have many ramifications. Not the least interesting feature is the storage of these raw materials in the leading ports of receipt for consumption. Two views on this page relate to the premises of a company in London, in whose vaults and warehouses is stored, sooner or later, an important proportion of the rubber and gutta-percha arriving at that port. The company referred to is the London and India Docks Co., with offices in Leadenhall street. The premises set apart for their rubber business are situated in the St. Katherine dock, near the offices of the principal brokers and merchants in this branch. Since these views were taken the property and some other dock properties in London have been taken over by the city, so that rubber and other commodities imported there are now under control of municipal authorities until passed into trade. The object of the city was to acquire ownership of valuable real estate, with a view to making London ultimately the best equipped shipping port in the world.



ST. KATHERINE DOCK, LONDON.

[Interior of Vaults, Sampling Plantation and Borneo rubber. Warehouse of London and India Docks Co.]

A LEADING CITIZEN OF PARÁ.

[COMMUNICATED.]

THE occurrence during the present month of the birthday anniversary of Senator Antonio José de Lemos, of Pará, who is often referred to as the most prominent personage in the north Brazilian states, suggests that a brief sketch of his career may be of interest to the readers of THE INDIA RUBBER WORLD. The new régime in the rubber situation in the Amazon region, to which numerous references have been made in these pages during the past few months, has been promoted in no small degree by Senhor Lemos, either as a member of the senate of his state, as editor of the leading newspaper on the Amazon, or in his capacity as a creator of public opinion in that part of the republic in his capacity as a leading citizen.

Antonio José de Lemos was born in Maranhão—the province south of Pará—on December 17, 1843. When 17 years of age, after having passed his first studies in the city college of Maranhão,



SENADOR ANTONIO JOSE DE LEMOS.

he joined the Brazilian navy, and on board the corvette *Paraense* he assisted in the war with Paraguay—the war of the triple alliance—as ship's clerk. On the same corvette he, on February 2, 1867, arrived for the first time in Pará, where it was his fate to remain and work for the progress of the great Amazon region. He was nominated there as secretary of the port and navy yard, but this work proved not to be in keeping with his ambition.

He seemed naturally inclined for journalism and in this field his first marked success was attained. After editing the journals *O Pelicano*, *O Tacaoe*, and *Liberal do Pará*, he became the editor of *A Provincia do Pará*, upon its establishment on March 25, 1876, since which time he has remained at its helm. He has become one of the most accomplished and successful editors and publishers in Brazil, and made this paper one of the most influential in the republic. Such important questions as the abolition of slavery and the substitution of republican government for the monarchy were treated by the then young editor of *A Provincia do Pará* in so forceful a manner as to create political parties to enforce the liberal opinions of the paper.

In 1885 Senhor Lemos was elected a representative in the state legislative assembly and at the time of the proclamation of the republic, in 1889, he was *intendente* (mayor) of the city of Belem, which is the local name of the capital of the state of Pará. He was elected to the mayoralty for the second time

in 1898, since which year he has been unanimously reelected for every term to the position of chief administrator of this important city of the Amazon.

For some time he has also been state senator, taking an active interest and exerting a vital influence in all important questions of administration and legislation. During the sitting of the legislative assembly the actual work of the mayor is performed by a substitute. As the chief in Pará of the predominant political party (*partido republicano*) Senor Lemos's opinion is much considered by the federal government. Senator Lemos has been largely instrumental in the modernization of Pará, including the embellishment of the city with parks, tree-lined avenues, paved streets, electric car lines, and electric lighting.

Senator Lemos has been particularly interested in the establishment of charitable institutions. Due to him was the creation of an asylum for poor people, one of the best public buildings of the city (*Azylo de Mendicidade*). The orphan asylum (*Orphanato Senador Lemos*) has his constant attention. The great improvements in the hospitals *Orden Terceira* and *Santa Caza de Misericordia* has to be considered, especially the latter, one of the best in Brazil, are due to the fact that the president of the board of directors is Senator Antonio Lemos.

All the benevolent associations in the state of Pará have Senator Lemos as an honorary president or honorary member. He is also commandant colonel of the state national guard. Senator Lemos is a great friend of the foreigners who come to the Amazon, and especially is he an admirer of the Americans.

LONDON'S ANNUAL RUBBER HEEL SHOW.

IT was said by some one of the International Shoe and Leather Fair, held at Agricultural Hall, London, during the first week in November, that it "would be better described as a shoe, leather, and rubber fair," in view of the good number of exhibits of rubber heels, overshoes, and the like. As was the case last year, the American trade was well represented. As usual, with the exhibits of leather in general and leather shoes in particular THE INDIA RUBBER WORLD, in this connection, has little concern, but a detailed account of the rubber exhibits alone would fill more space than can be spared here for the whole exhibition.

The United States Rubber Co., Limited—as the European department of the big American company is known—as usual had on view an extensive display of the various forms of waterproof footwear made by this corporation.

The Hood Rubber Co., Limited—the foreign branch of the Hood Rubber Co. (Boston)—in addition to a full line of their output of footwear, exhibited a model of their factory, which is in the first rank, as to size and production, among the world's rubber shoe plants.

The B. F. Goodrich Co., Limited—here is another American concern with a branch registered under the British laws—were represented by a display of their rubber footwear, now on the foreign market for about a year. As at previous shows, they exhibited their own "Majestic" heel pad, and the O'Sullivan heel, which they market extensively in Great Britain.

Prominent in the show was the stand of The India Rubber, Gutta Percha, and Telegraph Works Co., Limited, of Silvertown. Here was an exceptionally varied stock of heel pads, revolving and stationery, at all kinds of prices, and in various colors. There were also sporting requisites—golf balls, football bladders, and the like.

The North British Rubber Co., Limited, the leading makers of rubber boots and shoes in the United Kingdom, showed specimens of all their products in this line, as well as other rubber goods of different kinds.

Calmon Asbestos and Rubber Works, Limited, representing the important Hamburg house of Calmon, exhibited a number of novelties, including an asbestos sock, which is fitted to "Plim-

solls" and gymnastic shoes, and greatly minimizes the drawing of rubber soles.

Another foreign house represented, in the footwear line, was Etablissements Hutchinson, of France, through their branch in Basinghall street, London, who never fail to present attractive new patterns and shapes.

The preceding list falls far short of exhausting the rubber features of the show. Heels have been mentioned in connection with some of the exhibits referred to, but there were other heels. It was, in fact, a rubber heel show, for the Britishers are still rubber heel mad. Among the concerns devoted to this output alone were:

Wood-Milne, Limited, Preston.
Tapedes, Limited, Birmingham.
The India Rubber Manufacturing Co., London.
Redfern's Rubber Works, Limited, Hyde.
The Palatine Heel Co., Limited, Preston and London.
The Lancashire Revolving Heel Co., Limited, Manchester.
Wallington, Weston & Co., Frome.
Hickson & Co., Stockton-on-Tees.
Philipps's Patents, Limited, London.

It would appear that, with so many firms in the field, after so many years, anything very new in the way of rubber heels would be impossible, but the International show this year brought to light probably more "novelties" in the way of heels than in any previous year. Certainly any heel which differs from another enough to permit of a British patent for it to be obtained may be exhibited as a novelty, and most of the different heels shown were protected by letters patent, in respect either of design, method of attachment, or something else overlooked by previous inventors.

There is to be a Boot and Shoe Exhibition at Birmingham, in January, at which a number of the firms mentioned in this report will be represented.

* * *

THE factory of Wood-Milne, Limited, at Preston, alone, is reported to be turning out an average of about 25 tons of rubber heels every week or 1,300 tons a year. They are said to be contemplating the erection of new works at Leyland, to cost £40,000 [= \$194,660], and to take on in addition the manufacture of tires and mechanical and surgical rubber goods. The company maintain a very extensive Irish office and warehouse in Dublin—at No. 149 Donegal street.

BRAZIL'S EXPORT OF RUBBER.

THE figures herewith indicate the weight in kilograms of the exports of rubber from all the ports of Brazil, of rubber produced in that republic, during the past five calendar years. They have been compiled from the returns of the federal bureau of statistics of Brazil, and are in continuation of a similar table presented in THE INDIA RUBBER WORLD, April 1, 1908 (page 246). We have had occasion before to refer to the high degree of efficiency to which the statistical office referred to has been developed, and the figures which follow may be regarded as representing very closely the totals of the rubber manifests from the different ports.

It will be observed that these figures relate to shipments by calendar years, whereas the Pará and Manáos figures presented periodically in this paper relate to "crop years." Besides, the latter include the output from the whole Amazon region, whereas the figures on this page report the Brazilian output alone. This, as will be seen, still shows a tendency to increase. The increase, however, in 1908 as compared with the preceding year, has been solely from the Amazon river ports.

For several years each annual statement showed a gain in the production of "manicoba" (Ceará) and "mangabeira" rubbers, which are produced south of the Amazon and find an outlet through southern ports. During the last year the production of these rubbers showed a considerable decrease, which may

have been due to the effect of the decline in rubber prices which was felt throughout the world. This decline in prices was liable to have less effect in the Amazon valley, where the rubber interest has existed longer and on a larger scale, and is organized more systematically. It will be necessary to have the figures for another year, covering the period of the revival of the crude rubber trade, in order to determine whether or not Brazil is producing more rubber. It is true that the figures given show a larger "grand total" for 1908 than for any former year, but this includes an increased production of caucho, a type of rubber not collected formerly in Brazil and also a type which under the methods now in use does not yield a permanent return.

It is not possible, from the figures at hand, to determine whether more or less Pará (or *Hevea*) rubber is being shipped from Brazil. It must be kept in mind that statistics emanating from Pará relate to the whole rubber output from the Amazon region, covering a number of neighboring countries, so that the steady increase in the output from the Amazon is not derived from Brazil alone.

PARA RUBBER (INCLUDING CAUCHO).

PORTS.	1904.	1905.	1906.	1907.	1908.
Manáos	15,331,869	15,245,938	14,732,000	16,767,834	18,065,000
Pará	13,171,212	16,221,766	16,554,000	16,017,611	16,781,000
Corumbá	251,396	441,787	217,000	392,594	537,000
Itacoatiara	2,175	6,091	77,000	117,204	
Maranhão	13,410	82,646	13,000	12,993	
Ilha do Cajueiro	18,344	17,296	49,000	74,355	
Porto Murinho	3,800	2,761	1,000	.....
Total	28,792,206	32,073,285	31,643,000	33,382,681	35,696,000

CEARA RUBBER ("MANICOBA").

PORTS.	1904.	1905.	1906.	1907.	1908.
Ceara	668,809	589,218	715,000	588,854	579,000
Bahia	939,157	1,443,826	1,410,000	1,285,103	1,249,000
Ilha do Cajueiro	503,871	557,530	505,000	520,824	327,000
Pará	2,430	350	.....	.....
Maranhão	11,471	.....	700	1,710	
Cabedello	1,923	8,527	100	9,812	
Pernambuco	97,556	82,666	31,300	16,875	
Maceió	180	.....	200	.....
Rio de Janeiro	680	100	.....	.....
Natal .....	.....	.....	.....	5,500	
Uossoro .....	.....	.....	1,700	.....
Total	2,226,077	2,682,217	2,664,000	2,428,678	2,166,000

MANGABEIRA RUBBER.

PORTS.	1904.	1905.	1906.	1907.	1908.
Bahia	415,579	261,189	262,985	264,811	106,499
Rio de Janeiro	85,195	105,413	129,044	75,586	52,607
Santos	128,991	95,190	88,535	100,931	33,092
Corumbá	56,383	74,733	81,722	75,800	80,337
Pará	541	2,805	1,114	.....
Maranhão	6,301	3,197	8,319	6,465	
Ilha do Cajueiro	35,316	29,773	22,026	39,896	
Ceará	6,935	19,019	7,001	4,777	
Cabedello	22,863	11,742	15,363	15,003	
Pernambuco	85,034	39,314	26,366	72,795	
Maceió	10,420	3,294	5,233	7,681	
Porto Alegre	350	.....	.....	.....
Porto Murinho	1,300	480	3,901	815	
Natal .....	.....	.....	1,620	13,663	
Paranaguá .....	.....	.....	10	15	
TOTAL	835,208	637,109	653,239	678,238	344,607
GRAND TOTAL	31,863,491	35,392,611	34,960,239	36,489,597	38,206,607

BRAZILIAN RUBBER EXPORTS, BY PORTS.

PORTS.	1904.	1905.	1906.	1907.	1908.
a Amazon ports	28,508,227	31,477,950	31,296,000	32,902,738	34,963,000
b Atlantic ports	3,042,385	3,394,900	3,361,517	3,117,650	2,625,470
c Interior ports	312,879	519,761	302,722	469,209	618,137
Total	31,863,491	35,392,611	34,960,239	36,489,597	38,206,607

a Pará, Manáos, and Itacoatiara.

b On the Brazilian coast, South of Pará.

c Corumbá and Porto Murinho, on the river Paraguay, discharging into the Rio de la Platte.

[NOTE.—The above figures do not embrace small shipments of "massaranduba" gum—a species of halata—from Pará, amounting in 1907 to 175 kilograms and in 1908 to 139 kilograms.]

CANADIAN TIRE PRICES.—The proud possessor of an automobile has suffered just as heavily as has the humble individual who never gets higher than an occasional pair of rubber heels. On July 15 the price of the smallest pair of automobile tires sold by the Dunlop Tire Co., was \$20.15, the most expensive \$146.80. On September 28 the same tires sold at \$22.15 and \$161.50, respectively, a very noticeable advance.—*The Toronto Star.*

In the Congo Rubber Country.

MINISTER RENKIN'S REFORM PROPOSALS.

SINCE the annexation of the Congo Free State to Belgium the reform of conditions in the African dependency has received much serious consideration at the hands of the government. The minister of colonies, Mons. Renkin, has made an extensive tour of the Congo colony, as a result of which he has made numerous representations and proposals to the Belgian chamber of representatives. From a resumé of these in *La Tribune Congolaise* (Antwerp) the following excerpts are made, as bearing more or less upon rubber interests:

"THE HARVESTING OF THE PRODUCTS OF GOVERNMENT LANDS.—What conclusions are to be drawn from the principle of government ownership? The minister has referred to the statement: 'I am not an enthusiastic supporter of government monopoly,' made by him in 1908.

"He thinks the time has arrived for gradually leaving to private enterprise the harvesting of the products of government lands (*domaine privé*), which are mainly rubber and gum copal. He proposes to carry out this reform measure in three stages or periods, to commence on July 1, 1910, July 1, 1911, and July 1, 1912.

"Under this plan the districts of the Lower Congo, the Pool, Kwango, Lulualaba Kasai, south of Sankuru, Katanga, the eastern province south of the latitude of Kamimbo, the Gurba Dungi territory and part of Lake Leopold II, and Equateur district would be surrendered to private enterprise on July 1, 1910. On the two subsequent dates, as aforesaid, the government would surrender the working of the remaining government lands, with the exception of five government tracts of an area of 600,000 hectares, which would be reserved.

"As regards the territories for which concessions have been granted, the government would subsequently examine into the question, whether or not it would be advisable to make different arrangements in agreement with the interested parties. Natives should have the right to harvest the products of the Government lands. In the territories surrendered to private enterprise the government would sell or lease to such parties parcels of land for the purpose of erecting factories.

"TAX IMPOSED ON THE NATIVES.—In his statement of the grounds on which the proposed budget is based, the minister subsequently enters into an examination of the question of taxes imposed on the native population. The system of compulsory labor is no longer practised in the Congo, and it is a manifest exaggeration to claim that a large proportion of the population has been reduced to a condition bordering on slavery.

"The minister states that conditions have already improved. He announces that the tax will henceforth be collected in money, but that the government reserves the right to take in certain cases appropriate measures in furtherance of the interests of the population.

"The tax payable in foodstuffs against a compensation for the same is to be abolished. Until all the provisions of the new system shall be in force, the natives may pay the tax in products of the soil, and will receive their compensation in money, such compensation to be based on the value of the product given in payment.

"The maximum native tax rate is to be revised, and the local tax rate modified whenever the returns justify such modification.

"REPLANTING RUBBER.—Entering into a consideration of the question of replanting, the minister announces his intention to abrogate compulsory replanting, as at present required of government agents and private parties.

"The minister purposes henceforth to levy a replanting tax,

to be fixed either at 0.40 or at 0.20 francs per kilogram of rubber produced, either from trees or *lianas* (creepers). The government is to establish standard plantations.

"In his proposition the minister outlines an initial plan, providing for the annual establishment of rubber plantations covering an area of 2,000 hectares [=4,942 acres], during a term of ten years.

"In addition to the proceeds of the tax, an annual appropriation of 1,000,000 francs [= \$193,000] is to be set aside for this purpose. The government intends to encourage the laying out of plantations by private parties, by selling them land."

[Reference is had in the last paragraphs to the regulation existing for some years in the Congo Free State, under which a certain number of rubber trees or vines were required to be planted for each ton of rubber exported.]

RUBBER IN THE CONGO BUDGET.

ACCORDING to the plan for the Congo budget for 1910, presented to the Belgian chamber of representatives, the proceeds of the sale of rubber are estimated at 13,397,500 francs, against 15,000,000 francs in 1909. This latter estimate was based on a production of 1,875 tons of rubber, of an estimated value of 8 francs per kilogram. The present budget is based on a production of 1,165 tons. If figured at a price of 8 francs per kilogram [=70 cents per pound]—i. e., at the same price as in 1909, the value of the production would be 9,320,000 francs, which means a decrease in receipts amounting to 5,680,000 francs. The favorable condition of the rubber market, which has been constantly improving and becoming more firmly established since the end of last year, allows, however, of figuring on the basis of a higher selling price. The price on which the estimate for 1910 is based is 11.50 francs per kilogram [= \$1 per pound], which figure is below the market price as quoted during the past few months. In consequence of the present condition of the market, the estimate, as inserted in the budget, means only a falling off in receipts of 1,602,500 francs.

AMERICAN INTEREST IN THE CONGO.

ALTHOUGH much interest was manifested in the United States in the formation of *La Société Internationale Forestière et Minière du Congo*, three years ago, on account of the participation of American capitalists in what promised to be an unusually important concession in the Congo state, there has been scarcely a mention of the enterprise in the American press since. This does not indicate, however, that the work of developing this concession, on which the time limit is sixty years, has been overlooked by the interests involved. The lands embraced in the concession are in the remote Katanga territory, and the organization of the work proposed by the *cessionnaires* must naturally be slow, measured by business conditions in more civilized countries. The object of the company is to develop mineral and forest resources, the latter including india-rubber, besides which the company expect to plant rubber extensively. A recent number of *La Tribune Congolaise* (Antwerp) contains this report from Lac Leopold II:

"In the interest of the *Société Internationale Forestière et Minière du Congo*, M. Boulard, chief of this division, accompanied by his assistant, M. Bricusse, together with a new agent, M. Ledoux, who has recently arrived here, have ascended the Olongolo river to the place where it empties into the lake, to establish a new plantation station there, some hundreds of meters above the State station, Bongo. This new station will bear the name of Olongo, and will be under the control of M. Ledoux, agricultural engineer, who before rejoining our Nioki Division, had been sent off on a trip into the Mayumbe region to study the conditions there."

RUBBER PROFITS ON THE KASAI.

THE trading profits for 1908 of the Compagnie du Kasai—the rubber monopoly in the Kasai region of the Belgium Congo—though showing an important improvement over 1907, fell considerably short of the results for some preceding years. The gross return for 1908 was 8,125,674.73 francs [= \$1,568,255.22]. The net profit, after providing for the cost of planting rubber as required by law, interest on bonds, etc., was 4,337,428.70 francs [= \$837,123.74].

After paying 6 per cent. on the capital shares, directors' fees, agents' commissions, and adding to the reserves, there remained for the holders of the beneficiary shares (common stock) 3,216,000 francs [= \$620,688], or 800 francs per share.

The capital of the company is in 4,020 shares of 250 francs each, totaling 1,005,000 francs [= \$193,965], and an equal number of beneficiary shares "without designation of value." It is the later which participate in the large profits above referred to. One-half the beneficiary shares are held by the 14 companies participating in the Kasai syndicate, one-half by the Congo State. If the beneficiary shares be given the same par value as the capital stock (250 francs), as is the custom in issuing "common stock" in America, the Kasai dividend of 800 francs per share would work out at 312½ per cent. for the year. Last year the distribution was only 400 francs per share.

A recent Brussels bourse quotation for these shares "without designation of value" was 13,675 francs [= \$2,639.27].

The net profits of the Kasai syndicate since the beginning, derived chiefly from its rubber trading, have been:

In 1902	1,210,706.23 francs	[= \$233,666.26]
In 1903	3,497,393.01 francs	[= 677,996.85]
In 1904	5,334,797.06 francs	[= 1,029,615.82]
In 1905	7,543,084.08 francs	[= 1,455,885.40]
In 1906	8,033,657.22 francs	[= 1,550,495.85]
In 1907	2,018,979.93 francs	[= 389,663.13]
In 1908	4,337,428.70 francs	[= 837,123.74]

The following statements appear in the latest annual report of the Kasai company:

"The importance of our harvests has virtually not varied at all, having been about 1,427 tons in 1907, while in 1908 it was 1,410 tons.

"We have again extended our field of operations toward the south and southwest. The different centers of population with which we come into contact are, for the most part, peaceful. All branches of our African service are working to our satisfaction. Our flotilla has been reorganized, and two new units have been added to it.

"Our producing area in the Lukombe district is continually being increased, and the funds for our replantings are regularly provided. Our Dima plantation is successfully carrying on its breeding experiments and its work with the growing plant.

"In a word, the situation that we have brought about in Africa after seven years of persevering work is very satisfactory. The taking over of the Congo by Belgium has only made it stronger.

"The greater part of the company's agents under bail up to the present time have been acquitted or sentenced to light punishment. They are better, in general, than the reputation too often attaching to them would lead one to believe, and their devotion and spirit of discipline are rather deserving of praise."

A SUGGESTION RE "LANDOLPHIA."

TO THE EDITOR OF THE INDIA RUBBER WORLD: The *Landolphia* rubber species are found everywhere in tropical and sub-tropical Africa; in some places the vines are not above 1 inch in diameter, while in other places they are found up to about 12 inches. In some regions they grow sparsely, and in a few parts they are a forest. As they do not grow straight, however, their tapping is more difficult than tree rubber, and consequently the collection of *Landolphia* rubber is comparatively expensive.

Many remedies have been suggested, one of which is that the *Landolphia* vines should be made into an annual or biennial crop, the same as the grape vine, and cut down a short distance from the ground; they would then sprout up again and be ready for re-cutting in a year or two. The whole of the cut plant would be carried to a central station, the larger pieces barked and this bark, together with the smaller branches and leaves, put through a masticating machine and the whole of the latex extracted instead of less than one-fourth by the tapping methods. *Landolphia* would thus become the most profitable of rubber plants.

Some attempts have been made in this direction by means of rollers, tube mills and other machines, with varying amounts of success. Some people only extract part of the rubber contents, others heat and spoil the rubber, and very few can be termed a commercial success. If a really good machine were provided there would be a large sale for them and the inventor would be well paid for his work.

This method would greatly increase the quantity available of this valuable rubber, because, instead of a man tapping a pound or two of rubber per day, he would be able to cut down enough vines to produce many hundred times that amount. The cost of collection would be very low, and such rubber could be sold at much lower prices than those at present ruling and yet realize handsome profits.

We have no doubt that many of your readers, like ourselves, would be very pleased to get into communication with inventors and manufacturers in this direction, and the discussion of this subject in your columns would doubtless be not only interesting but beneficial.

THE COSMO CONTRACTING SYNDICATE, LIMITED,

S. GOLDBREICH, Director.

LONDON, November 3, 1909.

GOOD RUBBER FROM UGANDA.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In your issue of October 1 (page 28) I observe you make some allusion to our *Funtumia elastica* rubber. It will interest you to know that at the London sales held on the 19th inst., some of our rubber fetched 9s 4¼d. [= \$2.27½] per pound. This was the third highest price in the market, and we hope before long to so improve the Mabira rubber that we shall easily top the best plantation Pará. This information may be of interest to the readers of your valuable journal, which we—in common with other planters—read with the greatest benefit from month to month. Yours faithfully,

MABIRA FOREST (UGANDA) RUBBER CO., LIMITED.

JOHN W. JOHNSTON, Managing Director.

London, October 21, 1909.

* * *

At the second annual meeting of the Mabira Forest company it was stated that the production of rubber had gone up from about 10,000 pounds in 1907 to 35,137 pounds in 1908, while the output for the first six months of 1909 was 26,000 pounds. Besides tapping mature trees a considerable amount of planting has been done, the number to May 31, 1909, being 276,634 *Funtumia elastica* and 3,471 *Hevea Brasiliensis*, in addition to coffee, cocoa, and sisal. At the latest report arrangements were being made to put out 150,000 seeds of *Hevea*.

* * *

AN interesting series of letters of travel in British East Africa is being contributed to an American newspaper syndicate by Mr. Edgar Beecher Bronson, an accomplished writer as well as a traveler of experience. A recent number, entitled "Rubbering in Africa," had to do with the territory controlled by the Mabira Forest (Uganda) Rubber Co. The region is just north of Victoria Nyanza (lake Victoria), which great body of water is reached by the railway from Mombasa, recently traversed by Mr. Theodore Roosevelt on his hunting expedition. Mr. Bronson's article is unusually informing.

The News of Rubber Planting.

RESULTS OF THE FEDERATED MALAY STATES COMPANY.

DESPITE all that has been reported in relation to the yield of planted *Hevea* rubber, there is as yet no standard for comparison of general utility. On an important productive estate trees will be tapped of varying ages, some regularly all year and some for only a single series of a fortnight or a month. Likewise different methods practised on trees of a given age do not always give the same results, and furthermore there must be a difference in the output of rubber in the hands of experienced workers and those without experience. A consequence is that even in the most informing company reports it is not always made clear how much rubber comes from trees of any given age, tapped by this or that system.

It is interesting, however, to note that in the report of a certain well managed rubber plantation in the Malay peninsula, which during the past year yielded 126,512 pounds, or 1.98 pounds per tree, the average for the older trees was 5½ pounds. These trees are of different ages, up to twelve years. Certain young trees tapped during only six months, averaged 1 pound each, and trees still younger tapped during four months averaged 8 ounces each. The company referred to is the Federated Malay States Rubber Co., Limited, owned in and controlled from Antwerp, under the able management in Selangor of Mr. E. B. Skinner. It is this company whose product appears at the monthly inscriptions at Antwerp, just as the British owned plantations send their produce chiefly to London.

With regard to yield, it may be mentioned that this company's annual report two years ago showed an average of over 2.6 pounds for all the trees tapped, and the lower average this year is due to the coming into bearing of so many young trees. The production, however, of 5½ pounds from 17,148 trees must be regarded as a very notable fact.

The report of the Federated Malay States company says: "The cost of tapping for labor only was 18.58 cents (silver) per pound, and the cost, including knives, cups, collecting cans, etc., was 20.72 cents per pound. Considering the very large proportion of young trees tapped, the cost may be considered satisfactory." It is clear that the average cost of production is not wholly satisfactory. It would be most desirable to have some such company isolate a certain number of mature trees and inaugurate some system of cost keeping for this section alone, with a view of arriving at the actual expense involved. It is clear that the tapping of trees which yield only 1 pound must lead to a largely pound cost than in the case of trees yielding five times as much rubber.

The salient features of the company's reports during four years past may be summarized as follows:

	1906.	1907.	1908.	1909.
Yield (pounds)	13,322	32,175	66,725	126,512
Net profits (francs).....	74,093.16	173,980.35	180,061.15	645,341.22
Dividend	5%	8%	8.5%	24%

It is proper to note that the 24 per cent. dividend did not absorb all the profits of the company for the year. The legal reserve, which this year amounted to 32,000 francs, was provided for; as well as a special reserve of 50,000 francs; 77,000 francs to the directors (who would have had nothing in a lean year); and a carryover to the new year of 10,000 francs more than in 1908.

The manager of the Federated company has done a considerable business in the treatment at his factory of considerable rubber from neighboring estates. In addition to his own output of 126,512 pounds, mention is made of 102,671 pounds treated for other planters, which doubtless added materially to the profits of the company. The number of coolies on the estate is 854. During the year, the labor force not being sufficient, some Chi-

nese women were employed in addition, and as much light work is involved in rubber production, it is possible that the employment of this hitherto unthought of class may extend to other plantations.

With regard to the tapping methods employed by Mr. Skinner, his report says: "At the beginning of the year, the 17,148 trees were laid out with a double herring bone, one-half of the tree with cuts at 12 inches apart; 6 inches of each cut was reserved for the year 1908-09, and the remaining 6 inches for the year 1909-10. It was expected that this surface of six inches would be exhausted in six months—i. e., an average of fifteen cuts to the inch. This, however, was not the case, as the average worked out at nearer 22 cuts to the inch, therefore the six inches of bark of these trees took much longer to finish. This mainly accounted for the very large increase in the crop over the estimated amount. The standard of 22 cuts to one inch should easily be maintained in the future."

Another point which remains for comment is that the officers and directors of the Federated Malay States Rubber Co., Limited, embrace most of the leaders in the crude rubber trade at Antwerp—men whose fortunes have been made largely from handling the native Congo rubber—and their present interest in Malay plantations can hardly be interpreted otherwise than as an indication of an expected diminution of the Congo rubber output.

EXPANSION OF THE MALACCA RUBBER PLANTATIONS.

At the third annual meeting of Malacca Rubber Plantations, Limited (London, October 26), the issue was authorized of 6 per cent. debenture bonds to the amount of £500,000 [=\$2,432,500], the proceeds to be employed (1) in repaying loans involved in recent purchases of adjoining properties which have brought the company's acreage of rubber up to 15,000, and (2) in providing about £240,000 working capacity, which it is expected will be required soon in dealing with the great number of trees now reaching a tappable age. The latest census of planted *Hevea* trees is as follows:

7 years and over.....	170,000
6 years and over.....	101,000
5 years and over.....	114,000
4 years and over.....	365,000
3 years and over.....	600,000
2 years and over.....	750,000
Under 2 years.....	650,000
Total	2,750,000

While the company have been tapping for three years, the total product so far has not been large, but it is believed that about 225,000 trees are now ready to be tapped, which, at the same rate as realized hitherto, will greatly increase the output. The company have paid, for the three years, the 7½ cumulative dividend on the preference shares—115,000 at £1 each. Their white crepe rubber has sold at the high London prices for this grade, but now that a preference is being shown for smoked sheet, the management is preparing to adopt the smoking process. The Malacca company's original estates were founded by a Chinese company, and some interest attached to the purchase, owing to the fact that there were Americans among the vendors.

RUBBER PLANTATION YIELDS.

SPACE cannot be afforded for all the statistics of production of the many rubber producing plantations in the Far East, the returns from which are cabled regularly to the outside world, in detail comparable with that noticeable in reporting railway earnings, for example, in the United States. It may be of interest, however, now and then, to glance at returns taken at random

from the latest despatches, as has been done in the table which follows. The point to be made is that a steady increase in production is shown, and that at a rate which insures the permanent importance of Ceylon and the Federated Malay states in the production of rubber. *The figures indicate weights in pounds.* The word "Limited" is omitted from the legal title of each company named:

	1908.	1909.
<i>Golconda Malay Rubber Co.:</i>		
October	3,667	10,675
Ten months to October 31.....	44,263	69,348
<i>Federated (Selangor) Rubber Co.:</i>		
October	4,961	8,026
Seven months to October 31.....	30,443	52,115
<i>Anglo-Malay Rubber Co.:</i>		
October	32,521	53,394
Ten months to October 31.....	280,524	417,178
<i>Harpenden Selangor Rubber Co.:</i>		
October		2,212
Ten months to October 31.....		15,738
<i>London Asiatic Rubber and Produce Co.:</i>		
October	4,453	8,851
Ten months to October 31.....	24,860	56,550
<i>Valambrosa Rubber Co.:</i>		
October	26,245	34,000
Seven months to October 31.....	140,549	201,902
<i>Pataling Rubber Estates Syndicate:</i>		
October		15,636
Ten months to October 31.....	55,937	115,630
<i>Federated Malay States Rubber Co.:</i>		
October		25,500
Five months to October 31.....		108,690
<i>Kuala Lumpur Rubber Co.:</i>		
October		39,500
Four months to October 31.....		136,100
<i>Mabiri Forest (Uganda) Rubber Co.:</i>		
October	5,615	14,400
Ten months to October 31.....	23,243	79,145
<i>Damansara (Selangor) Rubber Co.:</i>		
October		19,515
Ten months to October 31.....	99,515	161,613
<i>Malacca Rubber Plantations:</i>		
October		24,000
<i>Perak Rubber Plantations:</i>		
October	6,613	10,500
Seven months to October 31.....	29,092	65,261
<i>Sumatra Para Rubber Plantations:</i>		
October	4,704	10,640
Four months to October 31.....	21,842	38,872
<i>Bukit Rajoh Rubber Co.:</i>		
October		22,259
Seven months to October 31.....		142,930
<i>Consolidated Malay Rubber Estates:</i>		
October	10,591	21,030
Ten months to October 31.....	81,505	162,775
<i>Highlands and Lowlands Para Rubber Co.:</i>		
October	18,131	30,224
Ten months to October 31.....	163,022	264,228
<i>Linggi Plantations:</i>		
October	24,000	48,000
Ten months to October 31.....		421,500

SOME CEYLON RESULTS.

THE figures below relate to the first nine months of 1909, compared with the same period of last year. The rubber sales were at Colombo. The prices stated are in rupees, R1 being slightly less than 32½ American cents.

Ceylon Planters' Rubber Syndicate, Limited.—Sold 57,124 pounds at R 3.43 average, against 28,589 pounds at R 2.38 last year.
 Clyde Tea Estates Co., Limited.—Sold 10,322 pounds at R 3.61 average, against 2,768 pounds at R 2.58 last year.
 Yataderia Tea Co. of Ceylon, Limited.—Sold 9,128 pounds at R 3.67 against 4,216 pounds at R 2.56 last year.
 Udabage Tea and Rubber Co., Limited.—Sold 948 pounds at R 3.81 average; none last year.
 Ribu Rubber Co., Limited.—Sold 22,410 pounds at R 3.60 average, net, against 8,859 pounds at R 2.42 last year.

KUALA LUMPUR RESULTS.

THE Kuala Lumpur Rubber Co., Limited, a Malay States company, during the year ended June 30, 1909, obtained 196,121 pounds of rubber from 67,165 trees, or 2.92 pounds per tree. They have 36,307 trees, aged 7 years and older; the other trees are younger. It is planned this year to tap 148,600 trees. Comparative results:

	1906-07	1907-08.	1908-09.
Yield (pounds).....	52,098	79,274	196,121
Average price.....	5s. 2½d.	3s. 4d.	6s. 3¼d.
Net profits.....	£7,612 4 2	£5,117 0 0	£43,033
Dividend	3%	3%	20%

During the first four months of the new year, to October 31, the rubber harvest was 136,100 pounds.

PATRIOTIC RUBBER PLANTATION EMPLOYEES.

THE extent of the properties of La Zacualpa Rubber Plantation Co., in Mexico, and the allied enterprises is indicated by a poster which reaches THE INDIA RUBBER WORLD, issued in connection with the celebration of the Mexican independence day (September 15) by "La Junta Patriótica," formed of the plantation forces. The celebration really lasted two days, and the program indicates a wide range of musical and literary entertainment, interspersed with patriotic addresses, showing a degree of intelligence among the participants which would do credit to any rural community in any country. A report from the plantation states that some 3,000 persons attended the exercises. While the "Junta" is organized among the employés, with officials chosen from their number, the name of the superintendent of La Zacualpa, Mr. W. S. Fisher, is mentioned prominently on the poster in connection with the celebration exercises.

MEXICAN RUBBER CULTURE CO.

THIS company, with headquarters at Portland, Oregon, announce a series of measurements of planted *Costillia* trees on their plantation in Chiapao, Mexico, covering 25 each of the ages of 1, 2, 3, 4, and 5 years, the whole showing a very encouraging rate of growth. Their acreage—all planted about 200 trees to the acre—is divided about as follows:

5 year old trees.....	about 400 acres
4 year old trees.....	" 200 acres
3 year old trees.....	" 250 acres
2 year old trees.....	" 450 acres
1 year old tree.....	" 200 acres

Total about 1,500 acres

The company advise THE INDIA RUBBER WORLD: "We expect to commence our preliminary tapping next spring, and will push this work just as rapidly as is consistent with good business judgment."

PLANTING "JEQUIE" RUBBER.

THE Jequié Rubber Syndicate, Limited, registered in London in August, 1908, with £40,000 [= \$194,660] capital, are reported to have on their property in the state of Bahia, Brazil, some 420,000 planted trees of the highly approved *Manihot dichotoma* species, with an equal or larger number of native trees growing on land which it is proposed to clear and form into plantations. Furthermore, it is proposed to plant extensively. The expectation is to derive about ¾ pound of rubber per tree yearly, but in view of the small size of the trees the acreage yield is expected to be very large. Tapping was to have commenced during September, and washing and crepeing machines have been forwarded to the estate. The board is headed by L. T. Boustead, chairman of an important Malay States rubber planting company.

RUBBER PLANTATION TOPICS.

THE Planters' Association of Malaya have made representations to the government regarding the desirability of licensing and controlling dealers in india-rubber and gutta-percha. The argument in favor of this is that already much loss has been sustained by planters through thefts of rubber from drying rooms and even of latex from trees.

Arrangements have been made in London for sending a rubber research chemist to the Federated Malay States, to start in January and remain three years. A similar scheme is on the tapis for Ceylon.

The growing connection between the rubber producing and rubber consuming interests is further indicated by a report of the latest meeting of the Beaufort Borneo Rubber Co., Limited, in London, which was presided over by Colonel Richard K. Birley, C. B., who is the head of the famous rubber manufacturing company, Charles Macintosh & Co., Limited, of Manchester. The company have 875 acres planted up to date, and purpose tapping their older trees within six months.

At Dinner with President Colt.

To meet
The Directors of the United States Rubber Company

Mr. Samuel Pomeroy Colt
requests the pleasure of

.....
company at dinner
on Tuesday evening, November the twenty-third
at half after seven o'clock
at the Metropolitan Club

R. s. v. p.
Metropolitan Club

TO very many readers the feature of chief interest in connection with the dinner given at the Metropolitan Club, New York, on the evening of November 23, to the directors of the United States Rubber Co., by Colonel Samuel P. Colt, president of that corporation, will be a review of the list of guests. Perhaps at no other dinner given in New York has the prominence of those in attendance, from a business or financial or professional standpoint, averaged higher—if the term may be used in such a connection—than in the case of the half a hundred or more who sat at Colonel Colt's table.

The directors of the United States Rubber Co. themselves form a very substantial body of citizens, some devoting their energies wholly to the affairs of this important corporation, while the

others are interested in large business affairs on the outside. There have been larger gatherings of business men in the city, and, of course, dinners of more ultimate consequence. The point here, however, is that the dinner here reported was not for the promotion of any business enterprise, not for any political purpose, not for the entertainment of distinguished visitors from abroad. It was only an opportunity made by the president of a rubber manufacturing company to meet his co-directors in a less formal way than around the big table in the board room, and incidentally to enjoy the company of a few friends of his and their own.

It is high tribute to any man that he is able to surround himself with such a body of guests under such circumstances; it is a tribute to the company of which he is the head that its directors number among their friends so representative a body of men of affairs.

LIST OF GUESTS PRESENT.

**Denotes Directors of the Company.*

- Judge WILLIAM H. MOORE,*
- GEORGE F. BAKER, chairman of the board, First National Bank of New York;
- FRANK A. VANDERLIP, president The National City Bank;
- FRANCIS LYNDE STETSON,* general counsel United States Rubber Co.;
- GEORGE W. PERKINS, of J. P. Morgan & Co.;
- Rev. Dr. ERNEST M. STIRES, rector St. Thomas' Church;
- Judge ELBERT H. GARY, chairman United States Steel Corporation;
- FRANCIS L. HINE,* president First National Bank of New York;
- Commodore ELBRIDGE T. GERRY, counsellor at law;
- WILLIAM H. PORTER, president Chemical National Bank;
- JAMES B. FORD,* vice-president United States Rubber Co.;
- ANTHONY N. BRADY,*
- ROBERT WINSOR, of Kidder, Peabody & Co., Boston;
- HON. NELSON W. ALDRICH, United States senator from Rhode Island;
- THOMAS H. SHEVLIN, lumber merchant, Minneapolis;



AT DINNER WITH PRESIDENT COLT AT THE METROPOLITAN CLUB.

[Colonel Colt in the center, at the head of the table.]

Hon. PAUL MORTON, president Equitable Life Assurance Society;
 LESTER LELAND,* second vice-president United States Rubber Co.;
 GORDON ABBOTT, president Old Colony Trust Co., Boston;
 Commodore E. C. BENEDICT;*
 D. LORNE MCGIBBON, president Canadian Consolidated Rubber Co., Limited;
 EDWARD R. RICE;*
 DANIEL G. WING, president First National Bank, Boston;
 THEODORE N. VAIL, president American Telephone and Telegraph Co.;
 WILLIAM H. TRUESDALE,* president Delaware, Lackawanna and Western Railroad Co.;
 JAMES N. WALLACE, president Central Trust Co.;
 ALFRED L. RIPLEY, president State National Bank, Boston;
 ALBERT H. WIGGIN, vice-president Chase National Bank;
 RICHARD V. LINDABURY, New Jersey counsel United States Rubber Co.;
 JOHN J. WATSON, JR.,* treasurer United States Rubber Co.;
 JULIEN T. DAVIES, counsellor at law, New York;
 ARTHUR L. KELLEY;*
 J. HOWARD FORD;*
 Hon. CHARLES H. ALLEN, vice-president Morton Trust Co.;
 Hon. LeBARON B. COLT, United States circuit judge;
 HOMER E. SAWYER,* general manager United States Rubber Co.;
 STEPHEN O. EDWARDS, counsellor at law, Providence;
 Hon. EDWIN ALDRICH, United States district judge, New Hampshire;
 HENRY L. HOTCHKISS;*
 WALTER F. ANGELL, counsellor at law, Providence;
 WALTER S. BALLOU;*
 CALVIN S. MAY, M.D., New York;
 HOWLAND DAVIS, of Blake Brothers & Co., bankers;
 NATHANIEL MYERS, counsellor at law, New York;
 SAMUEL NORRIS, secretary United States Rubber Co.;
 PHILIP STOCKTON, president City Trust Co., Boston;
 FRANK S. HASTINGS;*
 Colonel HARRY E. CONVERSE;*
 GATES W. MCGARRAH, president Mechanics National Bank;
 ERNEST HOPKINSON, general counsel Rubber Goods Manufacturing Co.;
 EDGAR B. DAVIS, vice-president General Rubber Co.;
 JOHN D. CARBERRY, assistant secretary United States Rubber Co.;
 CHARLES MACVEAGH, counsellor at law, New York;
 RUSSELL G. COLT, of H. L. Horton & Co., bankers, New York;
 COLONEL SAMUEL P. COLT,* president United States Rubber Co.

A LIST OF THE TOASTS.

"Brotherhood and Trade".....The Rev. Dr. Stires
 "Corporations and Taxation".....Mr. Julien T. Davies
 "Timber and Lumber".....Mr. Thomas H. Shevlin
 "Industrial Combination".....Mr. R. V. Lindabury
 "Insurance and Banking".....Mr. Paul Morton
 "Tariff and Currency".....Senator N. W. Aldrich
 "Law and Business".....Mr. Francis L. Stetson
 "Rubber and Canada".....Mr. D. Lorne McGibbon
 "Judiciary and Commerce".....Judge LeBaron B. Colt

FLORAL DECORATIONS.

The floral decorations were elaborate. The center of the large table was ornamented by a large rubber plant, around which was a circle of rubber leaves and branches, tastefully arranged and sprayed on the cloth.

On a center line and to each end of the table was placed a large centerpiece of American Beauty roses, with asparagus vines.

Four smaller baskets of lilies of the valley, with delicate greens, was placed respectively between—but to each side of the two ends and the middle centerpiece.

Choice hot house fruit was also placed on the table.

The walls of the room were festooned with Southern smilax, and large rubber plants were placed at the windows and in suitable corners.

DINNER SOUVENIRS.

The dinner souvenirs, furnished by Tiffany & Co., were in exquisite taste. They consisted of a hand painted menu for each guest, bearing his name in gold scroll work, above which was a single leaf of a rubber tree in green. In the upper right hand corner was the Colt coat-of-arms in gold. The menu was a four-page folder of heavy bond paper bound with a knotted golden cord. On the second leaf appeared the menu, on the third page the list of toasts, and on the fourth the musical program, which was furnished by the Van Baar String Sextette. The menu itself reposed in a green beaver cloth lawyer's bag, tied with green ribbons, through which, interwoven with a narrow white silken ribbon, was caught the personal card of the giver of the dinner. As a further souvenir, a hard rubber fountain pen and filler nestled in a neat white box, each pen having around it a broad band of gold, upon which was engraved the initials of the guest and the date. As a suggestion of the industry to which Colonel Colt has devoted so large a part of his life was another box in which were a pair of miniature rubber boots and rubber shoes.

The ices were served in small silk covered boxes in green with "Metropolitan Club" on gold letters on one side, and on the opposite side the date—November 23, 1909. The box itself was surmounted by a sphere of white rubber, around which was a ribbon in red, white, and blue. The upper part of the sphere bore the name in green "United States Rubber Co."

The musical program rendered was in keeping with the general charm of the entertainment.

MENU			
	Seaconnet Oysters		
	Oxtail à la Française		
Celery	Olives	Radishes	Almonds
	Terrapin		
	Squab	Chicken Metropolitan	Potatoes rissolée
String Beans			Hominy and Samp
Canvasback Duck			
	Salad à la Tosca		
	Camembert and Gorgonzola	Cheese	
Fruit	Fancy Ices		Cakes
	Coffee		
Royalty	Amontillado	Sherry	
	Veuve Clicquot "dry" 1899		
	Liqueur		
	Perrier Water		

THE ELECTRICAL INTEREST.

THE longest submarine cable in New York was laid lately for replacing the old telephone service between "Broad" exchange of the New York Telephone Co. and the United States immigration station on Ellis Island. The new cable was purchased by the government, and is public property. It is described as being 9,000 feet long, and 3½ inches in diameter; weighs 86,000 pounds, and cost \$17,300. It is made of jute, tar, rubber compound and ground glass, and is designed to stand the hardest submarine wear. The binding is two layers of ¼ inch wire, wound crosswise to one another, and between them is a coating of jute.

One of the largest orders ever placed for paper insulated submarine telephone cable, it is said, was that completed recently by the Western Electric Co. (New York) for the Pacific Telephone and Telegraph Co. Its use is to connect San Francisco with Oakland, California, by way of Goat Island, beneath the waters of San Francisco bay. The total length of cable is 16,300 feet [=3.087 miles]; diameter 2¾ inches, with 69 pairs of telephone wire—26 pairs of No. 13 B. & S. and 43 pairs of No. 19 B. & S. The weight was approximately 101½ tons.



Mill Pond and Pen Stocks.

Power Plant. Storehouse in Background.

Main Factory, Miner Rubber Co.

Factory Walpole Rubber Co.

THE NEW FACTORIES AT GRANBY.

ABOUT fifty miles from Montreal, province of Quebec, in the shadow of Mt. Yamaska, and divided in twain by the rapid Yamaska river, lies the thrifty little city of Granby. Of this city for more than twenty years Mr. S. H. C. Miner has been mayor. An owner in most of its various industrial enterprises, possessed of large land holdings, and deeply interested in every phase, educational, religious or industrial, that the life of his native town affords, Mr. Miner has governed wisely and well. His latest enterprise—the factories of the Miner Rubber Co., and the Walpole Rubber Works—while of surpassing interest to his townfolk, are also of great interest to the rubber trade at large. Owning the land along the river front for more than a half mile through the middle of the town, it was natural that he should seek to drive the new mills by water power. He therefore put in two cement dams and a huge pen-stock, 1,000 feet long, to lead the water to the turbines, which, under 32 feet head, will deliver 600 H.P. of water power. In addition to this, the water power of the electric light plant, 200 H.P., which is available except at night. Furthermore, a 650 H.P. Goldie-Corliss engine will give steam power for the factories. The steam plant itself consists of three boilers, whose total power is 700 H.P.

The power plant is so arranged that the electrically equipped machinery in all parts of the works may be run either by the water wheels, the steam engine, or by both in unison. Washers, mixing mills, calanders—indeed, all machines are fitted with motors so that the pressure of a button starts or stops any or all of them. One of the most interesting mechanical appliances in the power plant is a new water wheel governor, as sensitive and effective as the best steam engine governor. It is something that all users of water power have wished for, but until recently considered almost a mechanical impossibility.

The factory buildings proper run for about 500 feet along the bank of the river and contain roughly 200,000 square feet of floor space. The main building, a fine four story brick edifice with square towers at either end, is designed for the manufacture of rubber footwear, and will have a capacity of 20,000 pairs of boots and shoes for a working day of ten hours. A similar building, but not as long, is the four story brick edifice with a single tower, which will house the specialties and mechanical rubber goods manufactured by the Walpole company. On a line with these buildings, and still further down stream, ground is being broken for a reclaiming plant and a last factory.

The factories are equipped with the Rockwood sprinkler in addition to the great fire pump, which has a capacity of 1,000 gallons a minute. The arrangement of the buildings is such that there will be absolutely no carting.

It is rarely that a manufacturer has either the knowledge or the opportunity to plan factories so substantial in construction, so ideal in arrangement, and with such economies in operation. Built of brick from his own yards, timber from the product of his great lumber mills in Vancouver, erected from architectural plans of his own, Mr. Miner has certainly created a most practical and permanent monument for himself.



MINER AND WALPOLE FACTORIES, LOOKING UPSTREAM.

THE EDITOR'S BOOK TABLE.

RAPPORT SUR UNE MISSION SCIENTIFIQUE EN AFRIQUE Occidentale. Recherches de 1906-07 à la Côte d'Ivoire. Par M. Aug. Chevalier. (Extract from *Nouvelles Archives des Missions Scientifiques*, Paris, Vol. XVIII, 1909.)

THIS paper has appended an interesting map of the forest regions of the Ivory Coast, indicating articularly the distribution of rubber species. There are many different *lianes* (creepers), in addition to the *Funtumia* trees.

ELECTRICITY EXPLAINED. BY J. CALVIN S. TOMPKINS. NEW YORK: Cochrane Publishing Co. 1909. [Cloth. 12mo. Pp. IV + 64. Price, 75 cents.]

THIS is a book for popular reading, and therefore expressed in simple language, which will prove helpful to persons desiring elementary information as to the different kinds of electrical currents and their control and their application to the wants of man.

A MANUAL OF STEAM ENGINEERING, COMPRISING INSTRUCTIONS, Suggestions and Illustrations for Progressive Steam Engineers Concerning the Application to Modern Daily Practice of the Approved Theory of Steam Engineering. By W. H. Wakeman. - - - New York: New York Belting and Packing Co., Limited. [1909.] [Cloth. 32mo. Pp. 409.]

THE author of this handy book has written extensively for steam engineers, and is an authority in his field. The present work has been prepared at the suggestion of a leading firm of rubber manufacturers, for distribution among their customers. It cannot fail to be of interest, not only to engineers, as a book of reference, but also to those who have to do with the administration of industrial enterprises which make use of steam power.

HENDRICKS' COMMERCIAL REGISTER OF THE UNITED STATES, for Buyers and Sellers. Especially Devoted to the Interests of the Architectural, Mechanical, Engineering, Contracting, Electrical, Railroad, Iron, Steel, Hardware, Mining, Mill, Quarrying, Exporting, and Kindred Industries. - - - New York: Samuel E. Hendricks Co., No. 74 Lafayette street. 1909. [Cloth. Large 8vo. Pp. LXXVII + 1,220. Price, \$10.]

THIS is the eighteenth annual edition of a work which has proved its usefulness to a very great number of business men in a wide field. It embraces the names and addresses of over 350,000 manufacturing firms and individuals, under 35,774 business classifications, the mere listing of which, in the index, requires 77 four-column pages in small type. While not offered as a complete directory of any branch of industry, its lists under each general heading are sufficiently full to make the work one of value for reference, to which are to be added the advantage of its being accurate and brought up to date.

DISEASES OF A GASOLINE AUTOMOBILE AND HOW TO CURE Them. A practical Book for the Gasoline Automobile Owner, Operator, Repair Man, Intending Purchaser, and Those Wishing to Learn the First Principles of an Automobile. Also for Launch Owners. - - - By A. L. Dyke and G. P. Dorris. [St. Louis: A. L. Dyke Automobile Supply Co. 1903.] [Cloth. 12mo. Pp. 201. Price, \$1.]

THIS is avowedly not a theoretical work, but one designed to answer briefly but clearly a series of practical questions concerning gasoline automobiles. As every such automobile calls for rubber tires, and as these have "diseases" as well as the other parts of a car, a chapter is devoted to the application of tires, caring for them, and making repairs when they are needed. This section of the work appears to be of a practical character, from which it may be assumed that the same is true of the remaining chapters.

THE TENSILE PROPERTIES OF INDIA-RUBBER. BY PHILIP Schidrowitz, Ph.D., F.C.S., Member of British section International Testing Committee. [Reprinted from *The India-Rubber Journal*, March 22-May 31, 1909.] [Paper. 4to. Pp. 15.]

THIS paper is devoted to the desirability of standardizing india-rubber goods, together with suggestions toward physical tests for this purpose, by a physicist who has devoted much attention to this subject. Illustrations are given of some testing machines designed by him for this work.

OTHER BOOKS RECEIVED.

THE SMOKELESS COMBUSTION OF COAL IN BOILER PLANTS. With a chapter on Central Heating Plants. By D. T. Randall and N. W. Weeks. (United States Geological Survey—Bulletin 373.) Washington: Government Printing Office. 1909. [Paper. 8vo. Pp. 188.]

A FEW PERTINENT FACTS CONCERNING THE PHILIPPINE Forests and Needs of the Forest Service That Should Interest Every Filipino. By Major George P. Ahern, Director of Forestry. Manila: Bureau of Printing. 1908. [Paper. 8vo. Pp. 21.]

INTERNATIONAL CABLE DIRECTORY OF THE WORLD, IN CONJUNCTION WITH Western Union Telegraphic Code System. Compiled and published by International Cable Directory Co. New York and London: 1909. [Cloth. 4to. Pp. 869. Price, \$7.50]

IN CURRENT PERIODICALS.

CACAO et Castilloa. By H. Hamel Smith. = *Journal d'Agriculture Tropicale*, Paris. IX-97 (July 31, '09). Pp. 196-197.

La Saignée de *Funtumia* par Incisions Verticales. By O. Labroy. = *Journal d'Agriculture Tropicale*, Paris. IX-97 (July 31, '09). Pp. 197-200.

Organization Générale d'une Plantation d'Hevea. [In French Indo-China.] By G. Vernet, agricultural engineer. = *Journal d'Agriculture Tropicale*, Paris. IX-96 (June 30, '09). Pp. 161-164; IX-97 (July 31, '09). Pp. 201-204.

Exploitation et Culture des Lianes à Caoutchouc en Afrique Occidentale. By E. De Wildeman. = *Journal d'Agriculture Tropicale*, Paris. IX-96 (June 30, '09). Pp. 172-174.

Principales Clases Comerciales de Caucho y Plantas que las Producen. By Paul Beckman [Translated from *Aus der Natur*.] = *Boletin der Ministerio de Fomento*, Caracas. I (July, '09). Pp. 19-37.

The Modern Telephone Cable. By Frank B. Jewett. [Deals with paper insulation.] = *Proceedings of the American Institute of Electrical Engineers*, New York. XXVIII-7 (July, '09). Pp. 947-961.

Cinchona-und Kautschukkultur in Ceylon. By Charles Boringen. = *Der Tropenpflanzer*, Berlin. XIII-6 (June, '09). Pp. 209-274.

NEW TRADE PUBLICATIONS.

THE NEW YORK LEATHER BELTING CO. (New York), publish a pamphlet, "From Forest to Factory," devoted to the "Victor" brand of balata belting, which is illustrated with views of more than a score of factories where this belting is in use. [6" x 9". 63 pages.]

HOME RUBBER CO. (Trenton, New Jersey), issue a catalogue of Packings for all Purposes and Conditions. The numerous brands of packing made by this company which have become widely known in the trade are all illustrated and described in this book, besides which several pages are devoted to the company's production of hose, belting, mats and matting, valves, and various specialties. [4½" x 7¾". 122 pages.]

JOHN ROYLE & SONS (Paterson, New Jersey), issue their Catalogue No. 214, devoted to Tubing Machine Fixtures. It is illustrated with a number of cuts of parts and fixtures in their line. [4" x 6". 63 pages.]

THE WATSON MACHINE CO. (Paterson, New Jersey), send out a collection of leaflets, each describing and illustrating one of the machines of their production adapted to the insulated wire industry. [6" x 9¼". 62 leaves.]

FRED MEDART MANUFACTURING CO. (St. Louis), sends Catalogue G. of Gymnastic Apparatus, of which the company are large manufacturers. This cannot be classed as a catalogue of rubber goods, though not a few of the Medart specialties embrace a certain amount of rubber. [5½" x 8¾". 112 pages.]

THE BEACON FALLS RUBBER SHOE CO. (Beacon Falls, Connecticut) have introduced a new feature in their advertising which is unique—a small monthly periodical, *Rubber*, which is readable as well as attractive in looks. The initial number is dated September, 1909. [4" x 4½". 16 pages.]

ENTERPRISE RUBBER CO.—William E. Barker, president and treasurer (Boston)—issue "Our Salesman in Print, No. 6," covering the latest catalogue of Candee Rubbers, with some special remarks to dealers. [3¾" x 6½". 76 pages.]

ELECTRIC HOSE AND RUBBER CO. (Wilmington, Delaware) issue a catalogue of designs, in colors, of their Interlocking Rubber Tiling. The pages of this attractive publication are trimmed in the shape of a section of tiling, which makes it somewhat unlike any other trade publication that has reached THE INDIA RUBBER WORLD. [4¾" x 4¾". 14 leaves.]

THE BRISTOL CO. (Waterbury, Connecticut) devote their Bulletin No. 13 to Bristol's Patent Steel Belt Lacing, which is made in various sizes and styles for all kinds of drive and conveyor belts—rubber, leather, and cotton. [8" x 10½". 8 pages.]

ALSO RECEIVED.

THE Bristol Co., Waterbury, Connecticut—Bulletin 111—Bristol Class II Recording Thermometers. 8 pages.

The Coile Bed Bath Co., Knoxville, Tennessee—The Coile Bed Bath. 16 pages.

THE GUAYULE CONSOLIDATION.

THE Intercontinental Rubber Co., capitalized at \$40,000,000, and the Continental Rubber Co., of America, with \$30,000,000 capital, were consolidated by a certificate of merger filed in the office of the secretary of state at Trenton, New Jersey, on November 1. The papers filed show that the Intercontinental company already owned 299,750 shares of the capital stock of the Continental company, valued at \$29,975,000. The total outstanding stock of the Intercontinental company was \$34,182,000, and of the Continental company \$29,990,000. The merger papers state that it was deemed best for both corporations to consolidate.

The name of the new corporation is the Intercontinental Rubber Co. and the authorized capital stock is \$40,000,000, divided into \$10,000,000 preferred, bearing 7 per cent. cumulative dividends, and \$30,000,000 common. The method of consolidation was that each share of the Continental stock not held by the Intercontinental company should be exchangeable, share for share, for the stock of the new Intercontinental company, all the stock of the former company held by the latter to be retired.

The directors of the new company are: Edward B. Aldrich, United States Senator Nelson B. Aldrich, of Rhode Island; Herman B. Baruch, Henry A. Bingham, Daniel Guggenheim, S. B. Guggenheim, Paul Morton, who was formerly secretary of the navy; Allan A. Ryan, and William Sproule. The address of all is given in the papers as No. 15 Exchange place, Jersey City, the New Jersey office of the corporation.

The Continental Rubber Co., of America, was the holding company for the Continental Rubber Co. and the Continental-Mexican Rubber Co., engaged in the exploitation of guayule rubber in Mexico. The interests involved in the consolidation also control the American Rubber Co.

THIS YEAR'S "NORTH BRITISH" TIRES.

TWO British shows of unfailing interest to the rubber tire trade occurred this year, as usual, in November, but too late to permit of their being reported in this issue of THE INDIA RUBBER WORLD. They were, of course, the International Motor Exhibition (this was the eighth year), organized by the Society of Motor Manufacturers and Traders, Limited, in connection with the Royal Automobile Club, under the patronage of the King, and held at Olympia, London, November 12-20. The other was the Stanley Show, held a week later, for the thirty-third successive year, at Royal Agricultural Hall.

At the Olympia Motor Exhibition the North British Rubber Co., Limited, showed a complete range of their well known "North British" clincher motor tires. There were four patterns: (1) the clincher plain ribbed tire; (2) the clincher vacuum grooved tire; (3) the clincher rubber studded tire; and (4) the clincher steel studded tire. These are all made by a new hydraulic molding process, by which the treads are molded and not cemented on in the usual way. The rubber of the "North British" tires is all white. It is stated, as likely to interest motorists, that the qualities insisted upon by the British admiralty for all mechanical goods are founded upon chemical ingredients similar to those used in "North British" tires.

In addition to tires the company exhibited some interesting accessories. Among these were a new valve grip and an improved security bolt. A deflation alarm valve shown, by blowing a whistle, indicates when a tire is punctured or is insufficiently inflated. By means of a new detachable rim exhibited by the company a tire can be detached, a new tube inserted, and the whole replaced within two minutes.

The "North British" clincher tires for cycles, exhibited at the Stanley Show, are in four types. The "A Won" tire remains at the top of their list. Similar to it, except for a special tread, is the "Clincher Salvus," which has been adopted for the British postoffice and other government departments. It is notable par-

ticularly for freedom from sideslip. The "B grade" remains the same in quality, but costs more, and for those who do not wish to pay for a first class tire the "C grade" has been introduced.

The company's motorcycle tire branch has now reached important proportions. These tires are made under two designations—"A Won" and "Dreadnought." Each brand is provided either with plain tread or rubber studded (Bailey's patent).

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of india-rubber and gutta-percha for the month of September, 1909, and for the first nine months of five calendar years:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All Other. Rubber.	TOTAL.
September, 1909..	\$136,708	\$255,732	\$380,612	\$773,142
January to Aug..	1,164,699	872,074	2,678,534	4,715,307
Total	\$1,301,497	\$1,127,806	\$3,059,146	\$5,488,449
Total, 1908...	926,566	1,043,528	2,629,927	4,600,021
Total, 1907...	1,051,903	1,213,902	2,997,815	5,263,710
Total, 1906...	895,296	936,350	2,361,917	4,193,563
Total, 1905...	856,493	941,858	2,129,936	3,928,287

AMERICAN EXPOSITION AT BERLIN.

IT is announced that Mr. J. Pierpont Morgan has accepted the honorary presidency of the exhibition of American Manufacturers to be held in Berlin in April-June, 1910. His royal Highness Prince Henry of Prussia is the honorary president of the German reception committee. Mr. George F. Kunz is chairman of the American advisory committee. Professor George S. Atwood, secretary of the American Association of Commerce and Trade at Berlin, is to be German manager. American headquarters have been opened at No. 50 Church Street, New York, under the management of Mr. Max Vieweger.

PERSONAL AND TRADE NOTES.

MR. HENRY C. PEARSON, editor of THE INDIA RUBBER WORLD, is scheduled to deliver some lectures on india-rubber, at the New York University, before the school of applied science, beginning on December 20.

Mr. A. H. Marks, vice-president of The Diamond Rubber Co., bought a large country estate west of Akron late in October, consisting of more than 30 acres. It was one of the largest real estate transactions of the year in Akron, the price of the land exceeding \$85,000.

Mr. David Aldebert Cutler, well known in the rubber trade, and Miss Blanche Mildred, daughter of Mr. and Mrs. William G. Williams, of Malden, Massachusetts, were married on the evening of October 20.

The Bertram Motor Supply Co. have leased for a term of years the premises No. 247 South State street, Salt Lake City, Utah, for the sale of automobile accessories. They will have the exclusive sale for Utah of "Diamond" tires.

FEDERAL RUBBER CO.—INCREASE OF CAPITAL.

THE Federal Rubber Co. (Cudahy, Wisconsin) have increased their capital to \$620,000, paid in, and a further increase to \$750,000 is contemplated by January 1. They have completed a new building, giving them a capacity of 250 tires a day, and 500 inner tubes. Their business is also good in solid tires and mechanical lines. They have opened a branch at Atlanta, Georgia, with the Dunham Rubber Co., an agency in St. Louis, with the Phoenix Auto Supply Co., and in Kansas City, Missouri, with the Motor Tire and Supply Co.

The Rubber Trade at Akron, Ohio.

By a Resident Correspondent.

EXPANSION OF THE GOODYEAR TIRE COMPANY.

THE most important development of the month among Akron rubber companies is the announcement of the plans for the expansion of the Goodyear Tire and Rubber Co.

At the next annual meeting of the company, on December 5, a large number of new shareholders will be represented, by reason of the sale of several thousand shares of treasury stock during the last few weeks. The stock was offered for sale on the open market and was bought in comparatively small blocks, it is understood, by a number of different interests. The price ranged as high as 165.

One of the new men who will enter the company is Mr. Frank H. Adams, who is to take the office of treasurer, which has heretofore been combined with that of vice president and held by Mr. C. W. Seiberling. Mr. Adams is a life long resident of Akron, being the son of Frank Adams, a pioneer sewer pipe manufacturer here. For a number of years he has been connected with the First National Bank of Akron, and will leave the position of cashier to enter the rubber business.

Rumors have been abroad that the Goodyear company has been merged with the General Motors Co., but such reports are emphatically denied by the officers of the company. What undoubtedly gave rise to them was the contract entered into between the Akron company and the Buick Motor Co., which is the chief factor of the General Motors Co. This is said to be the largest single contract for automobile tires ever made. It will provide equipment for a large part of the 1910 Buick output as well as for a number of cars from the Cadillac, Welsh, Oldsmobile, Oakland, Rapid, and Reliance factories, which are also components of the General Motors company. Mr. C. W. Seiberling informs THE INDIA RUBBER WORLD that the number of sets involved will considerably exceed 20,000.

Mr. F. A. Seiberling confirmed the rumor that overtures had been made to the Goodyear company to remove its factory to Detroit, but, judging by the preparations for additions to the factory here, it is not the intention of the company to make a change. Plans are being made for two factory buildings, five stories high, aggregating 500 feet in length and affording 150,000 square feet of additional floor space. The site of these structures will be the east half of the company's 12-acre property. To make room for them Prune street will have to be vacated by the city council, but when the petition of the company was presented to that body its members expressed themselves as favorable to the concession.

The company now have 1,000 people on their pay rolls, according to the statement of President Seiberling, and after the new additions are in operation from 1,600 to 1,800 will be employed. The new factories will be used for the manufacture of automobile tires. It is expected that 12 or more of the new tire machines already mentioned in THE INDIA RUBBER WORLD will be put into regular use at that time.

The Goodyear Tire and Rubber Co. recently purchased the abandoned plant of the defunct Akron China Co., which adjoins the Goodyear property on the east. Mr. F. A. Seiberling states that the old plant is being remodeled for use as a reclaiming plant. "We are now working out an entirely new process for reclaiming scrap rubber," said Mr. Seiberling. The plant will have a capacity of ten tons a day.

SWINEHART COMPANY'S NEW FACTORY.

THE new pneumatic tire factory of the Swinehart Clincher Tire and Rubber Co. will be ready for equipment with machinery during the first week of December. The building is two stories

high, 62 x 150 feet. In it will be installed a new engine, three rubber mills, one calender, and three hydraulic vulcanizers for pneumatic tires. The capacity will be 100 pneumatic tires per day. The standard types of automobile clincher and quick detachable tires will be made. Experiments are also being made on a new type of patent automobile pneumatic tire, but officers of the company say that it will not be ready for manufacture before the middle of the next season.

Mr. Claude W. Moody, formerly with the Pennsylvania Rubber Co. (Jeannette, Pennsylvania), has been employed as sales manager by the Swinehart company. To facilitate the distribution of their product the company established during the latter part of November agencies in Washington, Boston, and Buffalo, and others are to be placed in Philadelphia and Indianapolis. "We already have sufficient orders," said Mr. W. W. Wuchter, manager of the company, "to take care of our 1910 output."

BUCKEYE RUBBER CO. REBUILDING.

WORK was started during the last week in November on a new factory building at the plant of the Buckeye Rubber Co. It will be one story high, 208 x 62 feet. Its location will be alongside the structure partly destroyed by fire last summer, which is now being rebuilt. The object of the new building is to enable the company to increase its output of pneumatic automobile tires. These are marketed by the Consolidated Tire and Rubber Co. under the name "Kelly-Springfield." The addition will not affect the output of solid tires. When completed the new building will be equipped with four or five tire hydraulic presses to equip a vulcanizing department. The rest of the space will be used as a machine shop and considerable new equipment is to be purchased for this department.

NEW TIRE PATENT LITIGATION.

PATENT infringement suits involving two Akron companies were started during the past month. Action was instituted against the Rapid Safety Co., of New York, for the alleged infringement of a patent on an automobile tire granted to Edward B. Cadwell and licensed exclusively, according to the claims of the suit, to the Swinehart Clincher Tire and Rubber Co. The tire involved is of the cushion type.

Suit was also started by the Motz Clincher Tire and Rubber Co., of this city, in the United States circuit court in Cleveland with the Swinehart Clincher Tire and Rubber Co. as defendant. The Motz company claim to be the sole owners of patent No. 926,012, covering a tire having webbed sides and a thin tread. A restraining order and damages were asked. The Motz company announce that they expect to start other infringement suits.

SOME DIAMOND COMPANY HISTORY.

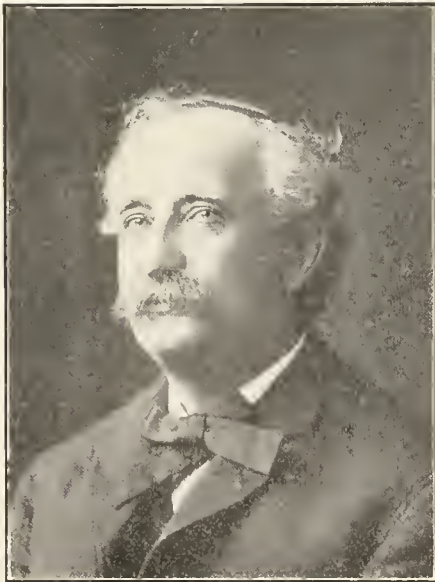
MR. OHIO C. BARBER, in an address delivered here November 8, related some interesting inside history of The Diamond Rubber Co., of which he has been a director and leading shareholder since its organization. "The Diamond Rubber Co. commenced business in 1893," he said, "and after passing through a period of changes the present management took charge. The gentlemen who came here at that time were all young men. They were four in number and I don't believe they could have mustered \$5,000 among them. They came from Boston and made a proposition to take over the company. It was a problem whether it was a good investment or not, but after mature deliberation and consideration of their recommendations, the owners of the company felt convinced that they were all right and sold half the stock to them, taking their notes for the debt. At that time the amount invested in the company was \$500,000 and the working force was 240 people. To-day the money in-

vested is \$18,000,000 and the working force is 4,200."

Fifty men attended the annual sales conference of The Diamond Rubber Co., which took place on November 3-5. It was held in the Akron offices of the company and all of the branch managers and leading salesmen were present. The men were taken through the factory and shown the improvements that have been made during the last year. Results of the past year's sales and plans for the coming season were talked over.

AFFAIRS OF THE ALUMINUM FLAKE CO.

SINCE the death of Mr. Frank Reifsnider, vice president and manager of the Aluminum Flake Co., that business has been in charge of Mr. George E. Probert, treasurer of the company. Mr. Probert says that no change will be made in the management of the company until the annual meeting next June. Mr. Reifsnider's funeral was held at his home October 29. It was in charge of the Knights Templar and Buckley Post, G. A. R., of Akron. Burial was in Glendale cemetery, Akron.



THE LATE FRANK REIFSNIDER.

Dr. George A. Kubler, of Berlin, Germany, European representative of the Aluminum Flake Co., arrived in Akron a month ago to take up the matter of organizing a stock company in Berlin for the management of the Flake company's European business. He intends to leave for London in December.

MORE ROOM FOR THE FIRESTONE.

To make room for the new factory which is to be built by the Firestone Tire and Rubber Co. next year, the Akron city council passed ordinances on November 6 vacating parts of Moses, Jasper, Cole and Falor avenues in the extreme southern part of the city. Though protests were made by some property owners against the action the councilmen preferred to arbitrate them rather than place any obstruction in the way of the new enterprise.

AKRON MEN PREPARING TO FLY.

THOUGH Akron's future depends upon the continued popularity of the automobile, it is keeping in the forefront in the aviation field. Two local inventors are at work on aëroplanes, Mr. Fred L. Childs, who has already made preliminary trials of a bi-plane, and Mr. Michael Paridon, an expert in the employ of the Diamond Match Co. The Barberton Aviation Co. has been incorporated to develop the aëroplane invented by the latter.

THE TIRE TRADE IN THE SOUTH.

AKRON manufacturers were extensively represented at the Atlanta show last month. The Goodrich and Diamond products were most in evidence, the representatives of the former com-

pany counting 53½ sets of Goodrich tires and the Diamond counting 51 sets. Seventeen automobile tire manufacturers were represented. One hundred and thirty-three sets of Akron tires were on the floor. Considerable attention was also given to the New York to Atlanta run which preceded the show.

"Preparation of the tire trade for future years," said an Akron rubber company official, "is evidenced by the keen attention that is being given to the south. The business is not there at the present time to warrant such attention, but the automobile and tire trade is camping on the trail of what the rapid development of that part of the country will produce in the next few years. With the recently established Diamond branch and the Ajax-Grieb branch established November 1, fourteen tire manufacturers are now represented in Atlanta. Yet the business in the South is strictly a consumers' business. In the whole of Georgia, North Carolina, South Carolina, Mississippi, Alabama, and Florida there are not half as many automobiles as there are in the state of Ohio. The Atlanta automobile show was a failure in so far as the attendance and resulting business was concerned, yet manufacturers feel confident of returns from it in the future."

STILL ANOTHER TIRE COMPANY.

As a solution of the tire problem for heavy vehicles traveling on sand roads, a sectional truck tire has been devised by H. A. Palmer, of Akron. Its manufacture has been started by the Palmer-Hawkins Tire Co., of this city, of which Mr. Palmer is president and general manager and Mr. A. W. Hawkins vice president. A motor truck for use in the sandy roads of Florida has just been equipped by these manufacturers with a set of their tires, measuring 36 x 10 inches. They claim the distinction of having made and applied the largest set of solid rubber truck tires ever manufactured or applied in the United States, if not in the world.

IN THE CHAMBER OF COMMERCE.

MR. H. S. FIRESTONE, president of the Firestone Tire and Rubber Co.; Mr. William A. Johnston, president of the Rubber Products Co., of Barberton; Mr. Joseph Dangel, manager of the Akron plant of the American Hard Rubber Co., and Mr. Will Christy, vice president of the Firestone Tire and Rubber Co., were elected to the board of directors of the Akron Chamber of Commerce at the annual meeting of that organization on November 17. Mr. C. B. Raymond, secretary of The B. F. Goodrich Co., retired at that time after one year's service as president.

STEEL STUDDED TIRES IN FAVOR.

THE adaptability of the automobile as a winter as well as a summer vehicle is expected by local tire men to result from the adoption by American tire manufacturers of the steel studded tire. Though this type has been manufactured considerably in Europe, it is comparatively new here. So far it is manufactured in Akron only by the Diamond Rubber Co. "We look upon the steel studded tire," said an official of that company, "as a happy remedy for the usual winter slump in the tire trade. It is distinctly a tire for use in ice and snow, and its sale at the present time is helping materially in the increase of our fall business."

TIRE PRICES HAVE BEEN HIGHER.

THOUGH there is a general impression that automobile tire prices are higher than ever before, actual comparison of consumers' net prices declared by manufacturers affiliated in the tire makers' association show that prices to-day are from 10 to 30 per cent. lower than they were two years ago. Comparing the last prices issued—those which went into effect September 27, 1909, at the time the second raise in prices in the present year was made, with the prices declared September 16, 1907, the following striking differences, pointed out by an official of an Akron company, are noticeable—the prices for the regular tread clincher casing being quoted:

Size.	1907.	1909.
26 x 2½ inches.....	\$15.60	\$13.80
32 x 3 inches.....	26.10	20.35
30 x 3½ inches.....	31.55	28.10
28 x 3 inches.....	22.65	17.75
34 x 4 inches.....	45.25	43.05
36 x 5 inches.....	74.45	72.05

This comparison is especially significant, in view of the fact that the highest price for crude rubber when the 1907 prices went into effect was \$1.13. The low prices of tires to-day are accounted for in part by the big cut made in September, 1908, at the time rubber went to less than a dollar a pound.

THE PRICE OF TIRES.

Mr. A. J. WILLS, assistant sales manager of The B. F. Goodrich Co., informs your correspondent that no increase in the price of automobile tires has been decided upon, but that if the price of rubber stays up, the increase will undoubtedly come. He looks for no substantial relief in the rubber market. Mr. W. B. Miller, secretary of The Diamond Rubber Co., says no increase is contemplated, and Mr. H. S. Firestone, president of the Firestone Tire and Rubber Co., says he knows of no intention to raise prices within the next two months.

A FEW NOTES.

NATURAL gas, which is used by Akron manufacturers for fuel, was secured for another ten years by a contract entered into by the city and the East Ohio Gas Co. November 15. Thirty cents a thousand feet is to be paid for five years and 35 cents for the succeeding five years. The gas is piped from West Virginia.

Mr. S. E. Connor has been succeeded by Mr. M. S. Long as secretary of the United Rubber Co., which absorbed the Aladdin Rubber Co., of Barberton a few months ago.

Mr. Joseph W. Kelley, a shareholder in The B. F. Goodrich Co., who retired as a department manager in that company two years ago, moved with his family to Boston on November 23, to make his home there. A large summer home, which he had just completed at Framingham, Massachusetts, was destroyed by fire early in November. Boston was Mr. Kelley's home when, as a young man, some years ago, he entered the employ of the Goodrich company.

A verdict of \$12,000 was returned in the present term of common pleas court here against the American Hard Rubber Co., as a result of a damage suit brought by Lola Pierce, a shop employe for the company, who was struck in the eye with a flying ball of polishing material in the Akron factory of the company two years ago.

THE RUBBER TRADE AT TRENTON.

BY A RESIDENT CORRESPONDENT.

THERE have been important developments in connection with the United and Globe Rubber Manufacturing Cos. since the election of Welling G. Sickel, former mayor of Trenton, as president, and the retirement from the concern of Watson H. Linburg and John S. Broughton. As related in the last number of THE INDIA RUBBER WORLD, Mr. Sickel was elected president at the meeting of the shareholders on October 11, succeeding Mr. Linburg. At the same time Aubrey Love was chosen secretary and treasurer, succeeding Mr. Broughton. Stephen B. Elkins, United States senator from Virginia, and Martin Maloney, of Philadelphia, were elected to the board of directors.

On November 8 Messrs. Linburg and Broughton completed negotiations which again placed them in control of the company. With the aid of other Trenton capitalists they acquired the stock held by Messrs. Sickel, Elkins, and Maloney. The consideration has not been named, but it is said to have been \$400 a share, making the transaction, approximately, involve \$500,000. Following the formal transfer of the stock Welling G. Sickel and



WATSON H. LINBURG.

[President United and Globe Rubber Manufacturing Cos.]

Senator Elkins presented their resignations as directors and as president and vice president, respectively. The other Sickel directors also resigned. They were: Mrs. Welling G. Sickel, Martin Maloney, J. Harrington Sickel, and Welling Sickel Katzenbach. As soon as the resignations had been accepted Messrs. Linburg and Broughton; William H. Brokaw, of the cracker firm of Exton & Co.; Karl G. Roebing, of the John A. Roebling's Sons Co.; and Wilbur F. Sadler, Jr., adjutant general of the state of New Jersey and president of the Broad Street National Bank, were elected directors. The new board immediately organized and elected Mr. Linburg president and Mr. Broughton secretary and treasurer. The new board at once assumed control of the plant. Karl G. Roebing is one of the heads of the Woven Steel Hose and Rubber Co., with which Mr. Broughton is also connected. It is worthy of note, also, that this is the second time an adjutant general of New Jersey has been identified actively with the United and Globe company, the first one having been the late General Alexander C. Oliphant, of Trenton.



JOHN S. BROUGHTON.

[Secretary and Treasurer United and Globe Rubber Manufacturing Cos.]

FOLLOWING his retirement from the United and Globe, Mr. Sickel has associated himself with the interests controlled by C. M. and H. H. Hewitt, comprising a chain of large manufacturing establishments in the East and West, including the Hewitt Rubber Co., of Buffalo, New York; the Magnus Metal Co., with fourteen plants scattered throughout the United States; the Featherstone Foundry and Machine Co., with works at Chicago; the National Brake Shoe Co., with works at Depew and Chicago; and the Hewitt Supply Co., with works at Chicago. Mr. Sickel will have charge of the direction of sales, a position of very great responsibility. He will be located in a suite of offices in the Trinity building, No. 111 Broadway, New York. In an interview with THE INDIA RUBBER WORLD correspondent, Mr. Sickel declared that he was still comparatively a young man, with a large acquaintance among the railroad officials of the United States, a large and valuable asset, and he would not be doing himself justice to retire from the field he has occupied so long. His interests with the Hewitts will be such that he will spend most of his time in New York, although he said no doubt he would in the future, as in the past, travel at times to all sections of the country. Aubrey Love will accompany Mr. Sickel. He will act as general office manager, at the same address.

* * *

THE American Inner Tube Co., with a capital of \$500,000, was incorporated under the laws of New Jersey, at Trenton, on November 13. It is to manufacture and deal in automobile tires, inner tubes, all parts of automobile tires and other rubber goods, as well as parts of automobiles and accessories to automobiles. The stock is divided into 50,000 shares, of a par value of \$10 each. The incorporators are H. O. Coughlan, S. A. Anderson and John W. Stout, and their registered address is at No. 15 Exchange place, Jersey City. The New Jersey office is at No. 1041 Clinton street, Hoboken, with O. F. Bugg as the registered agent.

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

THIS is not the season wherein the mechanical rubber lines are expected to do particularly well, and the present time is no exception to the rule. Mechanical goods departments are very quiet, and owing to the fact that there is still a scarcity of money in this city are perhaps more quiet than they should be, and the rubber establishments will be glad to see the time come when business is again moving along at a more lively rate. The high price of rubber is making the problem more complex. When high prices come during good times it is all right, but the way it is now it is a hard combination. On the other hand, the rubber footwear and clothing lines find a good sale, and all of the wholesalers are clearing their shelves of immense stocks. The rains started early, and each week or so there have been general storms sufficient to start up a lively demand for such goods. Each big rain is felt immediately by the wholesaler, because the retailers leave off their buying of such goods until the last minute, and then they want them in a hurry.

Mr. W. A. Daggett, of San Francisco, who held the position of specialty salesman of fire hose for the Bowers Rubber Works, has left the employ of that firm and will start into business for himself. He will take up the western agency for the Eureka Fire Hose Co., with offices, salesroom and stockroom in San Francisco.

Mr. W. F. Bowers, president of the Bowers Rubber Works, has lately been in the East, where he attended the rubber manufacturers' convention. One of the salesmen connected with the establishment will be selected to take the place of Mr. Daggett in the fire hose department.

There has been a reorganization of the Sterling Rubber Co. Mr. W. L. Conry, one of the original organizers, and who has

been acting as vice president since the organization of the corporation, has been elected president and general manager, taking the place of William Perkins, who has severed his connections with the firm. Mr. Willard Wells has been elected vice-president, and Mr. A. R. Ellert, formerly traveling for the firm, has been elected secretary and treasurer. Under the new arrangement it is the intention to devote more attention to the druggists' sundries end of the business. Mr. Conry is a druggists' sundries man, and a large number of new lines will be taken on.

Mr. L. L. Torrey, manager of the coast branch of the Pennsylvania Rubber Co., states that business keeps up very well. The new branch which this firm has started in Los Angeles has been doing especially good work, and a new location has been secured in a modern store at No. 930 South Main street.

Mr. William Perkins, formerly manager for the Sterling Rubber Co., is now connected with the Gorham Rubber Co., and lately has been looking after the business in Oakland, Alameda, and Berkeley.

Mr. A. T. Dunbar, who was formerly the coast manager for the Revere Rubber Co., has secured the agency for the Boston Rubber Co.'s lines, and is coming out to establish an office in San Francisco to act as the western representative of that firm.

Mr. C. E. Mathewson, Pacific coast manager for The Diamond Rubber Co., has returned from his visit to the factory at Akron, Ohio. He was accompanied on his trip by Dan McKay, manager of the branch of the company at Seattle, and by F. O. Nelson, the manager of the Los Angeles branch.

The Barton Packing and Rubber Co. are keeping quite busy in its work of manufacturing, and new machinery is now installed and in operation.

There is considerable manufacturing now in this vicinity, with the American Rubber Manufacturing Co., the Bowers Rubber Works, and the Barton Packing and Rubber Co. engaged, and they are getting the work down so that they can make very close prices.

"Dad" Tracy, who was formerly salesman for the Sterling Rubber Co., has been employed by the Pennsylvania Rubber Co., and he is expecting to be sent to that company's branch store in Los Angeles.

Mr. W. J. Gorham, president of the Gorham Rubber Co., is now in Seattle, visiting the firm's branch store. Mr. F. A. Sargeant, secretary of the San Francisco firm, is now taken from his duties for the time being while serving on the Federal jury.

F. S. Winslow, manager for the Pacific Coast Rubber Co., states that on account of the favorable weather the boot and shoe business has been unusually good. The mechanical goods trade, however, is light.

The Gutta-Percha and Rubber Manufacturing Co. report that business is quiet now, especially in the mechanical lines.

Mr. Kanzee, of the Phoenix Rubber Co., states that his firm is meeting with good success in their new compound for valve and discs, called Ralkanite, the name being a combination of that of the two proprietors, Ralph and Kanzee.

Mr. R. H. Pease, of the Goodyear Rubber Co., states that conditions in a general way are showing improvement. The rains in through the country have been the means of reducing the stocks of boots and shoes, rubber clothing and mackintoshes.

Mr. Benjamin H. Pratt, the new coast representative of The Fisk Rubber Co., has reached the city to take charge of the company's business, vice George E. Johnson, who resigned to take the agency for the Mitchell cars in the Northwest.

RIMS CHEAPER THAN TIRES.—If a tire cannot be repaired when punctured it is best to remove the inner tube before driving any distance on the flat tire. It is even better to remove the casing also and run on the bare rim. The rims will stand a great deal of hard usage and are cheaper than tires. Running for even a short distance on a flat tire will generally damage the casing beyond repair.

News of the American Rubber Trade.

AN AMERICAN FACTORY FOR R. & J. DICK.

AT the annual meeting of R. & J. Dick, Limited, at which a satisfactory report on the year's trading was made, the directors stated that in order to develop business in the United States, the board had resolved to manufacture belting in this country. A favorable site has been secured at Passaic, New Jersey, and arrangements are proceeding for the immediate erection of a complete factory. The company have opened offices in New York, at No. 50 Church street. As is well known, the firm were the pioneer makers of balata belting, a line in which they continue to be largely engaged. The total net profits of the firm for the year were £51,163 [= \$248,984.74].

NEW RUBBER STORE IN BRIDGEPORT.

A NEW wholesale and retail store was opened in Bridgeport, Connecticut, on November 17, by Jaycox Rubber Co., at No. 1042 Main street, with a full line of mechanical goods, druggists' sundries, rubber clothing and footwear, and automobile and bicycle tires and sundries. The owner, Mr. Ernest M. Jaycox, lately resigned as secretary and treasurer of The Alling Rubber Co., with whose syndicate of rubber stores he had been connected for nine years. The head salesman of the new house is Mr. Edward Dunn, who also was with the Alling company for nearly nine years.

QUADRUPLEX OCEAN CABLE.

It is stated that Stephen D. Field, a nephew of Cyrus West Field, who was connected with the laying of the first Atlantic cable, has perfected an instrument in his laboratory at Stockbridge, Massachusetts, by the use of which four messages can be sent over a single cable simultaneously. The device is now being used successfully on the cable between Key West, Florida, and Havana, Cuba, and proved serviceable during the recent severe storm. Heretofore it has been possible to send only one message at a time over a cable. Mr. Field has obtained patents on his invention. It was Mr. Field who invented and operated successfully in Stockbridge, early in the eighties, the first American trolley car.

THE TILLINGHAST TIRE PATENTS.

THE Single Tube Automobile and Bicycle Tire Co. have instituted suits against several manufacturers licensed to make tires under the Tillinghast patents to recover royalties claimed to be due and not paid. The suit recently decided in the favor of the patent holding company against the Continental Rubber Works was pending so long that some of the licensees ceased to pay the royalty, on the ground that the action was not being pressed and that they were not receiving the protection due them. When the court rendered its decision several of the licensees paid up and suits are being instituted against the others.

DELAFOND'S GUAYULE PROCESS.

IN reporting on an analysis of guayule produced by Mr. E. Delafond, of Mexico, by a new "physico-mechanical" process, at the "La Victoria" works, hacienda de Sierra Hermosa, at Catorce, state of San Luis Potosi [see THE INDIA RUBBER WORLD, November 1, 1909—page 49], a typographical error occurred which robs the statement of value. The correct figures are:

Pure caoutchouc	88 per cent.
Resin	7 per cent.
Moisture	5 per cent.
Total	100 per cent.

GOOD EXERCISE FOR "CATS PAW" HEELS.

CHARLES A. KING, who started from Port Arthur, Manchuria, in 1905, to walk around the world, and in so doing covered 56,000 miles, left Montreal on October 29, 1909, to walk to Vancouver

over the Canadian Pacific railway tracks, a distance of 2,896 miles, on "Cats Paw" rubber heels, made by Foster Rubber Co. (Boston). He expected to make the entire distance on this one pair of heels. Mr. King carries samples of the heels and makes sales in each town that he visits.

LEATHER BELTING TRADE.

THE annual meeting of the Leather Belting Manufacturers' Association was held at the Hotel Astor, in New York, on November 17, 1909, with a full attendance. Subjects of general interest were taken up relating to freight classification of leather belting, the deep waterways of the Atlantic seaboard, and the credit bureau. A general discussion of matters affecting business affairs was held. The officers for the ensuing year are as follows:

President, Charles T. Page, president; F. A. M. Burrell and Milton H. Cook, vice presidents; George H. Blake, secretary and treasurer. There was a luncheon at the Hotel Astor.

A NEW FIRM IN CRUDE RUBBER.

MR. ROBERT BADENHOP, who has just begun business on his own account in New York, as a broker and importer of crude india-rubber, gutta-percha, and balata, has had a business career which has given him a good knowledge of this trade, having been connected with rubber houses for the past eight years in London, Hamburg, and New York. He has lately returned from Europe, where he formed important connections. In his imports the new business will be backed by the important dry goods firm of Fred Victor & Achelis, at No. 66 Leonard street, at which address the office of Badenhop will be located.

TRADE NEWS NOTES.

THE fee paid by The Diamond Rubber Co. (Akron, Ohio), for filing with the secretary of state a certificate of increase of capital stock to \$10,000,000, was \$5,000.

THE Converse Rubber Shoe Co. are driving artesian wells with a view to providing an independent water supply for their factory at Malden, Massachusetts.

THE Boston Rubber Shoe Co. are reported as having protested against an increase in the assessed valuation of their real estate at Malden, for taxation purposes, from \$365,800 to \$573,400.

MR. E. R. Barton, general manager of the Dove Machine Co. (Lawrence, Massachusetts), who is doing an excellent business with the rubber trade in special machinery and molds, was a recent caller at the offices of THE INDIA RUBBER WORLD.

EDWARD J. Kane, No. 50 Ann street, New York, specializes in the purchase and sale of condemned fire hose, in which, during twenty-five years, he has built up a large business.

WITH a view to improving the fire protection system of Morrisville, Pennsylvania, The Vulcanized Rubber Co., whose factory is located there, have donated to public use a tall steel tower—used by them formerly as a water tower—upon which to mount a fire alarm bell which can be heard throughout the town.

THE Strong Machinery and Supply Co. (No. 48 Franklin street, New York), manufacturers of and dealers in packings, are selling agents for the United States of the Harburger Gummi-Kamm Co.

BOTH of the Wright brothers and Glenn H. Curtiss have been invited to the Aeronautic Symposium that the Rubber Club of America are holding on December 13 at the Algonquin Club, in Boston. It is not certain that they can be present, but the brilliant array of speakers that have already accepted and the moving pictures of aeroplanes in flight assure an entertainment of unusual interest, covering a subject that is to-day uppermost in all minds.

MR. MATLACK LEAVES MILLTOWN.

MR. JAMES C. MATLACK, vice president and general manager of the Michelin Tire Co. (Milltown, New Jersey), since the establishment of the Michelin interest in America, has resigned his connection with that company. Beginning his business career in the bicycle department of the Simmons Hardware Co., in St. Louis, Mr. Matlack's advancement was rapid until he became connected in an important way with the American Bicycle Co. In the fall of 1902 he resigned to join the International A. & V. Tire Co. at Milltown, New Jersey, of which he became president, and when this company was succeeded by the Michelin Tire Co. he became an official of the latter, as above stated. Mr. Matlack has been exceptionally successful as an organizer, business getter, and executive, and his next step in business will be followed with interest.

ESTATES OF FORMER RUBBER MEN.

THE widow of Robert D. Evans, the first president of the United States Rubber Co., who died in Boston on July 6, has filed an inventory of his estate with the Massachusetts tax commissioner. The actual market value on the day of his death is stated at \$10,538,103, a large part being in copper mining shares. The bank deposits were \$2,000,084, and the paintings in the residence of Mr. Evans have been appraised at \$340,000.

The will of Charles A. Hodgman, of the Hodgman Rubber Co., who died on October 5, has been filed with the surrogate at White Plains, New York. The estate, the amount of which is not stated, is left entirely to the widow and son of the testator, in trust, the income to be paid to Mrs. Hodgman during her life time. At her death it is to be divided between the son and a daughter.

RECEIVER FOR GOSHEN TIRE AND RUBBER.

GEORGE P. ROWELL has been appointed receiver for the Goshen Tire and Rubber Co. (Goshen, Indiana), on the petition of Chester O. Henderson, of Indianapolis, in the United States circuit court, who sues for alleged unpaid salary. The company named rented the factory some time operated by the Goshen Rubber Co., but closed some time ago.

THERMOID RUBBER CO.—EXTENSION OF PLANT.

THE Thermoid Rubber Co. (Trenton, New Jersey), have been making extensive extensions and improvements in their plant. One of the new buildings is illustrated on this page. It is 120 x 120 feet in size, of brick and steel construction. The ceiling of the first story is 16 feet high, and in the second story 14 feet on the sides, running to 27 feet in the center. The interior is painted white. The molds and machinery being painted black, a very pretty contrast results. The machinery is motor driven. The plant is equipped with heating and cooling devices of the most modern type. The welfare and the comfort of the men have been considered, both floors being equipped with the most improved washrooms, toilets, lockers, and the like. The sign facing the railroad, which will be noted in the cut, is attracting considerable attention, the same being of blue and white porcelain 38 feet long and 5 feet high. It is said to be the finest sign of the kind ever built. The first floor will be devoted principally to mold work of all kinds,

and the second floor to automobile tires and tubes and other accessories.

RETIREMENT OF MR. LOEWENTHAL.

ON December 1 Mr. Rudolph A. Loewenthal, vice-president of the U. S. Rubber Reclaiming Works (New York), and his son, Clarence H. Loewenthal, secretary of the company, are retiring. It is not probable that Mr. Loewenthal, senior, will engage in active business, though he will remain a director in the company. His son is to take an active interest in a line of business not connected with the rubber trade.

This news leads one to review briefly the many years of success that have attended Mr. Loewenthal as a rubber man. It will be remembered that back in 1881 he began with a small reclaiming factory at Creskill, New Jersey. Then in 1884 the firm of Loewenthal & Morganstern was incorporated, with a factory in Jersey City. Later came the so-called reclaiming trust—The Rubber Reclaiming Co.—incorporated in 1891, and of which Mr. Loewenthal was treasurer until 1894. This was dissolved in 1895, Mr. Loewenthal leaving the rubber business for awhile to become president of the Manhattan Fire Insurance Co. and the Fire Association of New York. In 1899 he sold these out and started up again the Jersey City plant, which for five years had been leased to the New Jersey Car Spring and Rubber Co. The business was incorporated as the Loewenthal Rubber Co. Soon after this he amalgamated with the reclaiming company at Derby and the U. S. Rubber Reclaiming Works, the latter name being retained by the combined business. The history of the company has since been one of continuous success, its growth being represented by the establishment and operation of the great plant at Buffalo, New York.

GLENDALE ELASTIC FABRICS CO.

IMPORTANT additions are being made to the plant of this company, at Easthampton, Massachusetts. When completed the capacity of the works will allow for the introduction of 120 additional looms. There will also be an increased amount of room in the making up and shipping departments.



ONE OF THE NEW BUILDINGS OF THE THERMOID RUBBER CO.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for four weeks, ending November 20:

COMMON STOCK, \$25,000,000.

[Less \$1,344,000 in treasury of a subsidiary company.]
Last Dividend, April 30, 1909—1%.

Week October 30.	Sales 9,375 shares	High 50 ³ / ₄	Low 45 ¹ / ₄
Week November 6.	Sales 500 shares	High 119 ³ / ₄	Low 118 ¹ / ₂
Week November 13	Sales 900 shares	High 50 ³ / ₈	Low 49 ¹ / ₂
Week November 20	Sales 17,700 shares	High 54 ³ / ₄	Low 49 ³ / ₄

For the year—High, 57³/₈, Aug. 19; Low, 27, Feb. 24.
Last year—High, 37¹/₂; Low, 17¹/₂.

FIRST PREFERRED STOCK, \$36,263,000.

Last Dividend, Oct. 30, 1909—2%.

Week October 30.	Sales 2,225 shares	High 119 ¹ / ₂	Low 117 ¹ / ₂
Week November 6.	Sales 500 shares	High 119 ³ / ₄	Low 118 ¹ / ₂
Week November 13	Sales 710 shares	High 118 ¹ / ₂	Low 118 ¹ / ₄
Week November 20	Sales 1,920 shares	High 120	Low 118

For the year—High, 123¹/₂, Aug. 24; Low, 98, Jan. 29.
Last year—High, 108; Low, 76.

SECOND PREFERRED STOCK, \$9,965,000.

Last Dividend, Oct. 30, 1909—1¹/₂%.

Week October 30.	Sales 630 shares	High 85 ¹ / ₄	Low 84
Week November 6.	Sales 300 shares	High 85 ¹ / ₂	Low 85 ¹ / ₂
Week November 13	Sales 700 shares	High 85 ³ / ₈	Low 84 ³ / ₈
Week November 20	Sales 200 shares	High 85	Low 84 ¹ / ₂

For the year—High, 89¹/₂, Aug. 23; Low, 67¹/₂, Feb. 25.
Last year—High, 75¹/₂; Low, 42.

SIX PER CENT. CERTIFICATES, \$20,000,000.

\$15,000,000 issued.

Week October 30.	Sales 126 certs.	High 104 ³ / ₄	Low 104 ¹ / ₂
Week November 6.	Sales 60 certs.	High 105 ¹ / ₄	Low 104 ³ / ₄
Week November 13	Sales 88 certs.	High 105	Low 104 ¹ / ₄
Week November 30	Sales 49 certs.	High 104 ³ / ₈	Low 104 ¹ / ₄

TRIBUTE TO THE LATE MR. ALLERTON.

At a meeting of the committee on resolutions of the New England Rubber Co. the following tribute to the late, George M. Allerton, whose death was reported in the last INDIA RUBBER WORLD, was adopted:

WHEREAS, The members of the New England Rubber Club have lost by death their friend and associate, George M. Allerton, who for many years has served one of our leading companies in its branch of the business, and who by his energy, industry, and ability, attained a position of trust and responsibility in the trade, and by his genial and loyal personality endeared himself to those with whom he came in contact; it is hereby

Resolved, That this Club extend to his family its deep and sincere sympathy.

Resolved, That these resolutions be spread upon the records of the Club and a copy engrossed and sent to his family.

GEORGE P. WHITMORE, Chairman;
ALEXANDER M. PAUL,
ELSTON E. WADBROOK,
Committee on Resolutions.

Boston, October 30, 1909.

TIRES AT THE ATLANTA AUTOMOBILE SHOW.

EVERY tire manufacturer of importance in the United States and most of the smaller concerns in this trade were exhibitors at the Automobile show, held in Atlanta, Georgia, November 6-13. It seems unnecessary to mention these concerns specifically, since they will be on exhibition in the larger New York show a month hence. It is not meant to imply here, however, that the Atlanta automobile show was not an event of importance. Not only were all the tire manufacturers represented there, but the number of makes of automobiles on exhibition was larger than is usual in any one automobile show in New York or Chicago. The city of Atlanta is, more than any other, typical of the "new South." When that division of the United States still remained isolated in so many ways from the rest of the country, Atlanta strove to keep pace with the national progress, with such success that to-day no other city in the country of the same size has made more advancement. Atlanta has the advantage, geographically, of being the center of the south more definitely than

any other place on the map, which fact is illustrated by the tendency of railroad systems to converge to that point. The importance of Atlanta in a commercial way was long ago recognized in the rubber trade, and most of the important concerns in this line opened branches in Atlanta before opening them elsewhere in the South. To-day every tire manufacturer of importance has a branch office in Atlanta, and the automobile manufacturers are following suit. Georgia is one of the most progressive states in the Union and becoming one of the most prosperous. For these reasons it is not surprising that the good roads movement is making great headway there. This, of course, implies that automobiling is gaining favor in the state, and that ultimately the farmers of Georgia will be automobile owners as generally as in the Central West, where the automobile first made its advent in agricultural regions.

BOSTON WOVEN HOSE AND RUBBER CO.

THE Boston Woven Hose and Rubber Co. have filed with the secretary of state of Massachusetts a statement of their financial conditions as required by the statutes, for their business year ending August 31, 1909, the details of which are reproduced below, in comparison with which are given also the figures for the preceding year:

	ASSETS.	
	1909.	1908.
Patents	\$1.00	\$1.00
Land and buildings.....	825,435.97	785,799.71
Machinery and tools.....	562,340.97	508,300.78
Cash	403,168.00	77,984.35
Accounts receivable	468,518.90	467,564.05
Office furniture	1.00	1.00
Merchandise	665,948.96	674,113.69
Total.....	\$2,925,414.80	\$2,513,764.58

LIABILITIES.

	1909.	1908.
Capital stock, preferred.....	\$750,000.00	\$750,000.00
Capital stock, common.....	750,000.00	450,000.00
Loans	455,000.00	695,000.00
Accounts payable	47,789.20	43,669.33
Accrued wages	8,456.80	.....
Surplus	914,168.80	575,095.25
Total.....	\$2,925,414.80	\$2,513,764.58

NEW RUBBER RECLAIMING PLANT.

THE purchase is reported, by J. H. Stedman & Co., Inc., scrap rubber merchants in Boston, of a disused manufacturing plant at South Braintree, Massachusetts, which they purpose converting into a rubber reclaiming factory. The premises referred to are known as the Hollingsworth & Whitney paper mill.

TRADE NEWS NOTES.

THE Elwell Rubber Co. (Trenton, New Jersey) have been made defendants in a suit in the United States circuit court, brought by the Foster Rubber Co., alleging infringement of patents granted to one Beebe.

Imperial Belting Co., Arthur R. Shurtleff, manager (Chicago), have removed from Dearborn street to No. 166 West Kinzie street.

The volume of business done by the rubber stamp and allied trades of St. Louis is estimated by a local newspaper at \$165,000 yearly. There are six houses in the trade, and customers are found as far away as Mexico.

The Gladiator Packing and Rubber Co., of Los Angeles, California, have increased their capital stock to \$200,000.

The New York fire department, on September 29, awarded contracts for 30,000 feet of 2¹/₂-inch cotton fabric rubber-lined hose—one-half each for Manhattan borough and for the boroughs of Brooklyn and Queens.

The excellent monthly publication *Steam*, devoted to the interests of steam users, has been purchased from the Gage Publishing Co. by the Ferguson Publishing Co., No. 114 Liberty street, New York, who will issue it hereafter.

Review of the Crude Rubber Market.

RUBBER quotations at this date show a distinct decline from the level which has been maintained for some time past.

The decline applies to most of the standard grades, including everything under the head of Pará. An actual advance is reported, however, in a few preferred African sorts, the supply of which is limited. Guayule is quoted higher, and Pontianak has gone up to an exceptionally high figure.

Manufacturers, as a rule, are showing less interest in the market, doubtless owing to having covered their most pressing requirements, and in view to the accumulation of visible supplies. But holders continue firm in their position.

The arrivals of rubber at Pará (including caucho) during November were somewhat larger than usual, thus bringing the total for the present crop season to a somewhat larger figure than in any former year, whereas during the first four months of the season the arrivals were smaller than in preceding years. The details by months follow:

	1906.	1907.	1908.	1909.
July	1,840	1,370	1,300	1,400
August	1,690	1,500	1,890	1,870
September	2,070	2,410	2,355	2,020
October	3,030	3,200	3,460	3,275
November	3,480	3,200	3,430	4,060
Total	12,110	11,680	12,435	12,625

[a—To November 27, 1909.]

Receipts at Manãos, which ultimately are included in the Pará statistics, up to the end of October were smaller than for the same period last year, counting rubber alone, and slightly larger if caucho be included.

THE LATEST QUOTATIONS.

Following are the quotations at New York for Pará grades, one year ago, one month ago, and November 30—the current date:

PARA.	Dec. 1, '08.	Nov. 1, '09.	Nov. 30.
Islands, fine, new.....	114@115	185@187	173@174
Islands, fine, old.....	none here	none here	174@175
Upriver, fine, new.....	123@124	203@204	194@195
Upriver, fine, old.....	127@128	none here	195@196
Islands, coarse, new.....	60@ 61	71@ 72	71@ 72
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	92@ 93	...@124	117@118
Upriver, coarse, old.....	none here	none here	none here
Cametá	63@ 64	84@...	82@ 83
Caucho (Peruvian), ball...	90@ 91	115@...	105@106
Caucho (Peruvian), sheet.	74@ 75	...@ 88	none here
Ceylon, fine, sheet.....	129@130	none here	207@208
Ceylon, crepe.....	.....	...@220	208@210

AFRICAN.

Lopori, ball, prime.....	112@113	...@135	136@137
Lopori, strip, prime.....	86@ 87	none here	none here
Aruwimi .....	.....	121@122	118@119
Upper Congo, ball, red.....	.....	129@130	123@124
Ikelemba	none here	none here	none here
Sierra Leone, 1st quality..	97@ 98	122@123	118@119
Massai, red	97@ 98	...@124	118@119
Soudan niggers	85@ 86	...@109	107@108
Cameroon, ball	62@ 63	89@ 90	86@ 87
Benguela	62@ 63	81@ 82	75@ 76
Madagascar, pinky	89@ 90	...@102	98@ 99
Accra, flake	21@ 22	23@...	22@ 23

CENTRALS.

Esmeralda, sausage.....	83@ 84	97@ 98	99@100
Guayaquil, strip.....	69@ 70	85@ 86	84@ 85
Nicaragua, scrap.....	81@ 82	95@ 96	96@ 97
Panama	60@ 61	84@ 85	82@ 83
Mexican, scrap	80@ 81	97@ 98	96@ 97
Mexican, slab	58@ 60	84@ 85	82@ 83
Mangabeira, sheet	56@ 57	82@ 83	67@ 70
Guayule	36@ 37	50@ 51	59@ 60

EAST INDIAN.

Assam	92@ 93	none here	94@ 95
Pontianak .....	.....	...@514	6@6½
Borneo	35@ 45	52@ 53	55@ 64

Late Pará cables quote:

	Per Kilo.	Per Kilo.
Islands, fine.....	7\$850	Upriver, fine.....10\$300
Islands, coarse.....	2\$900	Upriver, coarse.....
		Exchange

Latest Manãos advices:

Upriver, fine.....	10\$450	Exchange
Upriver, coarse.....	5\$400	.....15 21/32d.

Statistics of Para Rubber (Excluding Caucho.)

	NEW YORK.		Total 1909.	Total 1908.	Total 1907.
	Fine and Medium.	Coarse.			
Stocks, Sept. 30...tons	62	80 =	142	79	173
Arrivals, October....	814	366 =	1180	1458	1313
Aggregating	876	446 =	1322	1537	1486
Deliveries, October....	746	360 =	1106	1316	1316
Stocks, October 31..	130	86 =	216	221	170

	PARA.			ENGLAND.		
	1909.	1908.	1907.	1909.	1908.	1907.
Stocks, Sept 30...tons	755	440	572	325	285	550
Arrivals, October.....	2740	3160	2950	730	805	895
Aggregating	3495	3600	3522	1055	1090	1445
Deliveries, October	3265	3080	3105	825	825	850
Stocks, October 31...	230	520	417	230	265	595

World's visible supply, October 31...tons	2,537	2,742	2,779
Pará receipts, July 1 to October 31.....	7,460	7,830	7,670
Pará receipts of Caucho, same dates.....	1,140	1,130	880
Afloat from Pará to United States, Oct. 31	966	586	835
Afloat from Pará to Europe, October 31..	895	1,150	762

African Rubbers.

NEW YORK STOCKS (IN TONS).

October 1, 1908.....	134	May 1, 1909.....	268
November 1.....	134	June 1.....	156
December 1.....	179	July 1.....	268
January 1, 1909.....	156	August 1.....	130
February 1.....	157	September 1.....	123
March 1.....	200	October 1.....	67
April 1.....	178	November 1.....	134

Antwerp.

THE rubber offered at the monthly inscription on November 18 consisted of 124 lots, comprising about 254 tons, whereof 196 tons were of Congo sorts. A notable feature was the percentage of plantation rubber, no less than 36 tons appearing from the Malay states alone. The following table affords a

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for car-load lots, per pound—show a slight advance since last month:

Old rubber boots and shoes—domestic.....	10¾@10⅞
Old rubber boots and shoes—foreign.....	10¼@10⅜
Pneumatic bicycle tires.....	7 @ 7½
Automobile tires	7½@ 7⅞
Solid rubber wagon and carriage tires.....	9¾@ 9½
White trimmed rubber	10 @ 11
Heavy black rubber.....	6½@ 6¾
Air brake hose	5 @ 5¼
Garden hose	2⅞@ 3
Fire and large hose.....	3¼@ 3⅞
Matting	1⅞@ 2

classification of the offerings, with the range of brokers' estimations—in francs per kilogram—on the different qualities under each heading:

GRADES.	Kilograms.	Estimations.
Congo	6,462	6.25@14.25
Congo Kataka	4,596	11.00@14.50
Congo Djuma	16,038	7.25@10.75
Congo Kasai	74,792	7.25@14.50
Congo Plantation (Manit)	198	13.50@21.50
Upper Congo	17,490	7.00@14.35
Upper Congo Moreala	3,011	10.70@12.50
Upper Congo Aruwimi	51,224	9.30@13.40
Upper Congo Bokola	3,272	10.75
Upper Congo Equateur	6,237	14.50@14.70
Upper Congo Uelè	9,145	13.00@14.50
Upper Congo Lomami	3,438	8.25@13.90
Soudan Niggers	6,650	11.50@13.00
Nigerian Lumps	2,334	7.75
Madagascar	700	7.75
Rio Nunez (Upper Niger)	1,200	14.00
Peruvian Tails	934	9.25
Sumatra	238	14.75@15.00
Batavia	7,099	5.50@12.50
Java	1,724	12.50@15.00
Java Biscuit (plantation)	49	24.50
Straits Settlements (plantation)	36,157	19.20@15.00
Dutch East Indies (plantation)	620	14.75
Total	253,527	

Sales amounted to 216 tons. Prices realized averaged a decline of about 1 per cent. below estimations. Plantation sorts did not realize expectations. A few choice lots of Congo sorts, however, sold at an advance, including—

2404 kilos	Upper Congo Uelè	Estimation.	Sold.
1952 "	Upper Congo Equateur	14.50	15.02½
9366 "	Congo Kasai black I	14.20	15.02½
1839 "	Upper Congo ordinary	15.50	14.67½
301 "	Congo Katanza	14.35	14.40
		14.50	14.92½

Stocks remaining after the sale were about 580 tons. Next sale December 16, when about 600 tons will be offered.

ZELLER, VILLINGER & Co. report [October 21]:

In every one of our circulars of late we have drawn the attention upon the low level of prices for medium sorts compared with prices for Pará grades. In to-day's auction here the disproportional difference in prices has again been lowered in so far as sale's results turn out at about 6 per cent. above valuations. For a lot black Pará rather mixed 14.75 francs [= \$2.80] has been paid. Next auction here will take place about the end of next month and include likely about 500 tons. The future of the rubber market seems rather uncertain. The near future entirely depends upon the state of the navigation on the Amazon river and its tributaries. If low water continues—as it seems it will do still—present high prices are likely to rule until December or January next, just as it was the case some years ago. However, a reaction later on seems to us unavoidable, though the same may perhaps turn out less sharp than many people may expect at present, for it must be borne in mind that consumption of rubber everywhere is very big and still increasing.

Rubber Receipts at Manaus.

DURING October and four months of the crop season, for three years [courtesy of Messrs. Scholz & Co.]:

FROM.	October.			July-October.		
	1909.	1908.	1907.	1909.	1908.	1907.
Rio Purús-Acre	624	1,113	952	1,896	2,515	2,107
Rio Madeira	586	304	196	1,328	1,175	1,036
Rio Juruá	324	180	156	619	598	465
Rio Javary-Iquitos	707	383	508	1,034	896	1,034
Rio Solimões	100	152	209	240	253	395
Rio Negro	10	6	2	14	6	3
Total	2,351	2,138	2,023	5,131	5,443	5,040
Caucho	415	214	222	1,176	846	784
Total	2,766	2,352	2,245	6,307	6,289	5,824

Rotterdam.

At the inscription on November 9 about 9½ tons of Java plantation rubber was offered in 18 lots, of which 205 kilograms were *Hevea*, 8,720 *Ficus*, and 568 *Castilloa*—total, 9,493 kilograms.

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weight in Pounds.]

OCTOBER 25.—By the steamer *Cuthbert*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	TOTAL.
Poel & Arnold	228,800	24,000	85,100	24,300	362,300
New York Commercial Co.	217,000	65,800	65,100	6,600	354,500
General Rubber Co.	59,300	5,300	45,000		109,600
Hagemeyer & Brunn	42,200		56,800		99,000
A. T. Morse & Co.	32,200	2,500	22,100		56,800
C. P. dos Santos	6,400	700			7,100
L. Hagenaers & Co.	3,100	700	900		4,700
Total	589,000	99,000	275,000	31,000	994,000

NOVEMBER 4.—By the steamer *Polycarp*, from Manáos and Pará:

A. T. Morse & Co.	134,200	6,600	84,300		225,100
New York Commercial Co.	97,600	22,400	25,900	41,700	187,600
General Rubber Co.	97,100	15,500	45,400	1,000	159,000
Poel & Arnold	55,700	5,000	68,000		124,300
Hagemeyer & Brunn	70,600	6,000	35,600		112,200
C. P. dos Santos	61,000	3,600	9,900	8,600	83,100
Edmund Reek & Co.	8,900		7,300		16,200
L. Johnson & Co.			7,900		7,900
Total	525,100	59,100	284,900	51,300	920,300

NOVEMBER 13.—By the steamer *Clemens*, from Manáos and Pará:

General Rubber Co.	336,300	59,900	81,200	2,100	479,500
Poel & Arnold	150,300	22,900	74,100		247,300
A. T. Moore & Co.	114,500	0,100	83,000	500	207,100
New York Commercial Co.	110,600	18,000	49,200	23,900	201,700
Hagemeyer & Brunn	23,600	1,400	24,400		49,400
Edmund Reek & Co.	4,300	700	3,300		8,300
G. Amsinck & Co.	700		5,300		6,000
Total	740,300	112,000	320,500	26,500	1,199,300

PARA RUBBER VIA EUROPE.

	POUNDS.
Oct. 22.—By the <i>Lusitania</i> =Liverpool:	
General Rubber Co. (Fine)	8,000
Oct. 25.—By the <i>Cedric</i> =Liverpool:	
Raw Product Co. (Coarse)	7,000
Oct. 25.—By the <i>Alliance</i> =Mollendo:	
W. R. Grace & Co. (Caucho)	17,000
Oct. 28.—By the <i>Bluecher</i> =Hamburg:	
W. L. Gough Co. (Coarse) ..	6,500
New York Com. Co. (Coarse) ..	4,000
Oct. 29.—By the <i>Mauretania</i> =Liverpool:	
New York Com. Co. (Fine) ..	25,000
Poel & Arnold (Fine)	45,000
General Rubber (Fine)	11,500
General Rubber Co. (Coarse) ..	22,500
Nov. 1.—By the <i>Lapland</i> =Antwerp:	
A. T. Morse & Co. (Fine)	4,500
Nov. 1.—By the <i>Baltic</i> =Liverpool:	
Livesey & Co. (Fine)	4,500
Nov. 3.—By the <i>Carmania</i> =Liverpool:	
Poel & Arnold (Fine)	56,000
General Rubber Co. (Fine) ..	11,000
General Rubber Co. (Coarse) ..	11,500
Nov. 6.—By the <i>Campania</i> =Liverpool:	
General Rubber Co. (Fine) ..	43,000
New York Com. Co. (Fine) ..	5,500
Nov. 12.—By the <i>Lusitania</i> =Liverpool:	
General Rubber Co. (Fine)	25,000
Nov. 15.—By the <i>Celtic</i> =Liverpool:	
Livesey & Co. (Coarse)	7,000

OTHER NEW YORK ARRIVALS.

CENTRALS.		
[*This sign, in connection with imports of Centrals, denotes Guayule rubber.]		
Oct. 22.—By the <i>Eitel</i> =Colombia:		
Maitland, Coppell Co.	11,500	
A. Held	5,500	17,000
Oct. 22.—By the <i>Advance</i> =Colon:		
G. Amsinck & Co.	14,000	
Isaac Brandon & Bros.	9,000	
J. Sambrada & Co.	4,000	
A. Santos & Co.	3,500	
Mecke & Co.	3,000	
L. Johnson & Co.	2,000	
American Trading Co.	2,000	
Piza, Nephews Co.	1,500	
Andean Trading Co.	1,000	
Dumarest Bros.	1,000	41,000
Oct. 22.—By the <i>Byron</i> =Bahia:		
Poel & Arnold	23,000	
J. H. Rossback & Bros.	17,000	
A. Hirsch & Co.	13,500	
New York Commercial Co.	11,500	65,000
Oct. 25.—By the <i>Cedric</i> =Liverpool:		
Rubber Trading Co.	22,500	
Raw Product Co.	25,000	47,500
Oct. 25.—By <i>El Monte</i> =Galveston:		
Continental-Mexican Rub. Co. *	100,000	
Ed. Behringer	10,000	*200,000
Oct. 25.—By the <i>Alliance</i> =Colon:		
Isaac Brandon & Bros.	10,000	
G. Amsinck & Co.	5,500	
Andean Trading Co.	2,500	
Manhattan Rubber Mfg. Co. ..	2,000	
National Sewing Machine Co. ..	1,500	
Mecke & Co.	1,000	
Dumarest Bros.	1,000	23,500

Oct. 27.—By the <i>El Sid</i> =New Orleans:		
A. T. Morse & Co.	1,000	
A. N. Rotholz	1,000	
Manhattan Rubber Co.	1,000	3,000
Oct. 28.—By the <i>Carib</i> =Honduras:		
Eggers & Co.		6,500
Oct. 28.—By the <i>Hugin</i> =Tampico:		
Ed. Maurer	*160,000	
Poel & Arnold	*70,000	
New York Commercial Co.	*34,000	*264,000
Oct. 28.—By the <i>Thames</i> =Colon:		
New York Commercial Co.	20,000	
Maitland, Coppell & Co.	3,500	
G. Amsinck & Co.	3,500	
A. Held	3,000	
Kunhardt & Co.	2,500	
Suzarte & Whitney	2,000	
A. M. Capen's Sons	1,500	
A. Rosenthal & Sons	1,500	
Isaac Brandon & Bros.	2,000	
R. Gallego & Co.	1,000	40,500
Oct. 29.—By the <i>Mauretania</i> =Liverpool:		
George A. Alden & Co.		45,000
Oct. 29.—By the <i>Morro Castle</i> =Mexico:		
H. Marquardt & Co.	5,500	
Harburger & Stack	5,000	
Chilean Export Co.	3,500	
A. T. Morse & Co.	1,000	
E. N. Tibbals & Co.	1,000	
W. L. Wadleigh	1,000	17,000
Nov. 1.—By the <i>Oregana</i> =Mexico:		
George A. Alden & Co.		13,500
Nov. 1.—By the <i>Colon</i> =Colon:		
L. Johnson & Co.	10,000	
Piza, Nephews & Co.	8,500	
G. Amsinck & Co.	7,500	
J. Sambrada & Co.	1,500	

RUBBER FLUX

No. 17. Particularly adapted to softening material for tubing machine. Almost universally used for waterproofing wire.

No. 48. For fluxing pigments in compounding. A valuable adjunct to the manufacture of moulded goods as it DOES NOT BLOW UNDER CURE.

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Largest Producers of Guayule Rubber, Operating Nine Factories.

Dumarest Bros.....	1,500	
Meyer Hecht.....	1,000	30,000
Nov. 1.—By <i>El Mar</i> =Galveston:		
Continental Mexican Rubber Co.....		*330,000
Nov. 3.—By the <i>Joachim</i> =Colon:		
A. Santos & Co.....	10,000	
G. Amsinck & Co.....	3,000	
Roldan & Van Sickle.....	1,500	
L. Johnson & Co.....	1,000	
A. Held.....	1,000	16,500
Nov. 4.—By the <i>Yummeri</i> =Tampico:		
Ed. Maurer.....	*100,000	
Poel & Arnold.....	*56,000	*156,000
Nov. 4.—By <i>El Alba</i> =Galveston:		
Continental-Mexican Rubber Co.....		*70,000
Nov. 5.—By the <i>Lasari</i> =Bahia:		
J. D. Rosshack & Bros.....	50,000	
New York Commercial Co.....	30,000	
Poel & Arnold.....	22,500	
A. Hirsch & Co.....	22,500	125,000
Nov. 6.—By the <i>Matanzas</i> =Tampico:		
Ed. Maurer.....	*55,000	
New York Commercial Co.....	*35,000	
Poel & Arnold.....	*30,000	*120,000
Nov. 8.—By the <i>Panama</i> =Colon:		
G. Amsinck & Co.....	13,500	
A. Santos & Co.....	2,500	
L. Johnson & Co.....	2,500	
F. Lambrada & Co.....	1,500	
Piza, Nephews & Co.....	1,500	
Dumarest Bros.....	1,000	
Henry Mann & Co.....	1,000	23,500
Nov. 10.—By <i>Siberia</i> =Greytown:		
G. Amsinck & Co.....	3,500	
Jose Julia & Co.....	1,500	
Suzarte & Whitney.....	1,000	
Isaac Brandon & Bros.....	3,000	9,000
Nov. 11.—By <i>El Dia</i> =Galveston:		
Continental-Mexican Rubber Co.....		*165,000
Nov. 11.—By the <i>Atrata</i> =Colombia:		
J. H. Rosshack & Bros.....	7,500	
A. M. Capen's Sons.....	2,000	
Maitland, Coppel & Co.....	5,500	
A. Held.....	1,500	
W. R. Grace & Co.....	2,000	
J. Sambrada & Co.....	1,000	
American Trading Co.....	1,000	20,500
Nov. 13.—By the <i>Mexico</i> =Frontera:		
Harburger & Stack.....	1,500	
H. Marquardt & Co.....	1,500	
E. Steiger & Co.....	1,000	
A. Dumont & Co.....	1,000	
A. Klipstein & Co.....	1,000	6,000
Nov. 15.—By <i>El Monte</i> =Gaveston:		
Continental-Mexican Rubber Co.....		*70,000
Nov. 15.—By the <i>Allianza</i> =Colon:		
Isaac Brandon & Bros.....	10,000	
J. Sambrada & Co.....	6,000	
L. Johnson & Co.....	5,000	
G. Amsinck & Co.....	4,000	
De Sola Bros. & Pardo.....	3,000	
Piza, Nephews & Co.....	3,000	
Dumarest Bros.....	1,500	32,500
Nov. 15.—By the <i>Proteus</i> =New Orleans:		
A. T. Morse & Co.....	6,000	
Manhattan Rubber Co.....	2,000	
A. D. Rotholz.....	1,500	
G. Amsinck & Co.....	1,000	
Wessels Kulenkampff & Co.....	1,000	11,500
Nov. 16.—By <i>El Dorado</i> =Galveston:		
Continental-Mexican Rubber Co.....		*165,000
Nov. 17.—By the <i>Manzanillo</i> =Tampico:		
Ed. Maurer.....	*85,000	
Nov. 18.—By the <i>Prins Wilhelm</i> =Colon:		
A. Santos & Co.....	7,000	
G. Amsinck & Co.....	5,000	
A. Rosenthal & Son.....	3,500	
West Coast Rubber Co.....	1,500	
Roldan & Van Sickle.....	1,500	
A. Held.....	1,000	
Isaac Brandon & Bros.....	1,000	20,500
Nov. 19.—By the <i>Comers</i> =New Orleans:		
A. T. Morse.....	2,500	
For Europe.....	2,500	5,000
Nov. 20.—By the <i>Manterey</i> =Mexico:		
J. W. Wilson & Co.....	2,000	
H. Marquardt & Co.....	1,000	
Harburger & Stack.....	1,000	
American Trading Co.....	1,000	5,000

AFRICAN.

POUNDS.

A. T. Morse & Co.....	23,000
Rubber Trading Co.....	17,000
George A. Alden & Co.....	9,000
W. L. Gough Co.....	6,000
General Rubber Co.....	4,000
106,000	
Oct. 22.—By the <i>Monessa</i> =Lisbon:	
Poel & Arnold.....	85,000
Oct. 25.—By the <i>Cedric</i> =Liverpool:	
Poel & Arnold.....	13,500
A. T. Morse & Co.....	11,500
25,000	
Oct. 27.—By the <i>Kroonland</i> =Antwerp:	
A. T. Morse & Co.....	11,500
11,500	
Oct. 28.—By the <i>Blucher</i> =Hamburg:	
Livesey & Co.....	11,000
A. T. Morse & Co.....	73,000
Poel & Arnold.....	8,000
W. L. Gough Co.....	7,000
Rubber Trading Co.....	11,000
George A. Alden & Co.....	4,500
114,500	
Nov. 1.—By the <i>Baltic</i> =Liverpool:	
George A. Alden & Co.....	37,000
Livesey & Co.....	5,000
General Rubber Co.....	4,500
56,500	
Nov. 1.—By the <i>Lapland</i> =Antwerp:	
A. T. Morse & Co.....	78,000
W. L. Gough Co.....	11,000
Poel & Arnold.....	11,500
George A. Alden & Co.....	7,000
107,500	
Nov. 3.—By the <i>Carmania</i> =Liverpool:	
Poel & Arnold.....	28,500
General Rubber Co.....	22,500
Livesey & Co.....	20,000
A. T. Morse & Co.....	2,500
George A. Alden & Co.....	3,500
71,000	
Nov. 3.—By the <i>Louisa</i> =Lisbon:	
W. L. Gough Co.....	33,500
A. T. Morse & Co.....	15,000
48,500	
Nov. 6.—By the <i>Campania</i> =Liverpool:	
Rubber Trading Co.....	15,000
H. A. Gould Co.....	5,500
20,500	
Nov. 8.—By the <i>Arabic</i> =Liverpool:	
George A. Alden & Co.....	13,500
13,500	
Nov. 9.—By the <i>Finland</i> =Antwerp:	
Poel & Arnold.....	5,500
A. T. Morse & Co.....	3,500
Livesey & Co.....	3,500
12,500	
Nov. 10.—By the <i>Irene</i> =Genoa:	
W. L. Gough Co.....	7,000
7,000	
Nov. 11.—By the <i>Majestic</i> =London:	
George A. Alden & Co.....	120,000
120,000	
Nov. 11.—By the <i>Grant</i> =Hamburg:	
A. T. Morse & Co.....	70,000
Poel & Arnold.....	50,000
George A. Alden & Co.....	35,000
Rubber Trading Co.....	9,000
W. L. Gough Co.....	4,500
168,500	
Nov. 12.—By the <i>Lusitania</i> =Liverpool:	
George A. Alden & Co.....	34,000
34,000	
Nov. 15.—By the <i>Celtic</i> =Liverpool:	
H. A. Gould Co.....	9,000
Poel & Arnold.....	5,500
Livesey & Co.....	5,000
A. T. Morse & Co.....	18,000
Rubber Trading Co.....	2,500
40,000	
Nov. 17.—By the <i>Zealand</i> =Antwerp:	
A. T. Morse & Co.....	10,000
10,000	
Nov. 17.—By the <i>Oceanic</i> =London:	
George A. Alden & Co.....	8,000
8,000	
Nov. 19.—By the <i>Guyana</i> =Bordeaux:	
George A. Alden & Co.....	33,500
C. P. dos Santos.....	5,500
39,000	

EAST INDIAN.

[*Denotes plantation rubber.]

POUNDS.

Oct. 25.—By the <i>Philadelphia</i> =London:	
Poel & Arnold.....	*60,000
60,000	
Oct. 25.—By the <i>Indrawadi</i> =Singapore:	
W. L. Gough Co.....	6,500
Heabler & Co.....	5,500
12,000	
Oct. 25.—By the <i>Welshman</i> =Singapore:	
George A. Alden & Co.....	25,000
Poel & Arnold.....	22,500
O. Isrutein & Co.....	13,500
61,000	
Oct. 27.—By the <i>Berlin</i> =Genoa:	
New York Commercial Co.....	*5,000
5,000	
Nov. 1.—By the <i>St. Paul</i> =London:	
Poel & Arnold.....	*13,500
13,500	
Nov. 1.—By the <i>Denmainz</i> =Colombo:	
A. T. Morse & Co.....	*13,500
New York Commercial Co.....	*2,500
*16,000	

Nov. 3.—By the <i>Minerva</i> =London:	
General Rubber Co.....	*20,000
20,000	
Nov. 4.—By the <i>Adriatic</i> =London:	
New York Commercial Co.....	*10,000
10,000	
Nov. 8.—By the <i>Arabic</i> =Liverpool:	
Robinson & Co.....	15,500
15,500	
Nov. 8.—By the <i>New York</i> =London:	
A. T. Morse & Co.....	*13,500
13,500	
Nov. 9.—By the <i>Mesaba</i> =London:	
General Rubber Co.....	*17,000
17,000	
Nov. 13.—By the <i>Mattapo</i> =Colombo:	
New York Commercial Co.....	*9,000
9,000	
Nov. 15.—By the <i>Menapolis</i> =London:	
A. T. Morse & Co.....	*11,000
Raw Products Co.....	*5,000
*16,000	
Nov. 17.—By the <i>Oceanic</i> =London:	
New York Commercial Co.....	*33,000
Poel & Arnold.....	*9,000
*42,000	
Nov. 18.—By the <i>Suttoria</i> =Colombo:	
A. T. Morse & Co.....	*22,500
New York Commercial Co.....	*3,500
*26,000	

GUTTA-JELUTONG.

Oct. 25.—By the <i>Indrawadi</i> =Singapore:	
Heabler & Co.....	450,000
W. L. Gough Co.....	425,000
Poel & Arnold.....	220,000
Littlejohn & Co.....	150,000
1,245,000	
Oct. 25.—By the <i>Welshman</i> =Singapore:	
Heabler & Co.....	850,000
W. L. Gough Co.....	325,000
Poel & Arnold.....	300,000
L. C. Hopkins Co.....	225,000
1,700,000	
Nov. 3.—By the <i>Carmania</i> =Liverpool:	
W. L. Gough Co.....	22,000
22,000	
Nov. 8.—By the <i>Lothian</i> =Singapore:	
W. L. Gough Co.....	110,000
Poel & Arnold.....	100,000
210,000	

GUTTA-PERCHA.

POUNDS.

Oct. 22.—By the <i>Lincoln</i> =Hamburg:	
E. Oppenheim.....	11,000
11,000	
Oct. 25.—By the <i>Indrawadi</i> =Singapore:	
W. L. Gough Co.....	22,500
George A. Alden & Co.....	11,000
33,500	
Nov. 11.—By the <i>Grant</i> =Hamburg:	
E. Oppenheim.....	10,000
10,000	

BALATA.

Oct. 27.—By the <i>Manoa</i> =Trinidad:	
George A. Alden & Co.....	9,000
G. Amsinck & Co.....	2,500
11,500	
Nov. 3.—By the <i>Suriname</i> =Trinidad:	
G. Amsinck & Co.....	7,000
7,000	
Nov. 4.—By the <i>Guiana</i> =Demarara:	
George A. Alden & Co.....	9,000
Frame & Co.....	10,000
19,000	
Nov. 9.—By the <i>Maracayne</i> =Trinidad:	
G. Amsinck & Co.....	11,000
J. A. Pauli & Co.....	2,500
Middleton & Co.....	2,500
Frame & Co.....	1,000
Ed Maurer.....	1,000
18,000	

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—OCTOBER.

Imports:	Pounds.	Value.
India-rubber.....	6,591,715	\$7,375,123
Balata.....	81,043	41,085
Gutta-percha.....	92,871	16,495
Gutta-jelutong (Pontianak).....	3,376,728	110,308
Total.....	10,142,358	\$7,542,921
Exports:	Pounds.	Value.
India-rubber.....	99,508	\$68,549
Reclaimed rubber.....	65,899	7,794
Rubber scrap, imported.....	1,635,761	\$136,869

BOSTON ARRIVALS.

POUNDS.

SEPT. 12.—By the <i>Cymric</i> =Liverpool:	
Poel & Arnold (African).....	34,000
34,000	
SEPT. 13.—By the <i>St. Patrick</i> =Singapore:	
George A. Alden & Co. (Jelutong).....	527,000
Poel & Arnold (Jelutong).....	95,000
Heabler & Co. (Gutta-Percha).....	50,000
642,000	
SEPT. 22.—By the <i>Michigan</i> =Liverpool:	
Poel & Arnold (African).....	45,000
45,000	
SEPT. 27.—By the <i>Radania</i> =Hamburg:	
Poel & Arnold (African).....	11,500
11,500	



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London.

NOVEMBER 2.—The offerings of Plantation at to-day's auction are reported by Lewis & Peat at about 120 tons Straits and Malaya and 25 tons Ceylon. Gow, Wilson & Stanton, Limited, report that a steady demand existed for all descriptions, at prices showing very little change from what prevailed a fortnight ago. To-day's quotations:

Sheet and Biscuit:

Smoked sheet..... 9s. 4d. @ 9s. 8½d.
 Good to fine sheet..... 9s. — @ 9s. 1d.
 Good to fine biscuits..... 9s. — @ 9s. 1d.

Crepe:

Very pale..... 9s. 1d. @ 9s. 3½d.
 Medium and palish..... 8s. — @ 9s. —
 Dark and brown..... 5s. — @ 7s. 10½d.

Unwashed Scrap:

Medium to fine..... 6s. 2d. @ 6s. 8½d.
 Dark and low..... 4s. 3d. @ 6s. 1d.

Smoked sheet from Highlands estate established the highest quotation, 9s. 8½d. [= \$2.36.1] the same grade from Vallambrosa realizing 9s. 8¼d. [= \$2.35.6]. A few specially good lots were competed for and sold up to 9s. 3½d. [= \$2.26.6] per pound.

The price of fine hard Pará to-day on the spot is 8s. 10d. [= \$2.04.9].

Liverpool.

WILLIAM WRIGHT & Co. report [November 1]:

Fine Pará.—The market has been active but nervous, and consequently subject to violent fluctuations, but on balance there is a strong undercurrent of strength, and at each sensible reaction in prices, strong buying has taken place on behalf of the principal operators. This has been especially marked for the distant positions, and at about 7s. 4d. [= \$1.76] per pound there are and have been strong buyers right up to the end of the crop, which tends to confirm what we stated in our previous issue—that manufacturers must reckon on a basis of at least 7s. [= \$1.68] per pound. Receipts, in comparison with demand, especially the American one, continues small, and as there is a considerable amount to be covered in during the next two months, prices of the near positions have advanced 5d. per pound within the last week, closing with rather buyers than sellers at quotations.

British Official Statistics.

For ten months ending October 31:

	INDIA-RUBBER.		
	1907.	1908.	1909.
Imports.....pounds	63,850,056	52,944,752	63,451,808
Exports.....	33,989,416	31,656,016	36,635,760
Net imports.....	29,860,640	21,288,736	26,816,048

	GUTTA-PERCHA.		
	1907.	1908.	1909.
Imports.....pounds	5,616,240	2,894,640	3,753,792
Exports.....	968,520	464,800	462,560
Net imports.....	4,647,720	2,429,840	3,291,232

Antwerp.

RUBBER STATISTICS FOR OCTOBER.

DETAILS.	1909.	1908.	1907.	1906.	1905.
Stocks, Sept. 30.....kilos	397,454	654,161	719,005	566,683	566,735
Arrivals in October.....	265,185	55,4756	237,963	509,727	555,920
Congo sorts.....	199,664	487,104	180,360	444,820	391,112
Other sorts.....	65,521	67,952	57,597	64,898	164,808
Aggregating.....	662,639	1,208,917	956,968	1,076,410	1,122,655
Sales in October.....	197,808	546,813	233,152	455,329	568,172
Stocks, October 31.....	464,831	662,104	723,816	621,081	554,483
Arrivals since Jan. 1.....	3,836,338	4,217,919	4,302,317	4,762,232	4,615,168
Congo sorts.....	2,858,957	3,583,058	3,656,700	3,702,744	3,543,296
Other sorts.....	977,381	634,861	645,617	1,059,488	1,071,872
Sales since Jan. 1.....	3,967,242	4,562,709	4,236,685	4,876,338	4,602,046

RUBBER ARRIVALS FROM THE CONGO.

OCTOBER 18.—By the steamer *Bruvellesville*:

Bunge & Co.....(Société Générale Africaine) kilos	78,900
Do.....(Société Abir)	7,800
Do.....(Comptoir Commercial Congolais)	14,300
Do.....(Comité Spécial Katanga)	1,500
Do.....(Société Abir)	7,800
Do.....(Chemins de fer Grand Lacs)	12,300
Société Coloniale Anversoise.....(Belge de Haut Congo)	6,100
Do.....	4,300
Do.....(Sud Cameron)	8,900
L. & W. Van de Velde.....(Cie. du Kasai)	99,000
Do.....	3,000
Charles Dethier.....(American Congo Co.)	3,500
Société Générale de Commerce.....	1,600
Cassart & Henrion.....	1,300
	244,700

NOVEMBER 8.—By the steamer *Albertville*:

Bunge & Co.....(Société Générale Africaine) kilos	118,500
do.....(Société Abir)	3,900
do.....(Chemins de fer Grands Lacs)	6,800
do.....(Société Anversoise)	400
do.....(Comptoir Commercial Congolais)	28,300
do.....(Comité Spécial Katanga)	4,100
do.....(Cie. du Kasai)	76,700
Société Coloniale Anversoise.....(Belge du Haut Congo)	400
do.....(Cie. du Lomani)	7,400
do.....	5,900
Société Equatoriale Congolaise.....	350
M. S. Cols.....	850
L. & W. Van de Velde.....	4,200
Congo Trading Co.....	325
Charles Dethier.....(American Congo Co.)	2,500
	260,625

LITTLE BUT GOOD.—The Reading Rubber Stamp Works (Reading, Pennsylvania) recently received a check for two cents from a local firm in payment of a balance on an account. The check is kept as a curiosity, says a local paper, and is prized far above its actual value.

IF THERE IS TROUBLE
 I can help you. I have
 experience in straightening
 little difficulties.
J. MAYWALD, F. C. S.,
 CONSULTING CHEMIST,
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INDIA RUBBER WORLD

Twentieth
 Anniversary
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JANUARY 1, 1910.

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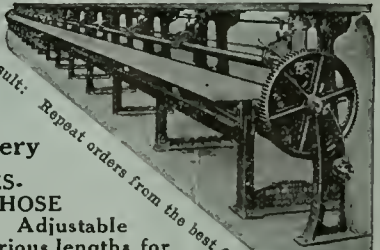
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OUR FIRST SCORE OF YEARS.

IN appealing again to the trade for support THE INDIA RUBBER WORLD would not imply any particular merit in the fact that twenty years of continuous publication have been completed, and still less from the control of the paper having remained constant during the same period, and its actual making in the hands of a staff so little changed.

And yet a period of twenty years counts in the career of any business undertaking; it counts in the life of the greater and the lesser journals; twenty years are an item in estimating the good will of an institution. Standing in the trade for so long a time gives the management an acquaintance with its interests not to be gained in a day, and affords an opportunity for usefulness which, if taken advantage of, is widened with the completion of every year.

Not the least element of such success as THE INDIA RUBBER WORLD may have attained is credited in this office to the fact of the management having been able to carry out the declaration of principles laid down in the first number, the chief item of which was independence from control by any business house or organization or combination. This declaration is renewed, and the maintenance of the principles of ownership by the man-

Twentieth Anniversary Number

First Issue, October 15, 1889

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agement alone will be the first aim of THE INDIA RUBBER WORLD in future as in the past.

The continued coöperation of the trade is solicited, since this is the basis of what merit THE INDIA RUBBER WORLD may have as the rubber man's newspaper and a record of its technical progress. With renewed assurances of distinguished appreciation of the Patrons of this paper, the Editor hopes to continue to command their esteem by making of it an institution of practical value to the trade.

WHAT WE HAVE RECORDED.

DEVELOPMENT on a commercial scale of rubber culture, based upon scientific study of planting, latex extraction, and treatment of latex. Large companies organized for carrying on such work, and systematic management. Local and international rubber exhibitions for the promotion of the cultural interest. Introduction of mechanical devices and apparatus for dealing with latex. Rubber planting shares on the leading bourses in Europe.

Interest created in the Amazon region in more systematic dealing with rubber production. Large corporations succeeding the haphazard work of individual and irresponsible *seringueiros*. The Amazon taking a stand to withstand the competition of the planting interest in British Asia and in the colonies of continental powers. Movement to improve transportation facilities in the Amazon region.

Rubber discovered in the Congo region and elsewhere in Africa, with the rise and decline of production in the different colonies; creation of new rubber markets in Antwerp and other European capitals; the Congo "red rubber" scandals, calling attention to the hardships attending the collection of forest rubber in any country, with the probable result that civilized people will insist upon their amelioration, whether in Africa or America.

Scientific rubber production introduced into Africa in the colonies of all the Powers, particularly cultural schools by the French and planting in the German possessions.

The utilization of rubber yielding species not before of recognized value, including the guayule shrub in Mexico, the product of which now amounts to millions of pounds yearly.

The coming of the pneumatic tire, first for bicycles and later for the automobile, creating the largest single feature of rubber goods production. The consequent development of means of travel, forming a basis for important new industries, the whole affecting social life in civilized countries and promoting travel in hitherto

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remote lands. Other than pneumatic tires, though in use before, have come into an immensely increased demand, with important commercial results.

Introduction of miscellaneous rubber goods into many countries where their use before was unknown or not usual, with a generally beneficial result to the consumers, and increased profits both to the producers of the goods and the supplies of crude rubber. The use of rubber footwear practically has been introduced into Europe in this period even in the countries longest accustomed to rubber goods in general.

Improvement of rubber reclaiming until the product has come to be utilized in the production of practically every line of rubber goods on the list. Today there are grades of reclaimed rubber selling at higher prices than grades of crude in large demand.

Perfection of the acid curing process in the production of many lines of specialties with results not attainable so satisfactorily under any other system, particularly in druggists' sundries and such like goods.

Disposition of people engaged in the rubber interest in any way to write on the same, and of people in and outside of the industry to read on the subject; the appearance of a mass of books, reports, and pamphlets, and the constant reporting of rubber news in the daily journals and leading periodicals in every field.

TWENTY YEARS IN JAPAN.

THE progress which the Japanese have made in rubber forms one of the interesting chapters in the history of the industry for the last two decades. At the beginning of this period there was not in Japan anything which in any other country would have been called a "rubber factory." A few determined pioneers, however, were using rubber, and getting commercial results from it—small, to be sure, but of so practical a character as to serve as the foundation of creditable manufacturing establishments today.

The beginnings of the industry in America and in Europe were characterized by inventions so numerous as to burden the patent office records; by a continuous story of originality in mechanical and chemical fields. It has been charged that the Japanese have invented nothing in the rubber manufacture, but have been mere adapters of foreign ideas. Why should they not profit by the work of others, instead of waiting to work out a rubber industry of their own?

The Japanese have been adapters, but not more than has been common in the building up of the rubber industry in the United States, Great Britain, and so on. In fact the growth of the industry has been based upon friendly international relations, due to the fact that these are all "Western nations"—one family, as compared with the racial differences which divide Orient and Occident. And here let it be said that ingenuity may be shown

even in "adaptation." If no Japanese can claim as yet to have invented any rubber machine or process of note, they have shown great skill in getting results from foreign inventions, worked often under unfavorable circumstances. If a machine broke down, thousands of miles from suitable facilities for its repair, the machine was repaired none the less; if process secrets were guarded from them, they have found out by patient experimentation how to get the results aimed at. They have thus shown not only real ingenuity, but indomitable industry.

The substantial basis upon which Japan's rubber interest has been founded is suggested, among other things, by the extent to which foreign manufacturers already have been establishing themselves in the Mikado's country. If no prospect existed of the latter being able in time to supply their own wants in rubber goods, why should important concerns abroad take the trouble to build branch factories in Japan, even if there are customs barriers to face?

Considering everything here set down, it must be admitted that Japan has not made a bad showing in connection with rubber in the last twenty years.

MR. TAFT ON ADVERTISEMENTS.

THE new President of the United States, in the exercise of his constitutional duty periodically to advise the Congress on the state of the Union and to make suggestions relating thereto, very properly discusses the perennial deficit in the postal accounts. From the beginning the postoffice department has been regarded, not only as a non-business enterprise—that is, one not conducted for earning profits—but as a public utility to be fostered, even at the expense of the general budget. There can be no question that the liberal extension of the service to remote regions has tended mightily to the more rapid development of the country, to the diffusion of intelligence, and to making the enormous American republic homogeneous to an extent not equaled in any other great nation.

There may be a sound argument for making the users of the post-office pay the cost of the service, as in the case of the patent office, even though the army, the navy, the judiciary, the system of education, the scientific departments, and all the other branches of administration are conducted regularly at a loss—if the tangible results, translated into terms of public revenue, be compared with the actual cost in dollars. Where change shall be made in the existing system, however, it is not the purpose of this article to suggest. We elect legislators for such work.

It is interesting to note that President Taft dwells upon the theory—though it is not clearly demonstrated in his message—that newspapers and periodicals pay less than their just proportion of the cost of transmission of the mails. So far as we can see from his contention, if newspapers paid their due share, letter postage could be reduced, and yet allow the treasury a handsome sur-

plus from the operation of the postal service. Again, THE INDIA RUBBER WORLD has no desire to express any opinion in the premises. We pay cheerfully the postage rates current, and don't know whether it is too much or too little. Probably no one knows, or ever will.

The point of the President's argument, however, lies in his reference to the "proportion of advertising to reading" in certain classes of printed mail matter. Well? Mr. Taft does admit "the spread of intelligence which a low charge for carrying newspapers and periodicals assists." But is intelligence spread only by "reading matter?" The "Annual Report of the Secretary of War" of the United States doubtless is the most voluminous year book the world has ever seen—contributed to by thousands of able officers and scientists. But if a set of the volumes of the war report were mailed to every household in America we do not believe the spread of intelligence thereby would be comparable with that from the ordinary distribution of the advertising pages of any leading magazine—to say nothing of the reading pages. The mails, by the way, are burdened every year with millions of war reports and other public documents—all without advertisements—on which no postage is paid, while the advertisement carrying periodicals pay many millions of dollars to the post-offices.

We fear that the President has not been well advised as to the educative nature of modern advertising. Besides, readers of advertisements throughout the land are moved to write tons of prepaid letters to advertisers, giving rise to more tons of mail matter—also well prepaid—in response thereto. The postal budget this year was \$203,562,383, compared with only \$30,041,983 thirty years ago. We do not believe that the increase would have been one-tenth as great but for the circulation of newspapers with advertisements for a character to develop trade and add to the volume of and revenue from the mails.

THE CITY OF MANAOS, TWENTY YEARS AGO, probably never had been heard of by one rubber man in a hundred. Ten years ago Manaos was shipping direct more rubber than Pará. It had become a city, connected by ocean steamers with New York and European ports. Its citizens had the advantages of waterworks, electric lighting, street railways, and the like. And now an international rubber conference is about to be held in Manaos. It may not be a large affair, but the Far Eastern rubber situation, which it has been called to face, had very small beginnings.

IF THE PRICE OF RUBBER REMAINS STATIONARY at the present high level much longer, the manufacturers and buyers of their products may become so accustomed to the situation as not to care whether a decline ever comes. By the way, the first number of THE INDIA RUBBER WORLD, in its review of the crude rubber market, noted the complaints of manufacturers at having to pay more than 60 cents a pound. In early issues of the paper appeared a series of interviews with manufacturers on the crisis in the industry threatened by the approach of crude rubber to the 75 cents level. Later, when rubber actually rose to \$1, it caused little concern, because the advance had been discounted. The salient feature of the crude rubber situation in future will be

greater stability than in times past, due to reasons about which the trade can keep better informed—and this is of more importance to the trade than to be able to buy rubber at any particular price, low or high.

WE CONTINUE TO BE SURPRISED at the amount of energy expended in the effort to produce synthetic rubber. Suppose it were produced, it would be of importance only to the extent that it could be exchanged for gold—or its equivalent. There are still many people in the world who have little or no use for rubber, but everybody can use gold. Then why do not the busy investigators, instead of aiming at artificial rubber, revive the time-honored game of trying to make gold from the baser metals?

THE DEATH OF THE KING OF THE BELGIANS recalls not alone the Congo question, but to the mind of the Editor it recalls "stopping the press" in THE INDIA RUBBER WORLD office—it was back in April, 1890—to make room for a report just received regarding Stanley's discoveries of rubber in the Congo Free State. This section of Africa, he declared, would become "the rubber reservoir of the universe." From that date until this there has scarcely been an issue of the paper without references to the Congo region and its rubber—not discussion or criticism or sentiment, but *news*. And this month is to be reported the death of King Leopold, whose name has been connected so much with the subject of rubber. THE INDIA RUBBER WORLD has not devoted itself to any particular rubber yielding country, but has attempted to keep its readers informed regarding them all. But at this moment, when the files of the paper can be pointed to as embracing the story of Congo rubber from the first word, it seems in order to use this fact on which to base the reminder that, whatever else THE INDIA RUBBER WORLD may have been, it has always been a *newspaper*.

VIANNA AND OTHER SPECULATORS.

TO THE EDITOR OF THE INDIA RUBBER WORLD: I notice the publication in your issue of November 1 (page 59) referring to Mr. Vianna, of Mello & Co., in Pará, as the person who acquired such notoriety in years gone by through raising the prices of rubber up to \$1.20 or thereabouts. This is wrong. The unfortunate gentleman connected with this attempt to raise rubber prices is no longer among the living and it is not he, therefore, who is now a member of the Mello firm, as your paragraph leads one to believe, but is the surviving brother. The former was Joaquim Candodo Vianna, Baron de Gondoriz, while the survivor is Mr. Joaquim Guilherme Vianna.

Mindful of the rule, "speak no ill of the dead," I should be pleased to see the rubber press refrain from referring to this former able business man as an *arch speculator*. The writer of these lines has heard from such an authority on rubber as Mr. Charles R. Flint that, had Mr. Vianna been able to "hold his own against banking odds," manufacturers would have seen their way to buy rubber at the price level planned by him within eight days of the date of the crash. Upon the other hand, the writer has heard it from other notable authorities that Mr. Vianna's plans were frustrated by parties in the trade with stronger financial backing, who frightened manufacturers from the market with offers of rubber for future delivery at much lower figures than Mr. Vianna had tried to obtain. Now the facts of the case are that the one was no more an arch speculator than the other, only the European firm was so much better backed financially and thus had the means of "taking the ground from under Vianna's feet."

If any one merits the title of arch speculator on the Amazon, the palm must be given with all honors to the head of a certain

firm who is credited with having driven the poor producers of rubber up river to sell a very large portion of their 1907-08 crop at about 66 cents per pound, when, as a matter of fact, he had sold most of it ahead of purchasing the same at an average of \$1.10.

Like Vianna the firm last referred to "counted without their host." Presuming that the native houses had no substantial resources, and no personal assistance, and that no government help could be counted on in the crop to follow, they carried the "bear" game to extreme. The consequences were (1) the establishment of branches of the Branco do Brasil on the Amazon, authorized to make liberal advances on rubber to the original holders—i. e., producers, and (2) the promulgation of the syndicate law, which, like the sword of Damocles, is only suspended above the heads of operators venturing to carry the bear movement to excess—ready to slash right and left wherever

government assistance can be carried. Hence the failure of any later bear movements.

I doubt very much whether manufacturers would reconcile themselves quietly to the price of rubber at \$2 as predicted by you so far back as 1906. But the sooner they do so the better, for obvious reasons, among them being the fact that so long as the holders of rubber are not driven to desperation for financial assistance (and those of the Amazon regions are not at the present time), and as long as the demand for that commodity continues to succeed the supply (as it also happens at the present time), so long will the prices range at \$2. And if it is proved that, even at these figures, manufacturers can still make money, it is difficult to understand why they should quarrel with present prices. It is these high prices and strong financial support that will stop speculation.

A. PARAENSE.

Pará, Brazil, December 1, 1909.

Growth of the Japanese Rubber Interest.

By Kenzo Okada (Tokio).

LET me have the honor, from across the Pacific, to congratulate THE INDIA RUBBER WORLD upon its Twentieth Anniversary. I am happy to have such a chance to introduce our rubber industry to the Occident.

The Japanese industry is growing year by year, and especially having been accompanied by the development in all lines since the Russo-Japanese war, the manufactures of rubber goods and electric insulated cables have been improved exceedingly. The works engaged in this business have been enlarged and a number of others established lately.

Among the new ones are Messrs. Sumitomo Cable Works in Osaka, and The Nihon Densen Kaisha (Japan Cable Works, Limited) in Tokio. Though only a short time has passed since their establishment, they are working on a large scale. Yet their supply of products is not sufficient for the demand. Messrs. Mitatsuchi Rubber Works have lately established a rubber boot and shoe department. The machinery for the purpose has come and they are fitting up with this, while extending their waterproof clothing department. Yokohama Densen Kaisha (Yokohama Electric Wire Co.) have extended their scope since the fire last year, having fitted up the machinery under the expert Mr. Y. Hata's supervision.

Tokyo Gomu Kaisha (Tokio Rubber Co., Limited) are planning to establish a plant to make mechanical rubber goods, waterproof goods, and rubber boots and shoes, with a capital of 1,200,000 yen [= \$498,400]. The largest cable works in the country now are Messrs. Fujikura Densen Gomu Kaisha (Fujikura Insulated Wire and Rubber Co.). They have a great reputation, and have been appointed manufacturers by the imperial department of communication. They are the only approved makers of rubber insulated wire for the government. They are producing a large amount of high tension cable by the order of the naval and military departments at present, and they have intended to extend their works, for which they are receiving a large amount of machinery from their foreign suppliers.

When the import duties for rubber manufactures was revised, the levy was increased little by little, and there is an expectation that a further increase will result from the coming revision. Accordingly some rubber manufacturers in Europe have come to Japan to engage in this business here, rather than pay higher import duties. Messrs. J. G. Ingram & Son, of London, have established a factory at Hiogo to make surgical rubber goods. The Dunlop Pneumatic Tyre Co. have established large works near Kobe, which are now almost in working order.

Since the sudden rise of the price of crude rubber, last spring, high quotations have been maintained continually to this day. At present, Upriver fine Pará is quoted at 4.90 yen per pound

[= about \$2.40. gold], and 190 yen per picul for Borneo No. 1. In spite of the high quotation the demand is increasing more and more, and our rough calculation for the rubber imported in this year indicates 1,000,000 yen [= \$498,400]. Three-fourths of the amount is handled by Messrs. Dewette & Co., Yokohama, importers of crude rubber and rubber chemicals. They import Upriver fine Pará, and Plantation sheet, and Borneo mainly, and some of the African product.

Throughout the country are found good sources of water, that will bring great development of the industries applying hydro-electricity in the near future. For this reason the demand for insulated wire will be largely increased together with that of the jinrickisha tires for which rubber will replace steel. Moreover, the demand for toys, army supplies, and the like grows so steadily that the rubber industry must develop day after day. Thus our business doubtless must have great influence hereafter as a factor in the national industry.

JAPANESE IMPORTS OF CRUDE RUBBER AND GUTTA-PERCHA.

	1908.		1907.		1906.	
	Quantities (Kin)	Values (Yen)	Quantities (Kin)	Values (Yen)	Quantities (Kin)	Values (Yen)
British India.....	22,469	35,720	39,126	53,106	31,256	41,151
British Straits.....	219,244	205,161	244,465	315,265	260,588	327,029
Dutch India.....	313,534	335,545	94,621	133,486	29,279	42,242
Philippine Islands ..	.....	.....	3,488	5,571	.....	.....
Great Britain.....	109,336	184,293	55,535	97,684	73,983	73,281
Germany.....	3,497	8,022	6,767	11,357	4,509	9,054
United States.....	98,880	101,291	72,015	145,841	31,124	83,493
Other countries....	12,668	16,546	3,827	8,404	13,557	8,039

Totals..... 770,647 886,578 519,844 770,714 454,296 585,189
 [NOTE.—The *kin* is nearly the same as the Chinese *picul*, and roughly is 1¼ English pounds. The *yen* is equal to 49.8 cents, gold.]

IMPORTS OF INSULATED ELECTRIC WIRE.

	1908.		1907.		1906.	
	Kin	Yen	Kin	Yen	Kin	Yen
Great Britain.....	1,854,302	860,872	998,432	647,297	.....	535,819
France.....	413,409	108,736	319,497	104,710	.....	35,181
Germany.....	890,570	229,309	286,161	124,072	.....	47,969
Italy.....	27,337	18,980	18,164	17,687	.....	5,283
United States.....	406,360	228,680	321,472	234,403	.....	332,282
Other Countries..	597	275	1,420	1,390	.....	631
Total.....	3,592,575	1,446,852	1,945,146	1,129,568	.....	957,165

PARA rubber seed is now advertised by important plantations in the Malay States at \$2 (silver) per 1,000, packed in bags, and \$2.50 when packed in cases, at the nearest railway station. Of course higher prices are charged for seed packed for shipment for long distances.

I AM a good deal like a famous epicure, whose taste and judgment was being criticised. "He doesn't know the difference between a brook trout and a rubber boot," said the critic. "Why should I?" said the gourmet, "I never tasted a rubber boot!"—*Rubber.*

The German Rubber Industry.

THE india-rubber industry in Germany had its beginnings not long after the discovery of vulcanization, and in advance of several other countries in Europe in which rubber goods are now made. It will not be attempted to point out here the pioneer in the German rubber field, but only to mention some of the important early workers in it. A lively interest in rubber, in fact, was manifested in German scientific circles years before the industry had a practical basis. It is worth while to mention the pamphlet brought out in Berlin in 1832 by Dr. F. Luedersdorff, the English edition of which bears the title, "The Solution and Reproduction of India Rubber." Luedersdorff treated of the action of sulphur on india-rubber, and there were not lacking those, in Charles Goodyear's lifetime, who held that in his publication the German chemist had anticipated the basic principle of vulcanization. Luedersdorff's pamphlet, in fact, was offered as evidence by the defendants in Charles Goodyear *et al. v. Beverly Rubber Co.*, a patent infringement suit tried in Boston in 1859.

The history of the rubber industry in Germany, if written in detail, would embrace a reference to the Englishman, Mr. Elliott, who in 1849 founded on the Spree a small factory from which has developed the important Vereinigte Berlin-Frankfurter Gummiwaren-Fabriken, now capitalized at 3,500,000 marks [= \$833,000]. There is to be mentioned, too, the late Senator Carl Maret, who in 1856 returned to Germany from a sojourn in America during which his attention was attracted to rubber, and he coöperated in starting, in the same year, the now great Vereinigte Gummiwaren-Fabriken Harburg-Wien, the largest rubber manufacturing establishment in Germany. It is not so long since THE INDIA RUBBER WORLD (October 1, 1909—page 15), upon the occasion of the death of Dr. Heinrich Traun, outlined the founding of the hard rubber industry at Hamburg, at the same time it was being developed in America, and by interests then practically identical.

There is no intention here to deal with all the rubber factories in Germany, but only to illustrate the enterprise and progressiveness which ever have characterized the industry in that country. The rubber trade has shared in the general industrial growth which in Germany followed the establishment of the empire, and today the Germans hold first rank among European rubber manufacturers in respect to volume of business done.

But there are other considerations. The ingrained love of science in the German has brought the resources of chemistry to bear upon the rubber industry to a notable extent, not in that country, but



THE LATE SENATOR DR. HEINRICH TRAUN. [Founder of Dr. Heinrich Traun u. Söhne, Hamburg. Distinguished in the hard rubber industry.]

in general. While rubber factory superintendents elsewhere were chary about using African sorts, for example, when they were first introduced, German experts discovered and pointed out how good results might be obtained from them. The broad effect of such investigations is seen in the general use in the industry of all sorts of rubber, instead of the manufacturers being confined practically to Pará rubber alone, as in the beginning. Otherwise it is possible that the better grades of rubber might ere this have figured at twice the highest prices ever reached, or even more.

The importance of the chemist in the rubber factory was first appreciated to an important extent in Germany, and today the influence of such recognition is felt in every country where rubber goods are made. It is true that Charles Macintosh, the pioneer English rubber manufacturer, was a scholarly man, and notably a chemist, which fact doubtless aided him in his rubber researches. But many of his successors in the industry, in England and elsewhere, not only possessed no knowledge of chemistry, but there was a period when "practical" men dealing in rubber evinced a lack of respect for the scientist. Charles Goodyear, for example, was wholly without a knowledge of chemistry when he set about the work which ended with his accidental discovery of vulcanization. And for nearly a half century there was hardly one head of an important American rubber company who had a scientific training.

Compared with this situation, one may refer to the late Heinrich Traun, who, before taking a position in the German rubber factory which later he made famous, completed a scientific course in a leading German university, after which he did professional work as a chemist in different countries. Again, mention may be made of Professor Dr. Adolf Prinzhorn, lately retired from the management of the Continental Caoutchouc- und Guttapercha - Compagnie, upon whom the two titles he now wears were conferred from a high source, in recognition of his scientific work in connection with rubber.

In connection with this subject mention must be made, also, of the late Carl Otto Weber, PH. D., whose fame as a rubber chemist became worldwide.

The "technical director" now has an established position in every German rubber factory of importance, to which policy is due, no doubt, much of the success of the industry in that country. And the example of the Germans has been followed in other countries, notably in the United States, where the old-time "rubber kings" seemed rather proud than otherwise of their



THE LATE SENATOR CARL MARET. [First president of the Verein Deutscher Kautschukwaren-Fabriken. Director of Harburg and Vienna India-Rubber Works.]



EMIL SPANNAGEL,

[Director of Vereinigte Berlin-Frankfurter Gummiwaren-Fabriken.]

YEARS.	Pounds.	YEARS.	Pounds.
1899	18,663,700	1904	28,243,380
1900	19,033,740	1905	29,793,280
1901	17,621,780	1906	24,960,100
1902	19,344,160	1907	22,977,900
1903	23,076,460	1908	22,816,420

Not only is there a disposition in Germany to supply every demand for rubber goods which may exist in the empire, but the export of German rubber goods has grown constantly from the beginning of the industry in that country. As having a bearing upon this subject, it may be worth while to repeat some extracts from a letter from a correspondent of THE INDIA RUBBER WORLD at Berlin, printed in the issue of May 1, 1900 (page 211):

"The leaders in the rubber industry in Germany manifest a deep interest in whatever development is made by their competitors abroad. When I visited Hanover I found Herr Adolf Prinzhorn, head director of the great Continental company located there, absent in the United States.

He had lately entertained the superintendent of one of the most important American rubber factories, and he was now returning the visit. The effect of the tendency of the German manufacturer to adopt whatever seems to him best in the practice of whatever country is evident in the growth of the exotic rubber industry on a scale more rapid within recent years than even in the country of its origin.

"No doubt the rubber trade in Germany has benefited by the fact that such men as Herr Emil Spannagel, director of the United Berlin-Frankfort India-Rubber Co., at Berlin, and Senator Carl Maret, of the United Rubber Factories of Harburg-Vienna, have developed their business career in part in other countries. These two have both spent some years in the United States. At Hamburg is the seat of the Harburg Rubber Comb Co., whose proprietor, Dr. Traun, has grown up in the business which he now controls. This business, as is well known, was originally an outgrowth of the hard rubber manufacture established by the late Conrad Poppenhusen, at College Point, now a part of New York city. Already the eldest son of Dr. Traun has spent a term of years in New York, at Pará, and in the Far East, and the doctor told me that he was looking forward to

success in working by "rule of thumb."

The extent of the German rubber industry cannot be better illustrated, perhaps, than by putting before our readers a statement of the net imports of crude rubber, year by year.

YEARS.	Pounds.
1889	7,322,480
1890	6,663,360
1891	8,041,880
1892	8,249,780
1893	8,881,840
1894	10,110,540
1895	10,909,360
1896	14,019,720
1897	13,848,780
1898	16,855,080

sending his youngest son—the third—to the United States to study the rubber industry as it exists there.

"It has been interesting to me to listen to those German rubber men talking familiarly of rubber conditions in America. Herr Louis Hoff, of the Harburg-Vienna company, for instance, talked of the rubber goods stores in New York, and of the conditions of the importation of crude rubber in the United States, and the like, in a vein which would be impossible with most American manufacturers in respect to the industry in another country. Herr Hoff, particularly, did not confine his remarks to the rubber trade. He had been reading in the newspapers reports of utterances from high English sources on trade relations with Germany, and he had definite and pronounced views on the attitude of the United States on the admission of foreign imports into Cuba, Porto Rico, and the Philippines. The fact is that these gentlemen regard the whole world as their field, both from which to draw men and ideas in the building up of their factories, and in finding a market for their products."

What is said here about the familiarity of the leaders in the German rubber trade with conditions in America applies equally, or even more so, to other countries. It has to do with the export of rubber goods from Germany to a larger extent than from any other country. The high tariff imposed on imports into the United States has limited German trade in the States, as it has the trade of England and France, but in South American and Far Eastern countries the German exporter has been singularly efficient. The German trade has also extended largely into Great Britain, a free trade country, to an extent which has been felt severely by the industry of that country and hindered its development. Every German rubber concern mentioned in these pages, and many others, have branch houses in London, and some of them in other important British trade centers, and not only branch houses but in some cases manufacturing establishments.

The thoroughness of the German as a trader is illustrated in the experience of a lead pencil establishment in the United States which had its origin in Germany, but, once established in New York, grew



PROF. DR. ING. ADOLF PRINZHORN.

[Retired recently as director of Continental (Caoutchouc- und Guttapercha Compagnie.)]

into an independent concern, requiring for the purpose of making erasers alone a rubber factory which before for years had earned an average of \$30,000 a year in dividends. This lead pencil concern, while still having its headquarters in Germany, canvassed hundreds of thousands of American business houses to learn (1) what lead pencils they used; (2) whether they used the German pencil; or (3)



THE LATE CARL OTTO WEBER, PH.D.

if not, why not. This information was made the basis of their present important trade.

The same principle, applied to hard rubber goods, mechanical goods, and particularly surgical goods has led to the preëminence of the Germans in the rubber export trade. The increasing importations of rubber goods into the United States is due largely not only to the activity of German manufacturers in studying intimately the wants of the trade, but particularly to their willingness to supply specialties on small orders. No American manufacturer would book an order for 75 cents worth of garden hose to be made to specification any more than a manufacturer of hair pins would take an order for a two-cent package for goods in his line of a special shape. But the German rubber factory will welcome such an order (1) because it means business in the general line, or (2) because if it be in a new field or in a special line of goods it offers a promise of an ultimate growth of trade. In hard rubber goods, for instance, a special surgical article may be ordered by the staff of a hospital and the German manufacturer fills the order readily. An American manufacturer capable of producing the same article will be indifferent about doing so in the absence of an order for less than thousands, being more interested in filling 20 ton orders for electrical appliances, for instance.



FRANZ CLOUTH.

It is not implied here that other rubber manufacturers than Germans are lacking in enterprise in any way, or that the vulcanite or any other branch of the rubber industry is larger in Germany than elsewhere. In fact, the German rubber footwear manufacturers, for instance, complain all the time of the lack of protection under their fiscal system against the competition from other countries. What has been said here in general, however, is illustrated by the fact that there has not existed in England for some years a factory devoted to hard rubber alone, although presumably the consumption of hard rubber goods in England is comparable with that in any other country of like rank.

Account must be taken in this article of the enterprise of the Germans in the development of a submarine cable industry, at a time when most other countries than England were content to leave the cable field to the latter. The success of the German manufacturers in this line, no doubt, was due in part to the encouragement of the government, which generally is extended to industrial enterprises of merit. The plant of Norddeutsche Seekabelwerke, Aktiengesellschaft, at Nordenham o/Weser, was described at length in THE INDIA RUBBER WORLD January 1, 1908 (page 109). The rubber feature of the cable industry in this country was the outgrowth of the important rubber industry at Cologne, founded by Franz Clouth, who, by the way, is distin-

guished from most manufacturers in this line by his success as an author. His "Gummi, Guttapercha, und Balata" long has been a standard work.

The importance must not be overlooked of the German faculty of association in trade, which is notably represented by the society of rubber manufacturers known technically as Centralverein Deutscher Kautschukwaren-Fabriken, of which the president today is Herr Louis Hoff, director of Vereinigte Gummiwaren-Fabriken Harburg-Wien, vormals Menier—J. N. Reithoffer Actiengesellschaft (Harburg a/d Elbe). This is in no sense a "rubber trust," nor does it lessen in any way the independence of the various leading companies which comprise its membership. Nor does the society undertake to regulate prices of rubber goods, or in any way dictate or control the affairs of its members. At the same time, its influence has been most helpful to the rubber industry in the matter of making its leaders better acquainted socially, in dealing with the government in the matter of legislation affecting the industry, and in keeping the members better acquainted with such details affecting the industry generally, for instance, as the conditions which now and then lower or raise the price of crude rubber and other important materials. A very notable meeting of this society was held in Berlin on November 5, attended by 54 leading manufacturers, for the discussion of important questions affecting the welfare of the industry.

GUSTAV HEINSOHN.

COTTON GROWING IN AFRICA.

SHIPMENTS of British grown cotton reach Liverpool every week from all parts of the empire, and this year's crop from new fields opened up by the British Cotton Growing Association, principally in Africa, is estimated at 33,000 bales, worth nearly £500,000. The West African crop is estimated at 13,000 bales of 400 pounds each, as compared with 6,400 bales in 1908. These figures are insignificant compared with the statistics of cotton as a whole, but the work of the association named has proved that cotton can be grown on a commercial basis over large areas in the British possessions, and an appeal is made now to the spinners of Lancashire to foster this new British interest with the investment of capital for the development of planting enterprises already founded by the association. It may be mentioned that the Duke of Marlborough has taken a very active interest in the promotion of the work of this association, the capital of which was subscribed by cotton manufacturers in England.

THE EARLY USE OF DENTAL RUBBER.

AN early application of vulcanized rubber, second perhaps only to its use in footwear, was developed by the American dentist. In the library of THE INDIA RUBBER WORLD is what may be termed the first rubber journal ever published—*The Vulcanite*, "a quarterly journal devoted to the science of mechanical dentistry," and published by the American Hard Rubber Co., at New York, during 1861-62. In its pages appeared frequently the name of Dr. Jonathan Taft, both as editor of the *Dental Register of the West* and dean of the Ohio College of Dental Surgery, both of Cincinnati, the latter the pioneer dental college in the western country. Dr. Taft was connected with this college for 24 years, and at various times with several other important dental schools. It may be added that he was a prominent member of the New England-Ohio family that gave to the United States the president now in office.

THE "cow tree" of British Guiana and adjacent regions, while yielding latex freely, has not been regarded as having value as a source of rubber. Recently, however, Mr. G. C. Benson, of that colony, has announced the discovery of a process whereby the product of this tree can be converted into a serviceable quality of balata.

Rubber Culture in the Far East.

By John C. Willis, M.A., Sc.D.*

THE history of rubber culture in tropical Asia dates from 1875, when the authorities at Kew succeeded in convincing the government of India that there were indications of a shortage in rubber supply, as there had been in regard to cinchona about 15 years earlier, and that it would be wise to get the rubber plants of South America established elsewhere. An expedition was sent, at the expense of the Indian government, to the valley of the Amazon, and succeeded in collecting, among other things, seed of the so-called Pará rubber, *Hevea Brasiliensis*. These were grown at Kew, and in 1876 the young plants resulting were sent to the East in Wardian cases in charge of a special gardener. The bulk of the plants came to Ceylon, it having been decided that India had no botanic garden in a suitable climate, but a few went to Singapore and elsewhere.

A special branch botanic garden was opened in Ceylon, at Henaratgoda, near Colombo, to receive the rubber trees, and about 50 were planted there, the remaining 20 being planted at the chief garden of Peradeniya near Kandy, at an elevation of 1,600 feet above the sea, which has on the whole shown itself to be rather too great a height for rapid growth. About 1881 and 1882 the plants began to flower, and a few seeds (and cuttings) were distributed, at first to other botanic gardens, and then to planters in the island who had expressed willingness to try the new cultivation. It is from these seeds or cuttings that the few old trees on such estates as Culloden in Ceylon have sprung.

Very slow progress was made in this way for the next 16 years, but in 1888 the late Dr. Trimen, director of the Ceylon botanic gardens, began to tap the largest of the trees. V-shaped incisions were cut with a hammer and chisel, and the milk was allowed to trickle down the stem into a channel made around the base by sticking on a strip of mud, and from this channel it ran into cocoanut shells, where it was simply allowed to dry, and formed a lump of blackish rubber. The tree was tapped once a week for about eight weeks, then given a rest, and again tapped after a few months. It was tapped every second year, and in nine years had given 13 pounds 6 ounces of dry rubber, or an average of 1½ pounds a year. Now this tree was 12 years old when the tapping began, and a yield of ½ pound, at the then price of a little over two shillings (50 cents), was not enough to make the cultivation profitable, the more so as this tree was the largest of all, and of a size that most trees only reach in 13-16 years.

In this condition we found the question on taking up the direction of the Ceylon gardens in 1896, and, feeling convinced that there was a future before rubber, we commenced detailed experiments in 1897. Tapping a large number of trees, so as to get an average result, we found that about 100 pounds of dry rubber might be expected from an acre of trees 10 years old. This at two shillings a pound was enough to show a fair profit, and people began to take up the cultivation from that time.

One of the most important results of these experiments was the rediscovery of a fact known to the natives of the Amazon, and which is known in the east as "wound response." At later tapplings near to the first the tree yields more milk than at the first bleeding. It is true that this milk is less concentrated so far as the amount of rubber in it is concerned, but it runs so much more freely that more rubber is obtained. This showed clearly the reason of previous unfavorable reports on rubber trees and their yield. Either only one tapping had been made, or the tapping had not been sufficiently frequent to show the wound response. Mr. Parkin, who was in Ceylon in 1898-99, carried out detailed experiments on wound response and fully established the regularity of the phenomenon.

Mr. Parkin also worked out the method of preparing biscuit or sheet is in vogue in the east to the present day. The active constituents of the smoke used in South America having been shown to be acetic acid and creosote, Mr. Parkin showed that the best results were obtained by heating the milk to something over 150 degs. Fahr., and coagulating with the calculated quantity of acetic acid in presence of creosote. Planters generally have considered the heating and the creosoting too much trouble, but the making of biscuit or sheet by the aid of acid is most common. Some people allow coagulation to go on naturally by leaving the milk to stand, but this of course simply means that the acid is formed in it by putrefaction. Recently Mr. Kelway Bamber has shown that the heating of the milk destroys the enzyme which it contains, producing a biscuit of the lightest color and one which does not subsequently darken. Good rubber produced in this way has obtained higher prices, and many estates now heat their milk.

The biscuits obtaining a higher price than the raw rubber dried in cocoanut shells, and the price of rubber rising generally, the industry now began to be rapidly taken up, and there was a great run on the few seeds available in the botanic gardens of Ceylon and of Singapore, where also rubber cultivation was being pushed. Seeds were sold at auction, and in one year realized \$10 a thousand. In the course of the following five years, seed began to come in from the trees in private hands, and in annually increasing quantity, until now it is a drug in the market, and proposals are under consideration to crush rubber seeds for the useful oil contained. The price of rubber now began to rise, and it proved that the return could be obtained in less than 10 years, and a greater rate than 100 pounds a year, so that the cultivation proved to be extremely profitable.

The biscuit or sheet form adopted for the eastern rubber, and its clear color and cleanliness, have caused it to meet with great favor, and it has sold at higher prices per pound than the best Amazon rubber. This is often supposed to mark a real superiority, but in reality does not, for it takes ten pounds of the South American rubber to equal eight of cultivated in the actual contents of caoutchouc, and consequently the former is really obtaining the higher price. Why the cultivated rubber should be somewhat lacking in strength and tenacity as compared with the wild is one of the greatest problems of the day.

Experiments were conducted by the writer and Mr. Kelway Bamber, preparing biscuit without drying, compressing the newly coagulated rubber into a solid mass. In this way a block rubber was turned out resembling the South American, with about 10-12 per cent. of water contained in it, and this has been favorably reported on by several manufacturers. Other people think that age of the tree is mainly responsible for the greater strength of South American rubber, but various experiments go against this view.

It was not long before tapping by means of a hammer and chisel was given up in favor of tapping by knives, usually of the type of a plane. Given a certain amount of bark on the tree, it was obviously necessary to make that last as long as possible, and tapping in V's by chisels was very destructive, so that a given place would not be healed up by the time that one wanted to operate on it again. Herringbone or spirally running cuts came in, and the wound response was obtained by shaving off the under side of the old wound. If the sideways-sloping cuts be made about a foot apart, and only one side of the tree be tapped at once, it is found that new bark has fully formed by the time that one returns to the cuts first made.

The early method of producing the rubber in little biscuits

*Director of the Royal Botanic Gardens, Ceylon.

is also being superseded by the use of machinery for turning it out in the form of crêpe or in other ways, and the biscuits, sheet or crepe are very often compressed into block rubber, which suffers less from oxidation.

As an indication of how rapidly the new industry is growing, the figures of export from Ceylon may be quoted:

1901	66 cwt.
1902	189 "
1903	389 "
1904	676 "
1905	1,401 "
1906	3,705 "
1907	7,093 "

To turn now to other countries in the east, the one which has shown itself to be on the whole the most favorable of all is the Federated Malay States, a British protectorate lying north of Singapore. The growth of rubber there has been decidedly better than in Ceylon and at the same time coffee, the only other planting industry of importance, has been lately in a very unprosperous condition. The country, unlike Ceylon or Java, has vast areas of undeveloped forest land, which is of all others the best suited for rubber. Under these favoring circumstances the industry has progressed very rapidly and the Malay States are by far the largest exporting country. Not only so, but capital has been more readily forthcoming for rubber planting enterprises.

Java is handicapped like Ceylon by very large existing industries which take up most of the available land, but on the other hand has a great advantage in unlimited and very cheap labor, while the trees grow very well indeed, and there are not wanting indications that Java will some day be an important producer of rubber.

Sumatra and Borneo are also being taken up as rubber countries, especially the former, and other far eastern islands will probably be employed sooner or later.

To turn to India, experiments with *Hevea* in the north have failed, but a considerable area is now planted with this tree in the southern part of the Madras presidency. Growth is apparently slower than in Ceylon, but there are great advantages in regard to plentiful and cheap labor.

At the time of this writing, it is probable that about 400,000 acres in tropical Asia are planted with *Hevea Brasiliensis*. This means in the course of the next seven or eight years a production of about 40,000 to 50,000 tons of clean rubber, or a good deal more than half of the world's present total production. Add to this the fact that during the present boom rubber companies are being floated almost daily, that tropical America and Africa have a fair amount of rubber planted, that it is improbable that the wild rubber of South America will be driven off the market for a long time to come, and that there are also considerable areas planted in other kinds of rubber, and it is evident that it will not be very many years before rubber is cheap and new uses for it may begin to arise freely.

A word of mention in conclusion in regard to other rubbers. *Castilloa elastica*, so largely planted in Mexico, has been given up in tropical Asia on account of its uncertainty. It is by no means easy to persuade the tree to grow well all the time. It may begin well and then fall off, or *vice versa*. The amount of rubber given by tapping is very variable, and there is no wound response.

Manihot Glaziovii, the Ceará rubber, grows like a weed all over the East, but has never given a large enough yield to be much taken up. In quality this rubber, when made into biscuit or sheet, is decidedly superior to the best plantation *Hevea*. Recently Ule has discovered three new rubber-yielding species of *Manihot* in Brazil—*M. heptaphylla*, *M. dichotoma*, and *M. Pianuhycnsis*. These are said to give much larger yields than the old Ceará rubber tree, and already have been largely planted in

Ceylon, where *Manihot* is found to do better than *Hevea* at high elevations or in the drier parts of the island.

[EDITORIAL NOTE.—Further details of interest on this subject, by the same writer, will be found in his recently published "Agriculture in the Tropics," reviewed on another page of this journal.]

THREE TIMES TWENTY YEARS AT WORK.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In your request for a contribution to your twentieth birthday number you refer to this lapse of years as "a little while." It is a little past three score years since I took up telegraphy, the only commercial enterprise at that time depending upon electricity for its success, and itself, commercially, then only five years old.

There was very little call for high insulation at that time. The wires were kept in the air as much as possible, and the leading-in wires were insulated by cotton wound on and saturated with beeswax and shellac. About 1847, Austin G. Day had covered wire with rubber, and Stephen T. Armstrong with gutta-percha, in this country, for subaqueous use. In that year the German government laid 1,380 miles of underground telegraph wires, insulated with gutta-percha and protected by a lead covering. The German cable had but a short life, as its makers, thinking that, like india-rubber, it should be vulcanized, mixed sulphur in the compound, and learned the dear lesson that gutta-percha did not believe in amalgamation.

Rubber submarines were used only experimentally at first. Gutta-percha at that time being cheap and more easily applied, and being free from sulphur, which caused the rubber compound to oxidize the wires, for some time had the preference in deep sea cables, notwithstanding its high cost.

Submarine cables were not at first a success, as no means developed for protecting them from anchors until 1851, when the first cable protected with iron armor, was laid across the English channel. The first armored cable that I know of in the United States was laid across the Hudson river, just above Cold Spring, New York, in 1853.

The wires of the New York, Albany and Buffalo Co. were run to Troy, and there crossed the river on a bridge, then down on the west side of the river to Albany. The wires south from New York city crossed the river on high masts, from Washington Heights to the Palisades, and, at the Highlands above Peekskill, until the middle "fifties."

Although the telegraph and telephone companies had used gutta-percha and "kerite," and for a few years, "okonite" cables, before the birth of THE INDIA RUBBER WORLD, it was not until about that time that a large demand for rubber in insulation was caused by the rapid development of the electric light and electric power industry.

HENRY A. REED.

[President Bishop Gutta Percha Co.]

New York, December 8, 1909.

THE BALATA INTEREST.

BALATA belting, to which considerable attention has been given in THE INDIA RUBBER WORLD lately, is now manufactured by Liverpool Rubber Co., Limited, who refer to this line of goods as being suitable for all ordinary modern belt driving except in situations of too high temperature, such as would have the effect of melting the balata. They mention their "Constellation" brand as having a tensile strength, in 4 plies, of over 1,800 pounds per inch of width. Other brands have over 1,300 pounds of tensile strength per inch of width. The tensile strength of the best double leather belting is stated by this firm at 1,300 pounds per inch of width.

* * *

THE INDIA RUBBER WORLD is assured by an important firm that within the present year they will have in operation in the United States the largest factory for balata belting in the world, though they are not at present prepared to make details public.

Growth of the Rubber Reclaiming Industry.

By Wilmer Dunbar.

THE reclaiming of rubber from waste or scrap material has made remarkable progress within the past two decades.

There is hardly any other branch of the business in which so large a rate of growth has been shown. The improvement in processes has been marked; the extent of the business has developed wonderfully; and the use of the product has increased more rapidly than the consumption of crude rubber itself. The reclaiming of rubber as a practical proposition originated in America, and here is first developed to important proportions. Naturally the use of reclaimed rubber was first adopted here, while manufacturers in Europe were depending largely upon substitutes. Today the use of reclaimed rubber has become universal in the industry, large plants for the purpose having been installed in Europe, in addition to the product of which an important quantity is exported yearly from the United States. Only recently a Japanese manufacturer has been making inquiries in this country with reference to having a reclaiming plant built.

The reclaiming business can be divided broadly into three groups—the mechanical, the acid and the alkali processes.

First in the order of development, and a process still largely used, is that known as the mechanical, in which the old rubber is first ground to a fine powder, and if fabric is present it is blown or sieved out by the use of compressed air or screens. It is then mixed with a given percentage of oil and devulcanized, after which it can be put on a mill and sheeted or batched out. In this description of the process for reclaiming rubber by mechanical means, probably, belongs the first attempts at reclaiming old rubber scraps, which was by the use of water, the rubber first being finely ground or shredded and then put into pans filled with water and either boiled or put in a devulcanizer. With some grades of old rubber this process was fairly successful, although with the rubber then in use, which was as a rule harder and, therefore, less easily acted upon than would be the case with the present knowledge of compounding, it was not extensively used. The next step was to use the finely ground rubber in the batches while the mass was being mixed on the mill and this is still being done very generally. The next attempt at reclaiming, and this was especially true of old boots and shoes, was to grind the stock to a fine powder, canvas and all, and then mixing with a certain percentage of oil and devulcanizing the entire mass, after which it could be batched or sheeted out on a mill, although by many users no attempt was made to do even this.

Next in order of development is what is known as the acid process. In this the rubber containing canvas is first cracked in fine shreds and is then put in an acid tank, containing a bath consisting of sulphuric acid and water. The stock is boiled in the acid and water long enough to remove the canvas, after which the rubber is washed in clean water to free it from the surplus acid. It is then dried and sometimes ground to a powder and run over a magnet to remove the iron, and by some manufacturers is run through what is known as a "riffler"—a long trough, containing obstructions through which a stream of water is running, which contains the rubber, and the obstructions are supposed to remove the sand and other metallic particles which the magnet does not remove. After the rubber is ground and is ready to be used, it is mixed with a given amount of oil and devulcanized, after which it is sheeted or batched out and by some manufacturers run through mill refiner with a knife, and by others through a strainer similar to a tubing machine.

Third and last in the order of development is the alkali process, in which the rubber and attached canvas is subjected to a treat-

ment with caustic soda and water. Some of the apparatus for the alkali process is very elaborate, although manufacturers are beginning to use simpler methods than formerly. After devulcanization, the old rubber is washed to free it from the alkali, and after drying is then sheeted and refined in the same way as described in connection with the acid process.

In describing thus briefly and incompletely the reclaiming industry, in which so many millions of dollars are invested, and by which so many thousand tons of reclaimed rubber are produced, it seems proper to say that were it not for the use of this reclaimed material, many rubber articles in common use would be beyond the reach of people in ordinary circumstances.

Reclaimed rubber is largely used in the boot and shoe trade, in mechanical goods, and for insulated wire. Though not largely used by the druggists' sundries trade and in the manufacture of automobile tires, it is safe to predict that it will be used largely by both in the near future, for experiments have already been made by some large manufacturers along these lines and with a great deal of success.

It is impossible to state with any degree of accuracy the amount of reclaimed rubber used in the United States, as many manufacturers do their own reclaiming, and the way in which the old rubber is collected makes it absolutely impossible to do any more than guess at the amount. There are people in the trade, however, usually well informed, who estimate the amount of reclaimed rubber used as twice the weight of new rubber.

Yet the reclaiming of old rubber is in its infancy, as well as its use in rubber goods, and it is destined to be the most necessary feature of the rubber industry of the world, next to the production of new rubber. The trade is coming every year more and more to recognize its importance. After several attempts at a permanent organization, a Rubber Reclaimers' Club has been formed, which has systematized the business very much, and corrected many abuses, especially in relation to the gathering of old rubber.

THE SINGAPORE RUBBER WORKS.

THE Nederlandsche Gutta-Percha Maatschappij (Netherlands Gutta-Percha Co.) have published a detailed report concerning the business year 1908, in regard to the company's operations in Singapore. The gutta-percha works, for making gutta-percha from leaves, are located at a distance of 45 minutes (riding distance) from Singapore and measures 60 x 48 meters [=196 x 157 feet]. The management considered it necessary to have the works inspected by one of the members of the board of directors residing in Holland, and the same reports that the machinery is in good condition. Operations in the works were started in July, 1908, but the report states that it would be impossible to operate the plant regularly and continually, the supply of leaves being too irregular. The india-rubber factory, adjoining the gutta-percha works, are also stated to be in a position to produce a sufficient amount of goods for meeting all the demands that could be made upon it at the present time. The company manufacture in their rubber factory tires for jinrikshas, gharries and the like; mats and other automobile accessories and hose. The director reports that the manufacture of these lines of goods is carried on in a satisfactory manner. It was not considered necessary to make any addition to the present stock of molds.

THE index to Mr. Pearson's book, "Crude Rubber and Compounding Ingredients," will be sent free by mail on request.

The Guayule Rubber Situation.

By Francis E. Lloyd.*

THE history of the guayule industry attaches to itself something of the dramatic interest associated, in the lay mind, with gold mining. And in effect sudden economic discovery is followed by a rush for possession. A steady and swift rise in values make a few rich, while those with a tardy appreciation of the importance of the discovery fail to have "luck." When it is seen that the field is limited, the fight for occupancy begins. And all this centers about a small woody plant thought, up to a few years ago, to be worthless save for fuel, and what meager comfort the gastronomically insistent goat could find in munching the young shoots.

The plant in question was discovered to botanical science, in 1852, by Dr. Bigelow when, attached to the Mexican Boundary Survey, he was collecting in the region of "Escondido creek" in southwestern Texas. The material, which consisted of a single sprig in summer foliage and flower, was later, in 1859, described by the late Professor Asa Gray under the name *Parthenium argentatum*, the specific name referring to the silvery luster due to the closely set, air-containing hairs which cover the surface.

But while the scene of the discovery lies within the United States, to which the guayule industry has quite recently extended, it was on the other side of the Rio Grande that the guayule made its debut as an economic force. In Mexico its place in primitive life without doubt antedates recorded history, as playing with a rubber ball, made of "gum" extracted, by mastication, from the guayule, was early indulged in among the indigenes. If these folk used a rubber ball soon after the conquest of Mexico, they probably did so before. It is interesting to know, in this connection, that one of the early attempts to get a sufficient supply of the rubber for examination was made by organizing a chewing "bee," but we are told that an essay to apply the method to the production of the crude rubber on a larger scale was rendered abortive by lockjaw! Furthermore, the name "guayule" has been referred to Aztec origin, and it seems not wholly gratuitous to regard the etymological evidence as of some, though admittedly equivocal, value.

THE PLANT DESCRIBED.

The guayule is a woody shrub of spreading habit. When grown without accident, it makes a much-branched bush. If the branches die away at the base, a distinctly tree-like form is assumed. Large plants may acquire a spread, or a height, of a meter or more, but such individuals are of advanced age, probably not less than 40 to 50 years, and, in consequence on the harvesting of the plant for the manufacture of rubber, they are getting rapidly fewer in number each year. The average plant taking the whole into account, was estimated by Endlich in 1904 to have a weight of about 500 grams, and my own observations indicate the approximate correctness of this. The small leaves are greenish, silvery gray, as also are the younger twigs, where, as the age of the axis advances, give way to light and then to dark, ashy gray. The natives of the guayule regions think to identify different kinds of guayule by the color of the bark, or by the color of the leaves. The distinctions do not bear investigation. The practical collector, however, distinguishes between "macho" and "embra" guayule. The former has fewer and stouter twigs than the latter. None of these distinctions appear, however, to correspond to certain racial, if not specific, differences which I have observed to obtain, but which appear to have little economic bearing.

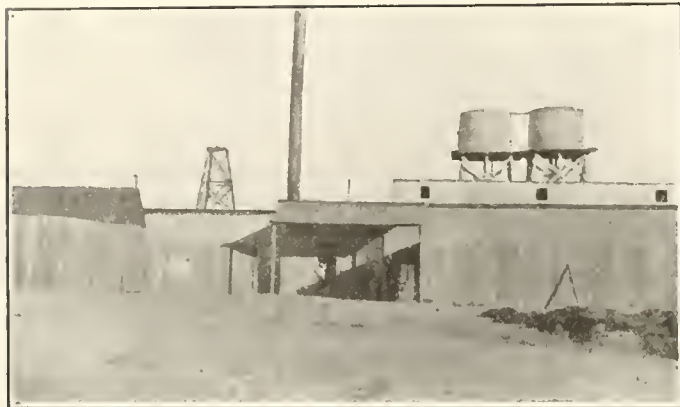
The winter appearance of the plant is strikingly different from its summer appearance. In winter the leaves, save those forming small clusters at the tips of the twigs, have fallen, leaving these bare. In summer the new growths are clothed with leaves of maximum size, in which the green color is more apparent. At this time also the flowers are borne in loose clusters on slender stems and crown the plant with a profusion of small, pale yellow blossoms. These are arranged in heads, each head resembling a small daisy and capable of forming, at most, five seeds. Usually some of these do not develop. A curious manner of development results in the association with the "seed" of a large amount of chaff, so that, if "seed" is collected, only a very small proportion of the whole is true seed. Only a small percentage of the seed is viable—discouragingly small, in fact, were it not for the generally lavish hand of nature. If, despite the apparently small numbers produced, all the seeds which actually germinate in the field could survive, there would frequently be many more guayule plants than could find room to develop. This has been observed by me to be the case in some regions, while others have shown quite the opposite condition. The inference from this is that no sweeping statement as to the rate at which guayule will reproduce itself from seed in the field may be made. It may be within the ability of a careful observer to state at what rate new plants are taking the place of old, and therefore what the probable stand will be in a given number of years, for a particular and restricted locality. The comment is naturally forthcoming that there has been a good deal of gratuitous guesswork, more or less influenced by personal interest, as to the rate of rehabilitation of a guayule



THE GUAYULE PLANT—USUAL HABIT.

[From THE INDIA RUBBER WORLD, July 1, 1905. Compare cut on a following page.]

*Professor of botany, Alabama Polytechnic Institute; late director department of investigation of Continental-Mexican Rubber Co.



GUAYULE FACTORY OF THE TEXAS RUBBER CO.
[At Marathon, Texas, First in the United States.]



LOADED WAGONS ARRIVING AT FACTORY.
[The Texas Rubber Co., at Marathon.]

field. The more important known facts it will be worth while to indicate.

Natural reproduction in the field takes place in two ways, by seed and by means of shoots (*retoños*) which start up from the shallow lying roots. Space does not permit me here to compare the efficacy of these two methods, but it will suffice to indicate that they are, in effect, complementary. *Retoños* are relatively few in numbers, but their initial growth is rapid and they quickly produce flowers. Further, their numbers are increased by injury to the top of the plant. The more of the upper part of the plant is removed, the more likely the roots are to produce *retoños*. Even portions of roots alone frequently do so, and this after dying back quite a distance. The phenomenon is well known, and this it is which has led to the extravagant notion referred to in the preceding paragraph. Nevertheless, it is true, broadly speaking, that on account of the readiness with which *retoños* are formed, it will be difficult to completely eradicate the guayule, which is different from saying that, in five years, "*ya está otra vez.*"

HOW THE RUBBER IS CONTAINED.

The internal structure of the plant is of more than academic interest, for the peculiar occurrence of the rubber furnishes the rationale of the success of the mechanical method of extraction. The more obvious details have been known since 1901, when Fron and Francois, French botanists, published a brief account of them. Later Ross (1908), and Lloyd (1908), extended this knowledge. Of interest here is the fact that the rubber, in sharp contrast to the condition found in latex plants, occurs in small, indeed microscopic particles within the cells of the pith, medullary rays and cortex (bark, so-called). Practically, then, each particular particle is completely surrounded by a membrane of cellulose. Obviously, the task of the extractor is to set free the minute masses of rubber and at the same time to bring them into close contact so that larger masses will result, and to completely separate the cellulose (together with wood and cork) from the rubber. Because of the circumstance that the rubber bearing tissues are penetrated longitudinally, from the top of the plant to the bottom by canals which are filled with resin,* this becomes mixed with the rubber during extraction to the extent of 25 per cent., which amount may be lowered by suitable processes.

The general occurrence of rubbers and resins in various plants, particularly in the guayule, has led to the notion that these substances stand in physiological relation to each other, and that as the season advances the resin becomes changed into rubber. I have at hand abundant evidence, however, that this cannot be the case, and contrariwise, that the process of rubber secre-

tion is quite independent of that of resin. This is shown particularly by plants under irrigation, in which the formation of rubber is delayed, but that of resin not.

The effects of irrigation upon the guayule beyond that just mentioned are very marked. These have been studied exhaustively, but here may be mentioned briefly only that the ratio of rubber producing tissue to the remaining, non-producing tissue is lowered in two ways, namely, by the relatively greater development of the wood cylinder and by the reduction of the thickness of the medullary rays. In addition to this, there is to be noted an increased hardness of the wood in which mechanical elements preponderate. The stems of irrigated plants show furthermore a strong tendency to run out into flowering shoots which die back. All this is compensated for, however, by the much more rapid rate of growth which, in irrigated plants averages five to eight times that of field plants. This, in the light of the fact that the deposition of rubber in the tissues of plants grown with extreme rapidity under irrigation, though at first relatively very slow, goes on steadily to a maximum which may be compared favorably with the maximum in field plants, is distinctly encouraging to those who hope to compass the successful cultivation of the plant. I do not ignore certain secondary practical difficulties, such as questions of cost, which constitute the business problem, but the one time greatest doubt as to the responses in the regard of rubber secretion may be retired. The evidence is to appear later, *in extenso*.

GUAYULE FACTORY PROCESSES.

We may now glance at the process of manufacture of the crude material from the shrub. Public attention was drawn to guayule rubber for the first time by a small exhibit made at the Centennial Exhibition at Philadelphia in 1876, sent from Durango.† It was not until 1888, however, that foreign attention was definitely drawn to the product, at first, it seems, in England, and very shortly after in Germany. In 1900 crude shrub was shipped to Hamburg, and from this small amounts of rubber were recovered and placed on the market. In the following year a laboratory was established by some interested Germans at San Luis Potosí, and the measure of success here had led up to the establishment, in 1902, of a factory at Jimulco. At this time also interested Americans began to conduct experiments at Torrcón. The Jimulco factory placed rubber on the market for the first time in 1905, while the efforts of the Americans culminated in the shipment of crude rubber into the United States in 1904, though in small amounts. For a period between the days when guayule shrub was bought for fuel to be used in smelters at the rate of 8 pounds for one cent gold till 1904

*The value of this resin, as at present understood, is discussed by H. O. Chute. THE INDIA RUBBER WORLD, July 1, 1909—page 351.—F. E. L.

†Following this display a leading rubber manufacturer imported to New York a steamer load of the shrub, with results stated in THE INDIA RUBBER WORLD, April 10, 1909—page 199.—THE EDITOR.



GATHERING GUAYULE IN THE TEXAS FIELDS.



BALING TEXAS GUAYULE WITH A PRESS.

or 1905, the whole industry was in an initial experimental condition, and produced little more than results of prophetic significance.

So far as we may ascertain, this experimentation took two trends, toward a purely mechanical method and toward a chemic-mechanical method, and, if we may depend on reports, in a very few instances, efforts have been made to use a practically purely chemical method, consisting of solution and differential precipitation. As our knowledge does not permit us at the present to believe that this method can produce a rubber which retains its characteristic physical qualities, we need not consider it seriously. On the other hand, the obvious lesson derived from the mastication of the rubber bearing tissues—the first learned by every one who becomes interested in guayule plant—led to the adaptation of machinery to accomplish this same end on a commercial scale. The separation of the fiber, or bagasse, from the rubber, was, however, more difficult, and it was at this point that the aid of chemicals was sought. No very apparent function was, however, at first attributed to that most used, caustic soda, and the earlier patent papers reflect an empirical and uncertain attitude. Avoiding insignificant detail, it will serve the present purpose to indicate the essential features of the process which has produced the generally best results.

The shrub is collected in the field either by pulling it up by the roots, a method causing irreparable injury to the stand, or, much less frequently by cutting at the level of the ground. It is then collected and carried *en burro* to a central camp where it is baled. This point may be on the railway or a good many miles away. In the latter event, it is hauled in wagons to the shipping point, and despatched by freight to the factory. Here it is stacked till needed. Shrinkage between field and factory weights are noted so as to control certain factors of more or less uncertainty. After washing, the shrub is passed through crushers to produce a fairly uniform coarse pulp, which is then put into pebble mills. The interior structure of this machine has been the subject of numerous patents. Steel balls have been used, associated with corrugations or projections of various kinds, but without bettering the standard mill charged with Norwegian flint shore pebbles. The mill—merely a short cylinder—is rotated on its axis until the rubber is agglomerated, when the charge of water, rubber and bagasse is discharged and conveyed to skimming tanks where the water-logged bagasse sinks and the rubber floats and so may be separated. A part of the bagasse does not, however, sink, namely, that derived from the cork proper of the bark and the water-logging of this is accomplished under water either by pressure or by continued soaking. Beater-washers may be employed for perfecting the separation of bagasse.

The rubber as thus prepared contains about 25 per cent. of resin, but this amount may be reduced by boiling in the weak

solution of caustic soda, which appears to accomplish this, in part at least, by saponification of the resin acids present. This treatment produces a rubber with 17 to 18 per cent. of resin. The rubber is now in a granular condition. By means of rolls it is further washed and sheeted, when it is ready for packing. It may be merely shipped in sacks, the rubber containing 25 per cent. moisture, or it may be further dried, and pressed into solid blocks of clean rubber, and in this shape, packed in boxes, it presents an attractive appearance. The best results which have been attained, so far as I am aware, by this or essentially similar processes, is an extraction of 15 per cent. of rubber with 25 per cent. of moisture.

EXTENT AND FUTURE OF THE INDUSTRY.

The industry as such is now, let us say, four years old. Within that time, so far as statistics are available* there has been a total exportation of crude rubber from Mexico of 37,932,986 pounds, 80 per cent. of which came to the United States. On a basis of 7 per cent. extraction of crude rubber of 25 per cent. moisture, this would represent 328,292 tons of shrub. On a basis of 15 per cent. extraction we should have 153,111 tons of shrub. Add to these items the amount of shrub exported as such during 2½ years, for which period alone statistics are available, and we have the limits 331,035 and 155,853 tons. If we should assume a 9 per cent. basis of extraction, which would not be far wrong in the average, we should have 191,389 tons of shrub consumed till the present time (September, 1909). It is probable that this estimate is not far wrong, and represents about one-half of the total supply as originally estimated. It now seems that this estimate, made by Endlich, was perhaps not quite liberal enough, but it is unsafe to make any assertions.

Here then, appears to be the situation. An industry a trifle over four years old, represented, according to Mr. Henry C. Pearson† by about \$30,000,000 of capital from the United States alone, has, at the present rate of manufacture, a four-years' further natural supply of raw material, roughly speaking. The further concentration of manufacture in a few hands coupled with a steady, controlled output, might be made to result in such regulation that the supply, supplemented by the reduced amount which may be expected to come on in the fields, may last a few years longer. I venture to say, however, that further manufacture without due heed to rigorous forestry methods can end only in the practical extermination, for an extended period, of the natural stand.

What these methods may be cannot be detailed here, beyond to say that of first importance, in view of the reproductive habits of the guayule already described, is the adoption of the cutting method of harvesting to replace the pulling. This will

*Summarized in THE INDIA RUBBER WORLD, September 1, 1909—page 424.—F. E. L.

†THE INDIA RUBBER WORLD, August 1, 1909—page 383.—F. E. L.



NEW GROWTH FROM TAP ROOT.

[The illustration shows a *retoño* or shoot developed in one year from the root of a guayule plant cut off at the ground. The scale of 5 centimeters (at the left) gives an idea of the height of the new growth.]

increase the oncoming shrub very materially, though to the precise extent may only be guessed at in view of unequal conditions. The number of new growths following cutting may, however, amount to 40 per cent. of the original number of plants, and doubtless, under favorable conditions, an even greater percentage may be expected. But, it must be understood also that much lower results may ensue if the conditions are less favorable.

In the light of the probable material reduction of the natural supply of guayule, a result not unexpected for some years, attempts have been made, doubtless by many persons, to see what could be done in the way of cultivating the plant. I have personal acquaintance with one *haciendado* whose repeated trials to germinate the seed resulted only in failure, and this experience is typical of most of these attempts. Success in germination has been reported in the pages of THE INDIA RUBBER WORLD on one occasion, coupled with statements of the content



AN IRRIGATED GUAYULE PLANT.

[Two years' growth. Compare the habit of this plant with the cut on a preceding page.]

of rubber in the resulting irrigated plants which seem to be not wholly warranted by my own observations.

I have already spoken of the result of irrigation on the plant. As to the possibility of germination it may be said that the seedlings of guayule are very small and delicate, and for a somewhat lengthy period succumb very easily to unfavorable conditions. They do not, for this period, have any of the resistant qualities usually attributed to desert plants. Moreover, the percentage of germination is very low. With proper conditions of temperature and moisture, however, it is possible to get all the seedlings desired, assuming a sufficient quantity of seed. To obtain this at the present time is expensive, though it will be possible to circumvent this difficulty. Here again the fundamental question is one of costs, and while these doubtless may be reduced, I desire particularly to avoid the implication that more than the experimental aspect of the problem from the scientific point of view has been solved.

The transplanting of both seedlings and of mature stocks is attended by more or less failure, and as this is necessary in order to get cultivated areas started, there is thus introduced another element of difficulty. Experience will enable us to reduce the loss, I think, but here is perhaps the greatest difficulty, to which again the cost problem attaches. The character of the soil too must be thought of. Whether the guayule will do without a distinctly limestone soil is doubtful.

REPRODUCTION.

The cultivation of guayule in a broad sense will, aside from the question of cost, be carried out in two directions, employing on one hand the methods of forestry, and on the other, those of agriculture. The methods of forestry will be largely restricted to the harvesting and partial modification of the habitat so as to better conditions for the guayule. The value of reseeded or transplanting in original fields is extremely doubtful because of the impossible nature of the soil, as we may call it by courtesy. The natural habitat of the plant is found in the footslopes of the mountain ranges of the *mesa central* of Mexico and its topographical continuation in the Big Bend country of Texas, the hard and rocky soil of which is seldom deep and homogeneous enough to render planting operations of sufficient ease to make them practicable. Agricultural operation, on the other hand, involves the use of both water and workable soil areas, and these at once make demands on the purse strings. Whether the use of catch crops will offset this difficulty remains to be tried.

The problem, therefore, is not an easy one, and is certainly not one for the pessimist. Here, however, is an extremely useful desert plant and one which may be made the source of much wealth even though it be granted that it may not be able to acquire the economic proportions which the cultivation of *Hevea* in the hitherto unconquered regions of the Amazon may attain to when the natural supply demands this expedient. We understand from the writing of Dr. Ross, that the Germans have not been blind to this possibility, and are experimenting with the guayule in desert Africa. It is therefore a matter of gratification that some Americans, on their personal account, have not disregarded it. It is to be expected that at no distant date the results of the work which has been done at their instance will be published.

NEW USE OF RUBBER IN SURGERY.

[IN a new appliance for use in operations on the thorax the head of the patient is placed in a compartment supplied with compressed air, in order to obtain a greater pressure than that of the atmosphere. Means are employed for supplying this air to the lungs, so that respiration does not cease when the cavity of the thorax is opened, as might otherwise happen, with fatal results. The operating chamber is rubber lined, and the apparatus embraces various rubber tubes.

India-Rubber in the Electrical Field.

By Ira W. Henry.

THE story of progress in rubber insulation during the past twenty years is practically the contemporaneous history of electrical achievement.

All forms of electrical energy, whether generated for lighting or power, or the transmission of intelligence, depend upon the insulated conductor to successfully accomplish their purposes. Twenty years ago such brilliantly illuminated streets as are now common, with swiftly moving electric cars, were practically unknown even in the world's greatest cities. The telephone, the office and household necessity of today, scarcely existed then on a commercial scale. All these conveniences and many others that electricity has supplied have been arrived at only by the use of perfectly protected wire.

The increase in the use of india-rubber as a material for insulation purposes during the past twenty years is indicated by the fact that at the beginning of that period there were only five insulated wire companies in America, turning out a product of under \$3,000,000 annually, while today there are twenty or more manufacturers in this field, with an output exceeding \$25,000,000.

In 1889 the avenues and streets of the great cities were disfigured by pole lines carrying a network of uninsulated wires for telegraph and other purposes. It was a necessity in those days, in order to transmit electric currents safely, to suspend the wires on insulators as far above the street traffic as possible. As the use of high tension currents increased, the danger of coming in contact with these wires was augmented, and in many cases where the wires were dislodged and fell to the street, there were serious results to life and property.

BURYING THE STREET WIRES.

It was just twenty years ago that active steps were taken by the officials of New York city to remove the unsightly and dangerous pole lines from the streets, and after many public meetings an ordinance was passed requiring the removal of all overhead wires in a certain section within a specified time.

This order was followed by protests from the electrical companies, and at a meeting held in the city hall prominent electrical engineers asserted that it was impossible to furnish current of sufficient voltage to light the streets on insulated wires placed underground.

At the same meeting representatives of two of the wire manufacturing companies signified their readiness to furnish and guarantee rubber insulated cables that could be placed underground and successfully accomplish the desired work. The electric companies having a large investment in overhead conductors, were naturally skeptical, but one company operating in Harlem, placed an order for rubber insulated cables that were laid in One Hundred and Twenty-fifth street, and much to the surprise of the protesting engineers these circuits were a success from the day they were installed.

The city authorities, now feeling assured of the right of their position, ordered all pole lines and wires cut down in a specified section, which for a period left the streets in darkness at night. This drastic action compelled the electric companies to take steps to fulfil their contracts with the city for lighting the streets, and within two years over 600 miles of rubber insulated conductors were in successful operation, in wire subways.

The action of New York was quickly followed by other cities, which of course was greatly to the benefit of the rubber wire manufacturers. Their business increased so rapidly that it was impossible to handle their orders, and capital, quickly seeing a new field for investment, was not slow in starting additional companies. With the increased business and new ideas entering

the field, the method of insulating conductors was greatly improved.

METHODS OF COVERING WIRES.

The first American companies followed the process introduced by Messrs. Siemens Brothers, of England and Germany, for applying rubber to an electric conductor. By this process two strips of rubber were placed longitudinally so as to cover the conducting wire. The whole was then drawn through semi-circular grooves which, in firmly pressing the strips around the conductor, caused them to unite at the edges (while the compound was still warm and immediately after the strips had been cut), and thus form a complete cylindrical casing for the conductor. The spare rubber from each strip was at the same time trimmed off at the sides by small circular cutters, close to the rollers. This plan was a great improvement in some respects, as it overcame the objection to unevenness of covering due to an overlapping seam.

When more than one covering was applied, to withstand high voltages, the joining lines of the successive layers were placed at right angles to each other. Difficulty was experienced by some manufacturers in having the seams of the rubber strips unite sufficiently to overcome dampness which might creep into the conductor when the wires were placed underground or submerged. This led to the starting of the second school of insulation known as the seamless method, which was distinctly American, and in opposition to the Siemens process.

The rubber compound by this process was not necessarily calendered or cut into strips, but was taken direct from the compounding mills and fed into a screw machine which forced the rubber in a compact and seamless mass around the conductor as it emerged from a die in the end of the machine. This process proved so satisfactory for high tension work that it induced an American company to enter the field for the production of submarine cables, which up to 1890 had been held almost exclusively by English manufacturers. The first cable of this character to be put in successful operation was laid during the Spanish-American war by the cable ship *Hooker*, of the United States army signal corps, and under the command of Colonel James Allen.

AMERICAN GOVERNMENT CABLES.

When the American army established its base on the southern coast of Cuba, after the blockade of Cervera's fleet in Santiago, it was found necessary to place Cienfuegos in direct cable communication with the United States. For this purpose a rubber insulated conductor was designed, having a stranded copper core, first insulated with a pure rubber jacket, over which was placed a thicker layer of vulcanized rubber. This conductor was protected in the usual way by a steel armor, and after being successfully laid by the *Hooker*, placed the commander of the army in Cuba in communication with Washington, and it was over this cable that the news of the destruction of the Spanish fleet was sent by Colonel Allen, within five minutes of the time of its occurrence.

Although this cable was of no great length, it proved to the American government that india-rubber could stand more service than gutta-percha, the material that before had been almost universally used. The success of this cable naturally led to more extended business, and with the acquisition of the Philippine islands, india-rubber cables were laid connecting the entire group with headquarters at Manila, and it has been stated that without these cables as a means of communication for giving prompt orders for the disposition of troops, the pacification of the islands

would have been impossible. In all, over 2,000 miles of rubber conductors were used in the cables of the Philippines system and their perfect service under the most trying conditions proved their great advantage for tropical regions, where the excessive heat would in many cases ruin cables insulated with gutta-percha.

Another point that was proved to the advantage of india-rubber was the possibility of shipping the cables overland to San Francisco before they were placed on the cable ship, thus saving ninety days in transportation. If gutta-percha cables had been employed it would have been necessary to have sent them in tanks of water to prevent the softening of the insulation, while rubber which had been vulcanized at a temperature of over 200 degs. Fahr. was of course not affected by any unusual amount of heat.

RUBBER CABLES IN SNOW AND ICE.

No history of rubber insulation is complete without a note on the important part it has played in the commercial conquest of Alaska. When gold was discovered in the Klondike, electric light and telegraph instruments had never been seen in that region. With the inrush of the miner the American government increased its military force to patrol the country and established stations in the gold region farther and farther back from the seacoast as successful explorations were made. These military posts were of necessity connected by telegraph.

It was found impossible to cut poles in that treeless waste, and the question of transporting them over hundreds of miles of rough country was impossible. To meet this emergency a rubber insulated land cable was designed that could be laid over the snow and ice and by this method keep up communication with the outlying territory. This wire was placed on reels strapped to dog sledges and played out in the most direct line possible. In many places it soon became buried in snow and ice, but was so designed that changes in temperature in no way affected it.

The rapidly increasing commercial importance of Alaska, due not alone to the gold output, but to the immense fisheries and fur interests, demanded still better means of communication. During three months of the year it is impossible for ships to arrive or depart from the icebound Alaska ports. This led to careful investigation and the only solution of the difficulty was a submarine cable connected with home. Very serious consideration was given to the engineering problems involved. The conditions were entirely new, as the shore end would be imbedded for a portion of each year in solid ice, and conditions had to be met with that were entirely new in cable construction.

Tests on india-rubber and gutta-percha were made under conditions as near as could be artificially produced in a laboratory comparing with the Alaska climate. The result proved a marked advantage in favor of rubber, and bids were advertised for by the United States army signal corps, for a deep sea submarine cable approximately 2,000 miles long, connecting Seattle, in the state of Washington, with Alaskan ports.

As a result of these tests the Congress provided for a system of telegraph lines and cables that should connect by an all-American route, putting military stations in Alaska in telegraphic connection with the army headquarters of the department of the Columbia. At that time the chief signal officer of the army said that the undertaking was unique in the annals of telegraphic engineering, when one considered the extent of the territory, its remoteness, the winter inaccessibility of the region, the severity of the climate, the uninhabited and tractless districts, or the adverse physical conditions.

He stated that if this system were completed on a straight line covering a map of the United States it would reach almost across the continent, while the cables used would reach from Newfoundland to Ireland. This plan comprised rubber insulated wires for submarine, land and other cables, all worked as one component system. The entire construction consisted of 3,625

miles of conductors. There are now installed and working cables in Alaska connecting Skagway, Juneau, Sitka, Valdez, and Fort Lisicum with Seattle, in the state of Washington.

A recent report from the war department states that although it was a radical departure to use rubber insulated cables, and that the Alaska line had been laid in depths up to 1,700 fathoms, the cable had a greater comparative transmitting speed by 25 per cent. than that of the gutta-percha insulated Atlantic cables.

INSULATION MACHINERY.

The great increase in the use of rubber for insulating purposes naturally demanded new types of machinery. The design and manufacture of this new apparatus naturally fell to the companies already making machinery for the rubber goods manufacture. When it is known that one insulating company has fifty mills running almost continuously it will be seen that this large amount of rubber compound must have an equal amount of other machinery to apply it to insulating wire.

At first a great many of the machines used for stranding the rubber conductor, taping and braiding the rubber insulation, and armoring the finished cable, were imported from England and Germany. With the growth of the industry in America and the high duty on machinery, the machine manufacturers at home were led to turn out a line of work designed especially to meet American requirements. The last twenty years have seen a tremendous growth in this field, and with the present insulated companies almost continuously increasing their plants and new wire manufacturers coming in the field, a very lucrative business has been established for this purpose.

The rubber insulation manufacturer occupies a very peculiar position in the commercial world. He must not only be an electrical engineer, but a chemist as well. The manufacturer is called on to meet the requirements for all classes of work from the small telephone wire to the high tension underground cable. The vast difference in voltage and conditions under which these materials are used make it necessary to supply various grades and thicknesses of rubber compounds.

RECLAIMED RUBBER.

While the government specifications call for 40 per cent. of pure Pará rubber combined only with dry mineral matter, the grades of wire used for commercial work under less trying conditions can safely be compounded with a less amount of pure rubber and reclaimed stock. Although many engineering specifications strictly prohibit the use of reclaimed rubber, careful experiments have proven that it is an acquisition rather than a detriment to an insulating compound, if properly used. It will be readily seen that chemically reclaimed rubbers are not suitable for insulating purposes, as the residue left is liable either to attack the metal conductor or the textile fabric with which the insulation is protected on the outside. High grade mechanically reclaimed rubbers which are made from special stock in which oil is not used to sheet them, can be highly recommended for commercial insulating work, as such material makes a firmer compound than one having a large percentage of chalk or other fillers as ingredients, the reclaimed rubber naturally making a compound less porous than with any of the hydroscopic materials.

HARD RUBBER IN ELECTRICITY.

The use of hard rubber has also played a very important part in the commercial introduction of electricity. In many places for dynamo and motor construction, as well as in high grade instruments, hard rubber has proved to be the only insulator that will withstand the high voltages and prevent leakage. In the last twenty years the output of hard rubber has steadily increased until today the total amount produced is ten times greater than it was in 1889.

While substitutes for rubber insulations have been highly advertised and in many cases put in actual commercial service, nothing has been found that will successfully take the place of Pará rubber for submarine cable work or high tension insulated

lines where there is a possibility of dampness coming in direct contact with the insulation.

Paper, fiber, cambric, and vulcanized oil have all been used where cheapness in first cost is desired, but in all cases where engineers are asked their opinion and where the United States government installs lines for communication or defense, rubber is always specified.

Scientific investigation of the physical and chemical qualities of india-rubber applied as insulating media have been given very close study during the past few years. As an English writer states, india-rubber is a most curious material to deal with in many ways; it alters its physical properties so enormously under different conditions. When vulcanized its physical properties are almost exactly the reverse of what they are when unvulcanized. In its original state it is elastic; when compounded or mixed it is non-elastic, but when cured or vulcanized it becomes more elastic than ever.

EFFECT OF SULPHUR UPON COPPER.

The vulcanizing process, which of necessity calls for the use of sulphur, naturally has a deleterious effect on the copper conductor. Many plans have been suggested and are in use whereby pure rubber or unvulcanized mixtures are placed next to the conductor, the vulcanized protection being a second layer surrounding the first. Even under these conditions the sulphur has

been known to attack the conductor. An English chemist finding that bromine, iodine, and chlorine, instead of oxidizing india-rubber in contact with water, produced an altogether different effect, endeavored to turn this to account in the manufacture of cable core. By his process the conductor was covered with two coatings of india-rubber which were first made to adhere in boiling water and afterwards run through a solution of iodine. The rubber treated in this manner was said to withstand a considerable amount of heat without deteriorating. It also resists the action of air and that of ordinary solvents.

This method of applying insulation containing no sulphur does not attack the copper and has therefore been recommended for special work. The compound is said to retain a permanent elongation like copper when subjected to tension, so that the conductor would keep central when the strain on the core is released. The elastic qualities of india-rubber are also improved by the above treatment.

Owing to the enormous variations in the nature of vulcanized india-rubber as manufactured by various mixings and methods of treatment, it is difficult to give any definite physical, mechanical or electrical data for actual tests, but by specifying certain amounts of thoroughly dried high grade gums, specifications can be drawn of sufficient accuracy to meet the electrical conditions desired.

Reinforced Concrete in Factory Construction.

By John O. De Wolf.

IN the growth and improvements in factory construction since the birth of THE INDIA RUBBER WORLD, twenty years ago, the most radical departures from previous methods, and the ones that are at present attracting the most attention, are those due to the introduction of reinforced concrete into structural work. This is becoming so general in its application and is especially suited to so many purposes that it is now receiving the most careful study of builders and engineers and has awakened great interest among mill owners.

Reinforced concrete is the name generally applied, in the United States, to concrete that has been strengthened by embedding in it steel or iron, either in rods or other forms. It is sometimes called armored concrete, ferro-concrete, and concrete steel; in France it is known as *beton arme*. Ordinary concrete is a combination in proper proportions of cement, sand, and broken stone, gravel or other suitable "aggregate." After it is thoroughly set it forms a mass as hard as stone. This is admirably adapted to resist pressure, but is weak in resistance to tensile strains. By embedding steel at the proper places in the concrete it resists the tensile stresses and the concrete resists the compression. All embedded metal does not constitute reinforcement; a beam surrounded by concrete is simply protected or fireproofed by the concrete, as the beam bears all the stresses. It is not reinforced concrete unless the metal is so placed as to bear those stresses which the concrete cannot resist unaided.

The invention of reinforced concrete is generally attributed to J. Monier, a French gardener, who about 1868 experimented along this line and first successfully applied it to the construction of large flower pots, cisterns, pipes, and the like. From this beginning has grown the present industry, which in many ways is radically changing building construction. Progress was slow at first, but as soon as the Monier system of construction became known others were brought out, differing only in the style of reinforcement and the methods of construction.

The first American patent issued in connection with this new kind of construction was in 1878, to Thaddeus Hyatt. He patented a special form of reinforcing rod with obstructions on it to prevent its slipping when in the concrete. About this time Ernest L. Ransome was working on concrete construction and

invented the square twisted reinforcing bar, which he patented in 1884. Since then a variety of "deformed" bars have been placed on the market for concrete reinforcement.

Among the best known and extensively used systems in Europe is that of François Hennebique, brought into use about 1892. This deserves especial note as M. Hennebique was one of the first to use beams of reinforced concrete and to study the theory of their design.

Most of the early formulæ used in construction were purely empirical, but since reinforced concrete has become a common form of construction it is receiving much attention from engineers; experiments are being made on it and a vast amount of information collected on the subject so that its design is no longer a matter of guesswork. The design of a reinforced concrete structure is now a matter of just as exact calculations as with any other structure material and its strength and permanence are in no way in doubt.

The question is sometimes asked as to the permanence of reinforced concrete; how do we know that a form of construction less than fifty years old will withstand the elements and the depreciation of years without weakening and failure? For answer we have only to refer to the permanence of the mortar and concrete made by the Romans and other ancient builders. A study of the use of mortar and concrete in their works leaves no doubt as to the durability of the concrete itself. The test of centuries is not needed to assure us of the behavior of the reinforcing steel, as the metal is thoroughly protected by the concrete against corrosion, and the examination of iron that has been embedded for years shows that no deterioration has taken place.

The first use of reinforced concrete on a large scale in factory construction was at the plant of the Pacific Coast Borax Co., erected by Mr. Ransome in 1898. Afterwards the building passed through a destructive fire and showed conclusively the ability of such a structure to withstand the high temperature that would have destroyed other structures.

A study of the different systems of concrete reinforcement is a most interesting one, but there are now so many that no attempt will be made to go into details of any particular one. In general it may be said that the metal is used in the form of bars,

sheets or specially designed sections. Some systems employ regular commercial iron or steel, some use sections specially made for the purpose, and others have special sections and special methods of placing and using them. The object of all systems of reinforcement is to assist the concrete to resist those stresses that it cannot itself carry. In designing reinforcement the concrete is generally allowed to carry none but compressive stress and the metal is so placed as to resist practically all others.

It is generally understood that a load on a horizontal beam causes a tendency to deflect and that this produces a tension in the lower part of it and compression in the upper portions. The tensile stresses are resisted by metal placed near the bottom surface. If the beam is continuous over a support instead of simply resting upon it there is also tension along the upper part at the support. This necessitates metal to resist it. In addition there is the tendency for the upper and lower parts to slide horizontally on one another as sheets slide when a book or pile of paper is bent. When this sliding, or sheering, tendency exceeds the strength of the concrete to withstand such action it is necessary to provide reinforcement to hold it. For this purpose metal is placed vertically or diagonally in the beam. It may be done by stirrups separate from the main reinforcing bars, by bending up some of the bars near the supports, or by reinforcement made of specially designed sections of metal for this purpose. It will thus be seen that the design of a beam involves not only provision for taking care of the tension in its lower portions, but also the tension and sheering stresses in other parts. In most concrete buildings the beams are an integral part of the whole structure instead of simply resting on supports, and the stresses are more complicated than in ordinary timber construction.

An important feature in a reinforced concrete building is its monolithic character. Instead of a collection of parts with more or less fastening together it has its walls, columns, beams, floors, and roof formed into one mass and so tied together by metal reinforcement that the concrete has little to do except resist compressive stresses. The floor reinforcement is carried over the beams and the beams and floor become one mass; there is thus none of the weakening or lack of continuity that occurs in a wooden building where one floor plank ends and the next begins. In the same manner the reinforcement is so designed and placed as to tie the ends of the beams into the columns and outside walls or pilasters. The column reinforcement extends continuously from the column of one story into that of the story above. This monolithic construction gives the greatest possible rigidity and forms a structure that is free from vibration, no matter what kind of machinery is operated in it. A conclusive proof of rigidity has been furnished by the behavior of reinforced concrete buildings during some of the earthquakes of recent years. Such rigidity and freedom from vibration must of necessity decrease the wear of the machinery, thus adding to its life and reducing the cost of repairs.

It is quite evident that a building of reinforced concrete must be fireproof. It commonly has no woodwork in its construction except the window frames and sashes, and these can be of metal if desired. Sprinkler systems are generally installed to protect the contents, though the building itself does not need them.

The question of the installation of piping, shafting, electric wiring, and so on, is one that arises and is frequently considered as a great objection to a concrete building. For sprinkler piping supports it is common to provide cast iron sockets set in the concrete and threaded to receive the pipe hangers. It is easy to mark their location on the wooden forms before the concrete floor slabs are poured. The cost of these sockets and setting them in place is a small item. In the same way sockets can be set for hanger bolts to support shafting, motors, and the like, providing their location is determined before the building is erected. For holding down machinery and for electric wiring it is a simple matter to drill the necessary holes and use expan-

sion bolts, or for small work wooden plugs can be driven into the holes and screws used in them. A pneumatic drill is a rapid and economical means for such drilling.

Larger window area can be obtained in a concrete building than with brick and timber construction and the lightness of the interior much increased on this account. In the case of a concrete rubber factory building designed by the writer the window area is about 65 per cent. of the wall space of each story, while a similar building of brick and timber construction has a window area about 25 per cent. less.

Rapidity of construction is frequently a point of advantage in favor of concrete. There is generally little or no delay in getting cement and steel reinforcement, while a building using heavy timbers or steel beams is liable to have a long wait for material unless ordered a long time before required. Such lumber as is required for centering is readily obtainable and work on it can be started without delay.

Instead of making the outside walls entirely of concrete it is quite common to use brick or tile for the curtain walls between the pilasters. In some cases this reduces the cost and to some the architectural effect is pleasing. If ornamentation or architectural embellishment is desired on a concrete building it can be obtained to any desired extent. The surface of the concrete can be hammered to resemble cut stone, or various surface finishes can be given by acid treatment or washing the surface after removing the forms before the concrete has hardened.

The question of cost is an important one to owners and we are constantly asked how reinforced concrete compares with brick and timber in this respect. No general reply can properly be made, as so much depends upon the conditions pertaining to each case. Generally speaking, the cost of concrete buildings for light floor loads is more than the common mill construction. As the floor loads increase, or if long spans and few posts are desired, the cost is more favorable to concrete, and for warehouses and heavily loaded structures concrete is usually cheaper. But in addition to the question of cost there are many reasons why this comparatively new system of construction merits careful attention from the manufacturer when he is considering the question of new buildings.

BLOODSHED OVER RUBBER.

THE article headed "Red Rubber" in Eastern Peru," in THE INDIA RUBBER WORLD, November 1, 1909 (page 44), is recalled by reports of subsequent proceedings in the British parliament. Upon inquiry being made as to whether further reports as to the Peruvian Amazon Co. had been received, Mr. McKinnon Wood, replying for the government, said that only unofficial reports had come to hand. But he was in communication with the Peruvian company on the subject of the alleged cruelties. The British ambassador at Washington had verified the reports of injuries inflicted upon two American citizens in the rubber region, and the payment of compensation on the part of Peru.

INDIANS KILL A "CAUCHERO."

AT the beginning of September was assassinated in Rio das Pedras, a tributary of the Madre de Dios, in southern Peru, a well known *cauchero*, Carlos Scharff. The act was that of some of his workmen, who charged him with barbarous treatment. The Indians of that region, which is hundreds of miles south of the Putumayo, the scene of the outrages described by the British press, are of the less tractable tribes Piros and Anahuacas.

According to the Manãos newspaper *Amazonas*, Scharff had lately collected about 500 tons of caucho. A Spaniard named Rodrigues, resident in Ucayali and an *aviador* of Scharff, had organized an expedition to Rio Tacauahamano to try and save this rubber. Creditors of Scharff down the Amazon were also sending representatives to Peru to protect their interests. He is reported to have owed in Pará, Manãos and Iquitos \$3,000,000.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

THE departmental committee to inquire into the employment of electricity in coal mines has now been appointed, and its findings will not be without interest to cable makers. The main reason for its appointment, I may say, is a strong opinion in some quarters that the West Stanley colliery explosion in the Durham field last spring was due to an electric spark formed by a short circuit at the working face. During the

ELECTRICITY IN MINES.

last two or three years the use of electricity instead of compressed air has largely increased in working coal cutting machinery, especially in the north of England, and many engineers have predicted danger in fiery mines. To some extent, no doubt, the opposition comes from the older engineers, who know little about electricity and are opposed to such innovations. But at the same time there are up-to-date men who recognize the risks introduced by the electrical coal cutter, and who only use electricity instead of compressed air because it is cheaper. If compressed air working can be cheapened—and from what I hear it will be—it is possible that electrical coal cutters will be forbidden. Another alternative is to render the occurrence of short circuiting practically impossible by improvements in the cables. In this connection I hear that Messrs. W. T. Glover & Co., Limited, of Trafford Park, have had the matter under careful consideration, and that they will shortly have some information to make public concerning it. It seemed to be advisable to say what I have done, because otherwise those not familiar with the details of colliery working might imagine that electrical winding or the use of the electric light at the surface had suddenly come under suspicion. At some of the South Wales collieries electrical winding is in use, and found to be cheaper than steam, and there is no doubt that the use of electricity for many operations in mining will continue to increase. Of course rubber insulation has by no means a monopoly; there is the same competition with fibrous and bitumen cables in this as in other fields. Although British cable makers are well to the fore in mining business, with regard to other parts of the electrical installation it is noteworthy that much of the plant has been supplied by Germany.

So far I have not seen anything in print regarding the doings of the International Committee and am wondering whether work on the Herculean task has been commenced in earnest. That there is scope for a good deal of careful examination

RUBBER ANALYSIS.

into the reliability of methods is evident to the student of chemical literature. Of late contributions to rubber analysis have consisted chiefly of diatribes observing the unreliability of what has been advanced some time previous as the solution of a difficult problem. To give only one instance of several which I have come across in the last year: In 1903 Weber published the chloral hydrate method of discriminating between the main constituents of the acetone extract from vulcanized rubber, and in 1909 Frank and Marckwald published their conclusions as to the unreliability of the method. The determination of the correct figure for the rubber resins is of course of considerable importance because of the great assistance it gives in arriving at an approximate valuation of the raw rubber used. As, however, in several widely used rubber mixings of today the acetone extract contains organic matter other than the rubber resins, great care is necessitated in drawing conclusions from the bulk of this extract until it has been closely examined. It is this inclusion of more or less new bodies in rubber mixings which is so apt to invalidate what it may be sought to establish as

standard methods of analysis. For the determination of certain constituents such as free or total sulphur or the various mineral compounds, this difficulty need not arise, and methods as precise as those recently published for American agricultural chemists might be strongly recommended if not enforced. Rubber analysis, however, is different from agricultural or mineral analysis in that it is not in regular operation between buyer and seller for the determination of particular ingredients. When the buyer of rubber goods has them analyzed—which is by no means a frequent occurrence—he wants to know the whole composition. Moreover, he wants the result as soon as possible and he wants it done cheaply. It may easily happen that some constituent may be present which will largely invalidate any standard method, and where time and price are important matters I imagine that rubber will continue to be estimated by difference rather than by the tedious though scientifically beautiful direct methods which have been evolved in recent years from Teutonic laboratories.

A FEW months ago I referred at some length to the remaking of vulcanized rubber under Gare's patent. The recent patent of

REMADE RUBBER.

Hutchinson and Milne, of October, 1909, for a process of reclaiming vulcanized rubber is on much the same lines and was, I believe, opposed by Gare. The main difference in the specification, as far as I can judge, is that the ground-up waste in Gare's patent is directly treated under heat, and pressure not particularly specified, and in Hutchinson's patent the ground-up rubber is first treated for the removal of the free sulphur and is then subjected to pressure and heat exactly specified; also in this process filling material may be added as well as coloring matter. A good deal is made of the possibility in this process of utilizing coloring matters to a much better effect on account of the low temperature of the operation and the absence of free sulphur. There are one or two sentences in the new specification which I am not prepared to accept straight off. Thus I read that even perished rubber can be rejuvenated so as to be of as good or even a better quality than it was originally. I don't think Gare ever claimed to do as much as this; in his works he has used goods such as solid cab tires which, if decayed at all, are only so to a slight extent on the surface, and if surface cracking was strongly in evidence the outside of the tire was cut off before being remade. I am not at all disposed to believe any statement to the effect that rubber which is really perished can be rejuvenated so as to possess its former properties. Of course if the term perished applies only to what is surface cracked, Hutchinson's statement has nothing very remarkable about it. In a general way these two patents remind me of the rival oil-fotation processes in ore dressing in which the final decision has just been given in the House of Lords. Without going into any details on a matter quite outside the province of these notes I may say that the first patentee has lost his case mainly because he made wide claims as to the quantities and methods of treatment, while the supposed infringer, who has won the day, gave precise detail of his process in his specification. There is no doubt that this remade rubber business is of considerable commercial importance and the patents in connection therewith are far more worth discussion than is the case with the great bulk of rubber patents. In the Hutchinson patent it is quite a relief not to read anything about "allied gums," which mysterious bodies usually figure in a rubber patent, the patent agent evidently having the impression that their inclusion is an element of strength.

SOME correspondence in the *India-Rubber Journal* has vested this topic with rather more importance than I had been inclined previously to credit it with, though the able botanist who presides over the destinies of the journal is not inclined to

**BANANA
RUBBER.**

be so optimistic as his correspondent. Some years ago the subject of banana rubber came prominently before me in connection with a secret process of getting rich quickly, but though I knew nothing really against banana rubber at the time, I was quite certain that the samples of rubber shown as having come from that source had quite a different and unmistakable origin. There was little doubt that trickery was at work in the case, and the statement made by the inventor of the process to the effect that rubber cannot be accurately analyzed did not cause me to change the opinion I had formed. Of course the present suggestion of banana rubber is not new, as Otto Zurcher of Jamaica took out a British patent for *Musa*, or banana rubber, a good many years ago. A friend of mine prominently connected with the company shipping the fruit from Costa Rica to England, was very incredulous about the plants yielding rubber, though attempts had been made, he said, to utilize the fibers in the paper manufacture. As the plants are felled after every harvest, there is of course plenty of raw material available for the recovery of by-products. With regard to the question generally, it is of course well known that numbers of plants yield latex which contains rubber in small quantity, and Mr. Pearson suggested in the first edition of his book that several shrubs in Mexico were well worthy of examination as a source of rubber. No doubt the guayule plant was in his mind, and since then we have seen the large guayule rubber business established. In cases of this sort, where the yield is not great and the quality inferior, it is all a matter of the market prices for raw rubber as to whether the business is likely to prove a success. The present time, therefore, is opportune to bring such projects before the capitalist—a fact which the so-called synthetic rubber people have not failed to take advantage of. Of course when the inevitable fall in rubber prices comes to pass it is more than probable that new sources of supply which might be made to yield a profit at present would prove unremunerative as investments; hence people with knowledge of the trade will not be in a hurry to invest money in banana rubber schemes any more than is the case at present with rubber from peat.

In the closing months of the year fires occurred at the cable works of Messrs. Johnson & Phillips, the well-known firm on the Thames, and at the cable works of Messrs. Conolly Brothers, at Blackley, near Manchester, though in neither case was the damage very extensive. Another fire which may be mentioned broke out at the non-flammable celluloid works at Dronfield, North Derbyshire, more damage being done to property across the road than to the works themselves. As a fire in such a factory is apt to cause mistrust as to the value of the process worked it has been pointed out by the authorities that the conflagration was limited to material which had not been treated. I have not seen any of this non-flammable celluloid, but I am sure that there ought to be a good market for such a material.

MISCELLANY.

In the matter of the new lease of life of the Scottish Vulcanite Co., referred to already in THE INDIA RUBBER WORLD, a company having been formed by Mr. Black, late of the North of Scotland Rubber Co., it is satisfactory to hear that many of the old staff will be taken on again.

Mr. Slazenger, the newly-appointed sheriff for the City of London, is a member of the firm which is so widely known in connection with lawn tennis balls. He has also another link with the rubber trade in that he is a brother-in-law of Mr. Alderman Frankenburg, of Salford, Manchester.

British East Africa is now becoming the regular objective of

wealthy sportsmen who are following in the wake of men like Lords Hindlip and Delamere, who, in addition to big game hunting have identified themselves with business interests in the way of developing the agricultural resources. On the property of the Hindlip Fawcus Estates, Limited, at Kahawa, Zuchi, Rewera Hills, rubber planting has recently been started, the trees selected being *Manihot Glaziovii* and *M. dichotoma*, the locality being near the coast. The family name of Lord Hindlip is Allsopp, the business with which the first holder of the title was connected not needing any particularization. Mr. W. P. J. Fawcus, who died recently, was for some years prominently connected with the Messrs. W. T. Glover Co., Limited, the cable manufacturers, and his son is now the local representative on the estates.

"CASTILLOA" YIELDS IN CENTRAL AMERICA.

WHILE considerable interest in rubber has been manifested in Jamaica, and a good deal of planting has been done on that island, the editor of the *Journal* of the Jamaica Agricultural Society points out in the October, 1909, issue that no organized tests for tapping results have been made there, in consequence of which opinion is still divided as to the practicability of rubber culture. They have gone on analogy—their lands bear other tropical products as well as any other part of the world, and why not rubber? This is the basis of such rubber enterprise as now exists.

The *Journal* prints in this connection a very interesting report from William Cradwick, of the colonial department of agriculture, on the tapping of a *Castilloa* rubber tree 14 years old, from seed imported from Costa Rica. Tapped by the Bowman-Northway method, introduced from Ceylon, the scoring on a modification of the herring bone system gave 1 pound of rubber; the spur used four days later gave a further yield of 5 ounces. This tree will be tapped once a month so long as it continues to yield. The tree is 49 inches in girth, three feet from the ground. Other *Castilloa* trees on the same estate are being tapped once a week and once a fortnight, so that observations may be kept as to the effect of tapping this species.

In the same issue of the *Journal* a Costa Rica correspondent discusses the difference between two varieties of native *Castilloa* in that republic, apparently alike to the uninitiated, but readily distinguished by the rubber gatherers. He says that a number of trees taken at random from the first group that he met in a forest, and apparently of the same age, when tapped rather crudely with the *machete* gave results as follows; one class yielded an average of 53 ounces of dry rubber and the other only 9.4 ounces. One tree of the better sort gave 76 ounces, and one of the other only 3 ounces. The age of the trees which he tapped is not even estimated, but they all bore signs of having been tapped before. The point of the correspondent's letter is that planters of *Castilloa* should be careful to secure the species or variety which is most productive.

The Mr. Cradwick already mentioned wrote in a recent report: "I am much more favorably impressed with *Castilloa* than I was, as in spite of a tree being attacked here and there by scale insects and a kind of dieback caused by a fungus growth, the majority of the trees grow rapidly and are free from troubles. They break off in hurricanes rather than blow out of the ground, and the breaking off apparently does not do them the slightest harm; in fact, I think it would be very advisable to top the trees at about 10 or 12 feet from the ground, as in this case the base of the stem would be thickened and strengthened, and high winds would then simply have the effect of breaking off the top growths without injuring the main stem of the tree at all."

"TIRES and All About Them," for everybody who has to do with rubber tires, for business or pleasure.



JOHN BOYD DUNLOP.

DR. DUNLOP AND THE "TIRE MAJORITY" DINNER.

WHILE the dinner in commemoration of the "majority"—or coming of age—of the pneumatic tire, reported in THE INDIA RUBBER WORLD last month (page 69) had for the guest of honor Mr. Harvey du Cros, managing director of the Dunlop Pneumatic Tyre Co., Limited, who was presented then with a beautiful gold souvenir and a congratulatory address with 850 signatures, there was much interest in the attendance at the dinner of Mr. John Boyd Dunlop, the inventor of the tire which was the basis of the Dunlop company.

Mr. du Cros, in acknowledging the honor paid to him, was very happy in his references to Mr. Dunlop. He said that he would not accept without qualification the credit given to him as the founder of the tire industry. No particular man founded that industry. It was founded by a group of men who were all present—Mr. John B. Dunlop, Mr. R. J. McCreedy, Mr. Richard Booth, and Mr. Fred Woods. They had two foreign godfathers, Monsieur Clermont, of France, than whom there was no more loyal colleague, and Herr Kleyer, who had founded the industry in Germany.

It was, however, Mr. Dunlop's brains that produced the invention, and no one appreciated this fact more than he (Mr. du Cros) did. Mr. Dunlop performed what had been declared

impossible. He produced a tire in which was solved the problem of putting air into harness. The principle on which he constructed the tire had not been improved on since. It was but bare justice to state that the industry was founded on the tire produced by Mr. Dunlop. There was no manner of doubt as to his ignorance of the existing Thomson patent. The speaker remembered the fatal day in 1890 when that ancient patent was laid before the Dunlop board. But if it had been known of prior to the formation of the company, the company would never have been founded.

Thomson apparently had the patent and no business; Dunlop had the business but no patent. Mr. Dunlop had helped them most materially in their efforts to find out something which would get them over their difficulty, and no one gave sounder advice than he did.

At the pneumatic tire dinner the leading toast was proposed by Mr. A. J. Walter, K.C., who spoke at length on the development of the bicycle, in connection with which the pneumatic tire first came into practical use. He said that in 1889 the number of bicycles in the United Kingdom was approximately 300,000, which, by the way, is a much larger figure than can be claimed for the United States in the same year, and rather notable in view of the fact that only cushion and solid tires had been applied to bicycles before that year. Mr. Walter said that the number of bicycles in that country now was about 3,000,000, and the yearly output something like 800,000. The export of bicycles in six months had amounted to £840,822 [= \$4,091,860.26]. It is evident, therefore, that the British bicycle industry contributes in no small degree to the demand for pneumatic tires. Mr. Walter said further that over 2,000,000 people paid a cycle tax in France. The number of motor vehicles in Great Britain at present is 100,000, and the yearly output 20,000.

It is announced that the French government has decided to confer on Mr. du Cros the order of the Legion d'Honneur. The King of Spain will confer upon him the order of Isabella la Catholica.

THEN AND NOW IN CEMENT MAKING.

IN the beginnings of the rubber cement manufacture, as carried on in Massachusetts, it was customary to cut up the crude rubber with butcher knives, after which the slices were cut into smaller pieces with tinsmith's shears. The shredded rubber was then put into a barrel, and naphtha was applied. The mixture was occasionally stirred with a piece of old board or an old oar for a paddle. It took a month to make rubber cement by this method.

Nowadays the crude rubber is speedily cut up by steam-driven rotary knives, and in the churn with which it is thrown with naphtha the stirring is done by paddles operated by steam power. By the modern method, with improved appliances, rubber cement can be made in a day.

RUBBER IN A LOOM PICKER CHECK.

A LOOM picker check invented in Lancashire involves a new use for india-rubber. A "picker" in weaving is the part of the picker staff which strikes the shuttle; it is covered with a material not so hard as to injure the shuttle, and yet durable, such as rawhide. Leather is expensive and requires frequent renewal, besides which a more elastic material is desirable. In the Lancashire invention cotton sheeting is treated with rubber solution and passed between heavy rollers, the operation being repeated several times with added rubber solution until the fabric has the desired quality. The fabric is then wrapped around a mandrel into a tube, vulcanized, and cut into suitable lengths.



THE PRESENTATION TROPHY.

[Testimonial to Mr. du Cros, at the "Tire Majority" Dinner.]

Twentieth Anniversary Congratulations.

WORDS are lacking with which to express adequately THE INDIA RUBBER WORLD's appreciation of the great number of kindly letters which have reached the management from rubber men everywhere, in connection with the Twentieth Anniversary. While in the nature of things the maintenance of a trade journal calls for other forms of appreciation than kind words, the Editor of THE INDIA RUBBER WORLD can say sincerely that the letters here quoted as representative of a mass of congratulatory correspondence are accepted as a better indication than any mere financial returns that his work in his chosen field has not been without success.

We thank our friends, and hope to merit equal kindness from them twenty years hence.

"OF GREAT INTEREST AND VALUE."

[From CHARLES MACINTOSH & Co., LIMITED, india-rubber manufacturers, Manchester, England.]

We are much pleased to hear that your widely-known journal is to celebrate its twentieth birthday. We wish it a long and prosperous life. We say this in no perfunctory manner. We feel that your paper has been of great interest and value to rubber manufacturers, and to rubber producers in the past few years. We hope that it will continue to keep abreast of the great developments which are apparently coming in the near future.

[Signed] R. K. BIRLEY,
Director.

CONDUCTED ON "RIGHT PRINCIPLES."

[From THE B. F. GOODRICH Co., india-rubber manufacturers, Akron, Ohio.]

I WAS not aware until just now that twenty years had rolled around since the first number of your excellent magazine, THE INDIA RUBBER WORLD, made its first bow to the public. Twenty years is indeed a long time, and many changes have since taken place in the rubber world. The fact that it has survived this long shows that its publication has been in good hands, and that the right principles were laid down and followed in its wonderful growth and success. I beg to extend THE INDIA RUBBER WORLD my very best wishes for a prosperous future.

[Signed] G. T. PERKINS.
[Director and long time president.]

"INFORMATION OF SPECIAL VALUE."

[From HARBURG AND VIENNA INDIA RUBBER WORKS, Harburg-on-Elbe, Germany.]

We are pleased to hear that the January number of THE INDIA RUBBER WORLD will celebrate the fact that the paper is twenty years old. We congratulate you, and hope that the paper continues its prosperous career. We always read THE INDIA RUBBER WORLD with great interest and consider that the information contained in it is of special value, not only to us but to all persons interested in the india-rubber trade as well.

[Signed] L. HOFF,
[Director.]

"INVARIABLY OF INTEREST."

[From NORTH BRITISH RUBBER Co., LIMITED, Edinburgh, Scotland.]

We notice that with the January number THE INDIA RUBBER WORLD celebrates its twentieth birthday, and we take this opportunity of congratulating you on this fact. In our opinion, there is no doubt but that THE INDIA RUBBER WORLD holds one of the foremost positions amongst publications of its kind. It is always up to date, brightly written, and contains valuable information and statistics which are invariably of interest to us, and we should judge to all those connected with the rubber industry.

[Signed] A. C. BAKER,
General Manager.

APPRECIATED IN THE INSULATED WIRE TRADE.

[From BISHOP GUTTA-PERCHA Co., insulated wire manufacturers, New York.]

IF your publication has been as valuable to, and appreciated as much by, the clothing, mechanical and other rubber industries, as

it has been in the insulated wire business, surely you may feel that your birth was not premature, but that, like other great enterprises and great men, was just in time to fill a great want, and we feel that it has been well filled.

[Signed] HENRY A. REED,
[President.]

"INSTRUCTIVE AND PROFITABLE READING."

[From JAMES C. HARVEY, india-rubber planter, Sanborn, Estado do Vera Cruz, Mexico.]

YOUR journal has been on my subscription list for the last ten years. I recall no number during that period that has failed to provide instructive and profitable reading, not alone as affecting the trade status of manufactured rubber goods and the market in the crude product, but as pertaining to planting affairs in general and with respect to all the commercial rubber producing plants, and it affords me a very great deal of satisfaction to say so.

[Signed] J. C. HARVEY.

"MUCH VALUABLE INFORMATION."

[From Professor Dr. ADOLF PRINZHORN, former rubber manufacturer, Hanover, Germany.]

ALLOW me to congratulate you most cordially at the completion of the twentieth year of THE INDIA RUBBER WORLD. There are few journals from which I have got so much valuable information as from this paper, which from the beginning has been under your able management.

[Signed] A. PRINZHORN.

"EACH ISSUE A LITTLE MORE INTERESTING."

[From GEORGE H. HOOD, a pioneer rubber manufacturer, Boston.]

IT gives me pleasure to recall that I was one of the subscribers to the first issue of your valuable paper, and that I have continued to receive it from that time to the present. I have always found it not only interesting, but helpful to me in keeping in touch with rubber matters in general. Each issue has always seemed to me a little more interesting and progressive than its predecessor, and it has always seemed to keep pace with the tremendous growth of the rubber industry. With congratulations to you for the good work you have already accomplished, and with best wishes for the continued growth and prosperity of THE INDIA RUBBER WORLD, etc.

[Signed] GEORGE H. HOOD.

"SCOPE AND USEFULNESS GROWING."

[From GEORGE A. ALDEN & Co., india-rubber importers, Boston.]

I WAS reminded the other day that THE INDIA RUBBER WORLD has been in existence twenty years. How time flies! It was an exhibition of very considerable nerve on your part to devote time and capital to the interests of a trade so relatively inconsequential in those days. But your forecast was sagacious and right, for the growth of the rubber trade has been phenomenal within that period, and a good trade paper has been a very necessary part of it. In all that score of years, I think, I have read more or less of every issue, and have on special occasions expressed myself in appreciation of its attractive make-up and of the great interest and instructiveness of its contents. I have observed its scope and usefulness grow greater year by year until THE INDIA RUBBER WORLD has become an undoubted power in the trade, looked to for information and looked up to for advice and opinions.

[Signed] GEORGE WATKINSON.

KEPT THEM WELL POSTED.

[From NORTHWESTERN RUBBER Co., LIMITED, reclaimed rubber, Litherland, Liverpool, England.]

IF I am not mistaken 1910 will celebrate the Twentieth Anniversary of THE INDIA RUBBER WORLD, and as I have been connected with the rubber business about the same time, I wish to extend to you my congratulations on the success which your paper has attained. I remember it in the early days and from its inception it was always a source of great satisfaction to me, and it kept me well posted in the affairs of the rubber world and

given me a great deal of useful information which enabled me to get into close touch with interests necessary to the successful conduct of my business. As an advertising medium it has always paid me and I hope that the paper will go on with the same success in the future as it has in the past.

[Signed] E. E. BUCKLETON,
[Manager.]

RIDES TWENTY MILES IN THE RAIN FOR IT.

[From HORTER CULTURE Co., LIMITED, New Orleans, Louisiana, india-rubber planters in Nicaragua.]

I AM anxious to have you know how much I care for your monthly journal; it is not only full of interest for me but I always find something in it that profits me in its application to what I am doing on my plantations. If in the mail I don't see the blue cover promptly, I don't mind a ride of twenty miles or so to get it, and riding for twenty miles in Nicaragua usually means a soaking.

[Signed] J. C. HORTER,
[Vice-President and Manager.]

"HIGHLY APPRECIATED IN HOLLAND."

[From Dr. A. G. N. SWART, 's Gravenhage, Holland, member of the committee of rubber growing companies in the Netherlands East Indies.]

YOUR paper being of the greatest interest, not only to Americans, but, I may say, to every one interested in rubber, I congratulate you most heartily on its twenty years of existence. I hope that its present Editor will continue in that capacity for ever so long, as his knowledge and ability in all matters concerning rubber is highly appreciated by all his good friends in Holland.

[Signed] A. G. N. SWART.

"PICKED UP TRADE THROUGH IT."

[From TYER RUBBER Co., manufacturers, Andover, Massachusetts.]

I READ THE INDIA RUBBER WORLD every issue, and there is always something instructive and interesting in it, and we should miss it very much. We have picked up trade through it, having one customer in particular in another country that read our "ad." and through that we sell large lots of our goods.

[Signed] JOHN H. FLINT,
[Treasurer.]

"PLEASANT READING."

[From WEISE & Co., india-rubber merchants, Rotterdam, Holland.]

MY best wishes on the twentieth birthday of THE INDIA RUBBER WORLD. I state with pleasure that your paper has not only always been of interest and value to us for its splendid information but also that I have always appreciated the fact that you understood how to make it a pleasant reading. Technical papers as a rule are so hopelessly tough!

[Signed] JAC. MUSLY.

THE BEST OF THE NEWS CONCERNING RUBBER.

[From BOTANIC GARDENS, SINGAPORE, Straits Settlements.]

THE INDIA RUBBER WORLD is of interest and value to me; I should be very sorry to be without it. It gives the best of the news of the day concerning the industry which is the sole topic of conversation here, and it gives its information clearly and brightly. I congratulate its Editor on its attaining its first twenty years, and hope it may go on as well for another twenty and more beyond that.

[Signed] HENRY N. RIDLEY,
[Director.]

"OF GREAT INTEREST FOR MANUFACTURERS."

[From MICHELIN ET CIE., india-rubber manufacturers, Clermont-Ferrand, France.]

ON the occasion of the twentieth anniversary of THE INDIA RUBBER WORLD's existence, I have pleasure in saying that I consider the reading of your excellent review of great interest for a rubber manufacturer. I also seize this opportunity to send you my best wishes for its further prosperity.

[Signed] EDOUARD MICHELIN.

"EACH YEAR MORE USEFUL."

[From RENÉ BOBET, consulting engineer in india-rubber, Paris, France.]

I HAVE been reading your esteemed journal since it was started—that is to say, for twenty years. It is a great pleasure for me on the occasion of this anniversary to sincerely compliment you on the remarkable manner in which you have made a success of

THE INDIA RUBBER WORLD. It is a pleasure for me to notice that your journal has each year become more interesting, more complete, and more useful to all those who are engaged in the caoutchouc industry, by giving information of the very highest value. I hope you will continue to be successful.

[Signed] R. BOBET.

THE "CLASSICAL" RUBBER PAPER.

[From VEREINIGTE BERLIN-FRANKFURTER GUMMIWAREN-FABRIKEN, Gross-Lichterfelde, Germany.]

I HAVE followed the development of THE INDIA RUBBER WORLD with great interest, and derived benefit from it many times. I think every modern rubber manufacturer ought to read it, and I think I am not too enthusiastic if I call it "the classical paper for the india-rubber trade." I am convinced that with the great progress and the wide future the rubber industry has before it your periodical is bound to have a brilliant career.

[Signed] EMIL SPANNAGEL,
[Manager.]

"A BENEFICIAL EFFECT."

[From PIRELLI & Co., india-rubber manufacturers, Milan, Italy.]

WE notice that THE INDIA RUBBER WORLD will celebrate in January next the fact that the paper is twenty years old. While heartily congratulating you on this event, we gladly avail ourselves of this occasion to express our appreciation of the most beneficial effect that the rubber industry and trade have derived from your paper and your personal collaboration.

[Signed] PIRELLI & CO.

"HAS GROWN IN USEFULNESS WITH YEARS."

[From VOORHEES RUBBER MANUFACTURING Co., Jersey City, New Jersey.]

MY attention is called to the fact that you are soon to issue a birthday number of THE INDIA RUBBER WORLD; that it is twenty years since I gave you the first advertisement, and that the blond-bearded young man who received it is now a recognized veteran in the trade. The pioneer rubber trade paper then seemed a necessity to the rubber business, and it has grown in usefulness with the years. I congratulate you on its well-earned past, on its excellent present and on its splendid prospects for future usefulness.

[Signed] JOHN J. VOORHEES,
[President.]

MARCHING ALONG WITH THE TRADE.

[From APSLEY RUBBER Co., manufacturers, Hudson, Massachusetts.]

A SCORE of years have passed since we as manufacturers of rubber goods gave a hearty welcome to THE INDIA RUBBER WORLD on its first appearance as the representative and exponent of this great industry. The industry itself has made enormous strides since that time, and THE INDIA RUBBER WORLD has marched along with it, and we believe it has contributed much to the advancement of the business it represents by the mass of practical information it has furnished its readers. Regarding the value of THE WORLD as an advertising medium, the most practical endorsement I can give is the enclosed copy for a full page advertisement in your birthday number.

[Signed] L. D. APSLEY,
[President.]

CONTRIBUTED TO THE BETTERMENT OF THE TRADE.

[From J. A. MENDES, india-rubber merchant, Pará, Brazil.]

I UNDERSTAND that the January number of THE INDIA RUBBER WORLD is to be a special number, celebrating the fact that the paper is twenty years old. I don't know of any other technical paper (the growth of which having kept pace with that of the rubber and allied industries) that has really contributed so efficiently to the betterment of all concerned, at both ends of production and of the vast and always increasing fields of the india-rubber manufacture.

[Signed] J. A. MENDES.

AN EXCELLENT TITLE.

[From the GOVERNMENT GUTTA-PERCHA AND RUBBER PLANTATIONS IN NETHERLANDS INDIA, Buitenzorg, Java.]

IT is a great pleasure to me to congratulate you upon the twentieth anniversary of THE INDIA RUBBER WORLD. The fact—

though I live so far away from New York—that I am a regular reader proves how I am attached to your paper. The title of your periodical could not be a better one; it gives one an exact account what is going on in "the india-rubber world."

[Signed] W. R. TROMP DE HAAS,
[Superintendent.]

"OF GREAT INTEREST."

[From JULIUS KOPP, wholesale india-rubber goods, Copenhagen, Denmark.]

I HAVE pleasure in stating that THE INDIA RUBBER WORLD is a paper of great interest to me and has very often given me valuable information.

[Signed] JULIUS KOPP.

"THE BEST PAPER IN THE INDUSTRY."

[From the AMERICAN ASSOCIATION OF COMMERCE AND TRADE, Berlin, Germany.]

I CONSIDER THE INDIA RUBBER WORLD the best paper in the rubber industry and unsurpassed in neatness of dress and solidity of contents and richness of news. I trust that the paper may under your able management celebrate many more decades of its existence.

[Signed] GEORGE S. ATWOOD.
[Secretary.]

LOOKS FORWARD KEENLY FOR IT.

[From J. L. HERMESSEN, A. M. I. L. E., rubber planting expert, Tapachula, Estado do Chiapas, Mexico.]

I HAVE pleasure in stating that I look forward keenly to every issue of THE INDIA RUBBER WORLD, finding the information which it gives from all parts of the world, and upon all phases of the industry represented, as interesting as it is valuable. With so much going on all the time in every direction. I do not know how any one connected with rubber—whether as planter, merchant or manufacturer—can keep *au courant* without reading THE INDIA RUBBER WORLD. Speaking for myself, I know I can't. Which is why I subscribe for it.

[Signed] J. L. HERMESSEN.

"ALMOST INDISPENSABLE."

[From G. VAN DEN KERCKHOVE, consulting india-rubber expert, Brussels, Belgium.]

UPON the occasion of the twentieth anniversary of THE INDIA RUBBER WORLD, I want to offer my most sincere congratulations. THE INDIA RUBBER WORLD is not only a useful organ but, I might add, has come to be almost indispensable, both to the manufacturer and the rubber planter. During the fifteen years that I have been a regular reader, and sometimes a modest collaborator, I have derived most valuable information from its columns.

[Signed] G. V. D. KERCKHOVE.

AMERICAN RUBBER GOODS EXPORTS.

OFFICIAL statement of values of exports of manufactures of india-rubber and gutta-percha from the United States for the month of October, 1909, and for the first ten months of five calendar years:

MONTHS.	Belting Packing, and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
October, 1909	\$167,775	\$160,899	\$419,292	\$747,966
January to September	1,301,497	1,127,806	3,059,146	5,488,449
Total	\$1,469,272	\$1,288,705	\$3,478,438	\$6,236,415
Total, 1908	1,049,641	1,157,136	2,940,309	5,147,086
Total, 1907	1,168,648	1,401,980	3,345,209	5,915,747
Total, 1906	994,883	1,077,009	2,702,861	4,774,753
Total, 1905	958,660	1,056,458	2,373,841	4,388,959

RED RUBBER STAMPS.—A maker of rubber stamps in St. Louis recalls that in the early days of the industry there was a great preference for red rubber stamps, and it was hard to convince anybody that stamps other than red were of any account.

NEW TIRE PROTECTOR.—An invention by E. P. Curry, of Hoquiam, Washington, is thus described: It is a tire protector, consisting of a thin band of steel which is fitted on the tire before it is inflated. Inflation causes the steel band to cling to the tire, thus saving it from wear.

JOHN MURPHY, A PIONEER.

THE reorganization of the Scottish Vulcanite Co., Limited (Edinburgh, Scotland), of which an account was given in this paper last month (page 75), recalls the connection with its beginnings of John Murphy, one of the oldest men in America now connected or who has been connected with the rubber industry. Mr. Murphy was born April 4, 1824, and at the age of 21 began work in rubber in the factory at Harlem, New York, of the three Rider brothers, who in 1845 formed a copartnership to manufacture under the patents of Charles Goodyear.

There were various changes within a few years in the then new rubber industry, and some time after the Rider and certain other licenses were acquired by the Union India Rubber Co., in 1848, the Riders became independent and incorporated the North American Gutta-Percha Comb Co., with a factory in East Thirty-third street, New York, and under patents and processes of John Murphy they began the manufacture of hard and soft goods of gutta-percha, and especially gutta-percha combs. The new com-



JOHN MURPHY.

pany were proceeded against by the owners of the Goodyear patents, which latter were finally successful.

William Judson, who had been one of Goodyear's advisers, and who had an interest in several American rubber factories, had already become one of the founders of the North British Rubber Co., at Edinburgh. It was at his suggestion that the Scottish Vulcanite factory was begun, about 1861. The first machinery used by the company was of American manufacture, and the first skilled employes graduated from American factories. The installation of the Edinburgh plant and its beginning of operation were in charge of Mr. Murphy, who remained in Scotland for two years.

Later Mr. Murphy was one of the incorporators of the old Manhattan Rubber Co., which for several years operated the old H. H. Day factory at New Brunswick, New Jersey. After a few years he sold out his interest and, in 1868, became factory superintendent of the Gutta Percha and Rubber Manufacturing Co. (New York), a position which he filled ably for more than 30 years, benefiting the business both by his skill as a manufacturer and his ingenuity as an inventor, and well earning the rest which he has since enjoyed so philosophically.

THE Western Electric Co. announce a contract with the Chinese government to equip a modern telephone plant in the city of Peking, at a cost of \$1,500,000.

Aëronautics at a Rubber Banquet.

THE evening chosen for the Aeronautic Symposium of the Rubber Club of America, in Boston, on December 13, was conspicuously dark and aggressively rainy, but all without effect, for there gathered at the new Algonquin Club the largest and the most representative aggregation that the history of the Rubber Club affords. Not only was all New England represented, but New York, the middle West and Canada sent delegates to attend the dinner, and incidentally all acknowledged that it was worth the journey. The Rubber Club had possession of one entire floor, which means the spacious banquet hall, two great reception rooms, and the broad foyer fronting the elevator and the stairs. From 6 until 7 o'clock the reception halls were crowded with friendly rubber men and their guests, who, at the end of the hour were marshaled into the banquet hall.

At the speakers' table were seated the President of the club, Mr. Henry C. Pearson; Professor W. H. Pickering, of Harvard University, and President of the New England Aëro Club; A. Lawrence Rotch, professor of meteorology, Harvard

University, and director of Blue Hill Observatory; Professor Robert W. Wood, of Johns Hopkins University, Baltimore; and Edgar Beecher Bronson, the well known author and explorer. These, the guests and speakers of the evening, had for table companions Mr. Frederick C. Hood, Vice President of the Club, and the honorary Vice Presidents: Ex-



ORVILLE AND WILBUR WRIGHT

Governor Augustus O. Bourn, John H. Flint, Alexander M. Paul, and Arthur W. Stedman. To right and left and in front of the speakers' table were round tables laid for six each, at which were seated Club members and their guests. The tables were tastfully decorated with flowers and during the dinner a superb orchestra in a near-by alcove rendered those selections that are always appreciated by good diners.

The menu was an artistic creation in green and white, the front cover bearing an excellent likeness of the Wright Brothers, while the back cover showed views of the Wright biplane, Baldwin's American war balloon, the Curtiss biplane and the Blériot monoplane. The eight-page folder within consisted of a title page, a list of the speakers and invited guests, the menu, and a list of the active officers of the Club, the whole being a typographical triumph.

The dinner was one of the most delicious that the Algonquin Club has ever served, and brought forth many words of appreciation. Two full hours were consumed before

coffee and cigars were reached, but none grudged the time.

Promptly at 9 o'clock President Pearson called the diners to order and, after briefly outlining the subject of the evening and explaining what a definite business interest the rubber trade had in airships of all kinds, whether heavier than air or lighter than air, introduced Professor A. Lawrence Rotch as the first speaker. Professor Rotch, whose book "Conquest of the Air" is receiving such world wide attention, and whose work at Blue Hill Observatory has given him an international reputation, proved to be a most interesting talker. He described, briefly and clearly, means by which with various kinds of kites and balloons carrying recording instruments they were able to learn much about temperature, pressure and currents up to a height of about 12 miles. He pointed out how this information, when tabulated not only from Blue Hill Observatory but from many others, would result eventually in charts that would be of the greatest practical use to aëronauts in forecasting the direction and velocity of winds and air currents and in the avoidance of storms.

Professor W. H. Pickering also proved a very pleasant speaker. He described in detail brief afternoon balloon trips,

MENU.

A good digestion to you all: and once more I shower a welcome on ye!
—HENRY VIII.

CANAPES MODERNE.

Give us a foretaste of your quality.
—HAMLET.

OYSTERS.

Even an oyster may be crossed in love.
—SHERIDAN.

CREAM OF FRESH MUSHROOMS.

I came upstairs into the world, for I was born in a cellar.
—CONGREVE.

CROUTE AU POT.

A delicate odor as ever bit my nostril.
—PERICLES.

FILET OF KINGFISH SAUTE MEUNIERE.

Some hours before you took me from the breach of the sea.
—TWELFTH NIGHT.

CUCUMBERS.

Cowcumbers are cold in the third degree.
—SWIFT.

SADDLE OF LAMB COLBERT.

Pray you, whom does the wolf love?
—CORIOLANUS.

NEW STRING BEANS. POMMES CHATEAU.

A most fresh and delicate creation.
—OTHELLO.

SWEETBREADS BRAISE AUX TRUFFLES.

FRENCH PEAS.
Your infant peas to asparagus prefer.
—KING.

ARTICHOQUES HOLLANDAISE.

And with forced fingers rude shatter your leaves.
—MILTON.

SORBET.

How well my comfort is revived by this.
—ROMEO AND JULIET.

BLACK DUCK.

And spread the sacred treasures of the breast.
—COWPER.

CELERY MAYONNAISE.

O herbaceous teat,
'Twould tempt the dying anchorite to eat.
—SIDNEY SMITH.

GLACES FANTAISES.

A thousand different shapes it bears
Comely in a thousand shapes appear.
—COWLEY.

FANCY CAKES.

All that's sweet was made
But to be lost when sweetest.
—MOORE

COFFEE.

Although the last not least.
—KING LEAR.

I witness with him
That he dined not at home.
—COMEDY OF ERRORS.



PROFESSOR W. H. PICKERING.
[President New England Aéro Club.]



AUGUSTUS POST.
[Secretary Aéro Club of America.]

telling exactly how the great airship was made ready, how it was trimmed and balanced and safely gotten away. His description of the landscape, over which they floated, of villages, railroads, rivers, and wooded sections, was so well done and so graphic that one almost felt as if a summer's afternoon balloon journey had been one of their own experiences.

The next speaker was Professor Robert W. Wood, of Johns Hopkins. Although a young man, as a physicist, experimenter, and solver of difficult problems, and a winner of scores of prizes given by scientific societies, Professor Wood is known the world over. To all of the above he adds a remarkable faculty as an after dinner speaker. He acknowledged that his personal touch with the subject of aëroplanes was not of especial note. Some years ago in Germany he had done some experimenting with Lilienthal, and as a purely physical problem had followed the evolution of the monoplane and the biplane to the present time. He likened the heavier-than-air machine to-day to the "dug out" canoe of

raconteur, and as a preliminary to his speech he told a good story and did it exceedingly well, and the audience was so appreciative that they kept him at it until he felt that his time had elapsed and he put a finis to a rarely witty series of anecdotes.

By this time the listeners were ready for the moving pictures which embraced dirigible balloons, leaving and entering their huge sheds, navigating the air, close at hand and far in the distance, giving really a better idea of these huge vessels and how they are manipulated than could be gotten by attending scores of ascensions. The really thrilling series of pictures, however, were those that covered aëroplanes in flight, particularly that which showed the Curtiss machine winning the *Scientific American* prize at Hammondsport. This showed the great machine starting on the roadway in a cloud of dust like an automobile, then suddenly rising in the air, sailing over the fences, then over the trees, and circling the race course again and again like some huge mechanical bird. These mov-



PROFESSOR ROBERT W. WOOD.
[Johns Hopkins University.]



A LAWRENCE ROTCH.
[Professor of Meteorology at Harvard.]



EDGAR BEECHER BRONSON.
[Author and Traveler.]

prehistoric man, when first he discovered he could add a sail to it. He predicted that before many years knowledge in aëroplaning and safety devices would so multiply that the flying machine would be relatively as safe as the present sailboat.

Mr. Edgar Beecher Bronson, who was the next speaker, is one whose name has of late appeared in the leading magazines in connection with exceedingly graphic hunting, ranching, and exploring stories. There is almost no form of adventure in which Mr. Bronson is not past master. Years ago he started by ballon from New York City and landed in the Adirondacks after being in the air for 26 hours, which was the record up to the time of the recent St. Louis races. As a big game hunter his story of "In Closed Territory" and his wonderful collection of trophies now on exhibition in New York make him one of the great American Nimrods. Incidentally Mr. Bronson is a delightful

ing pictures were shown by Mr. Augustus Post, secretary of the Aëro Club of America, and one who has successfully navigated the air in Europe and America for many years past.

After the moving pictures came a series of stereopticon views showing the progress flight in balloons and aëroplanes from the time of Montgolfier brothers up to the present. Mr. Post described all of the types in a few well chosen words and ended by a bit of personal experience describing his marvelous escape from death in Berlin, when his balloon burst and he and his party fell, wrecking the roof of a house, but themselves escaping serious injury. This concluded the evening's entertainment, and the Rubber Club's committees, and particularly those upon whom most of the work devolved—Messrs. Mayo, Appleton, Coe, and Stedman—were very warmly congratulated by all present.

GOOD CONDITION OF THE TRADE.

A NUMBER of representative men in the india-rubber industry have been asked by THE INDIA RUBBER WORLD for an expression of opinion on the condition of trade, and in regard to prospects. Without exception those who have been interviewed have regarded the situation favorably, as indicated by the quotations which follow.

* * *

JOHN H. COBB, president New York Belting and Packing Co., Limited: "Business is very good and the conditions on all lines throughout the country have improved materially over last year. In some lines, particularly in belting, the improvement is hardly as great as we had reason to anticipate. This is due largely to the fact that many saw mills are not running. Taken as a whole, however, the improvement for all kinds of mechanical rubber goods is very considerable and the prospects for next year are very satisfactory. Profits have been on a smaller percentage basis, owing to the great advance in rubber and in cotton duck. The raw materials used in our business have never been so high, and I do not see any chance for them to be lower very soon. The tremendous demand for rubber, particularly for tires, is likely to continue and keep up the price of rubber, while the shortage of the cotton crop seems likely to keep up the price of duck for another year. Fortunately our duck contracts are made in November and a further advance will not hurt us immediately. Our competitors in the belting trade are in no better condition than the rubber manufacturers. The advance in leather and leather belting has been even greater than in our product, and of course cotton belting has advanced in line with duck. I do not think that the advance in prices has had an adverse effect on the manufacturing business."

* * *

RUFUS A. BROWN, treasurer New York Rubber Co.: "We have done a very good business; much better than in 1908. The high prices of rubber and of cotton duck have done much, however, to curtail the profits of our business. We cannot advance the prices of our product as rapidly as the prices of the raw materials have been advanced. We had our contracts made for the materials for last year's manufacture on a much lower basis and so we got through all right. Now we must contract for new supplies on a high basis. It will necessitate considerable advance in our prices. Everything is up—litharge, and other compounding materials as well as rubber. These high prices must eventually limit business to some extent."

* * *

O. A. BARNARD, manager J. H. Lane & Co.: "Trade has been very good for the past year and the indications are for even increased business next year. The tire people are all very busy, and every branch of mechanical goods is booming. The advance in prices cannot stop trade. The railroads cannot stop using air brake hose on account of some advance in price, and people will

not quit using automobile tires. For certain classes of goods there is bound to be constant demand, no matter what the price may be. The price of cotton is high and will continue to be high. This year's crop was the smallest in 10 years and the demand is greater than ever."

* * *

MAX LOEWENTHAL, treasurer U. S. Rubber Reclaiming Works: "Our retail business has not quite been up to the normal of our best years, but it has been a great increase over the previous year and has been better than at any time since the beginning of the times of depression. There has been a great increase in activity, and the outlook for the next year is most promising. There has been an especial development in the line of mechanical goods and this increase we expect to increase. The high prices for all classes of goods has to some extent curtailed sales, but this has been felt most extensively by the retailers."

* * *

ARTHUR F. TOWNSEND, president Manhattan Rubber Manufacturing Co.: "Business has been good for many months past and is going to be even better in the future. Of course we suffer from the increase in the cost of new material. Increases in this line can never be followed exactly by fluctuations in the prices of the finished product. We cannot change the price of our goods to suit every fluctuation in the price of rubber and of cotton duck. The result of this is that we must be content with smaller profits and must learn to economize in our manufacturing processes. Our cotton duck contracts, however, have been made on a sliding scale, and this will help us to some extent."

* * *

F. H. APPLETON, of F. H. Appleton & Son, reclaimers of rubber: "Business in general appears to be normal, though in some branches of the rubber industry manufacturers are disposed to limit their production to actual current wants of customers, on account of the continued high cost of raw material. This is true just now of rubber footwear, and of various lines of mechanical goods. The condition described, however, evidently does not apply to the tire branch. Naturally the higher cost of crude rubber has stimulated the demand for reclaimed rubber, which from time to time comes into use in more classes of rubber products, as improvements are made in the quality of reclaimed rubber, and as compounders become more familiar with the possibilities of the use of reclaimed. But in those factories which are limiting production, the demand for reclaimed is less active than for some time in the past. The demand for the better grades of reclaimed—some of which now sell as high as 50 or 60 cents per pound—has been better sustained than for lower grades."

* * *

WILLIAM HILLMAN, manager of the Peerless Rubber Manufacturing Co.: "Business is booming, almost beyond control. Trade is so heavy that we are running night and day in our effort to catch up. There seems to be every prospect that it will keep going after the first of the year, but I wish it would hold up a bit and give us a breathing spell."

* * *

GEORGE WIES, president Eureka Fire Hose Manufacturing Co.: "We have had a very prosperous year and there is every prospect that the good work will keep up. We have just sold 30,000 feet of 2½ inch 'Eureka' hose and that is good business. On December 2 we had a meeting of all our selling force and every one of them reported that business in his section was improved and promised good orders."

* * *

A REPORT is to hand of rubber secured from planted *Hevea* trees in the Straits Settlements, at the age of 3½ years, which in London, on October 6, was reported on as "fair immature sheet, value 9s. 0½d. [= \$2.20] per pound." From the experimental tapping of 100 trees once it was estimated that the yield was at the rate of 1¼ pounds per tree per year.

THE BRITISH RUBBER CRAZE.

THE activity with which rubber plantation companies are now being brought out in Europe has never been exceeded at any period in the past. No effort has been made by THE INDIA RUBBER WORLD to keep a complete record of the new enterprises in this field, and the list which follows does not embrace even all the new rubber companies registered in London and Edinburgh from July 1 of the present year until early in November. Yet the list embraces no fewer than 77 new companies with a stated capital aggregating £6,463,345 [= \$31,453,868]—an astonishing figure.

While it is true that so large an amount of fresh capital has not actually been invested in rubber within the period mentioned, the public has put in very much money—millions, in fact. It will be understood that in most cases where rubber plantation companies are organized it is for the purpose of taking over estates more or less developed, and as a rule the vendors accept shares in part payment. Again, the full number of shares authorized is not always issued at the beginning, a certain proportion being reserved for issue later, as funds are needed for development work. In addition to the companies brought out in Great Britain during the period under review, the promotion of companies has been active in Germany, Holland, and elsewhere in Europe, and several have been organized in Ceylon.

The date mentioned in connection with each company named in the list which follows is that of its registration in London, or, in a few cases, in Edinburgh. Not the least interesting feature in connection with the list which follows is the widespread distribution over the earth of the present or prospective plantations to be dealt with:

CEYLON.

Tillyfour Rubber Co., Limited; September 25.....	£70,000
The Rubber Estates of Bentota, Limited; November..	65,000
The Sapumalkande Rubber Co., Limited; October 6..	150,000
Galle (Ceylon) Rubber Estates Syndicate, Limited; September 29	7,500

FEDERATED MALAY STATES.

Eow Seng Rubber Co., Limited; September 23.....	£20,000
The Lendu Rubber Co., Limited; November 3.....	60,000
The Heawood Tin and Rubber Estate, Limited; September 2	64,000
The Sungei Liang Rubber Co., Limited; August 18....	70,000
The Rubber Estates of Kedah, Limited; October.....	120,000
Ratanui Rubber Estate, Limited; July 28.....	35,000
Chersonese (F. M. S.) Estates, Limited; August 24....	225,000
Malayan Rubber and Produce Co., Limited; August 17..	500,000
The Sungei Kruit Rubber Estate, Limited; July 31....	55,000
Mambau (F. M. S.) Rubber Co., Limited; July 1....	25,000
United Sua Betong Rubber Estates, Limited; July 15....	70,000
St. Andrew (Malay) Rubber Estate, Limited; July 28..	25,000
Killinghall (Rubber) Development Syndicate, Limited; July 23	25,000
Sungei Krian Rubber Estate, Limited; July 26.....	75,000
Brieh Rubber Estate, Limited; July 21.....	50,000
Sendayau (F. M. S.) Rubber Co., Limited; August 13..	50,000
Allagar Rubber Estates, Limited; October.....	85,000
Carey United Rubber Estates, Limited; September 29...	150,000
"Cromlix" Rubber Estate and Produce Syndicate, Limited; October 12.....	10,000
Carthusiana Rubber Estate Syndicate, Limited; October 19	12,000
Batung Malakka Rubber Estates, Limited; October 21..	50,000
Riverside (Selangor) Rubber Co., Limited; August....	50,000
Lumut Rubber Estates, Limited; October 25.....	220,000
The Alor Pongsu Rubber Estate, Limited; November..	40,000

STRAITS SETTLEMENTS.

Val d'Or Rubber Estates, Limited; October 8.....	£90,000
The Merlimau Rubber Estates, Limited; September 18..	210,000
The Batu Kawan Rubber and Coconut Plantations, Limited; September 3	80,000
Krubong (Malacca) Rubber Plantations, Limited; September 1	20,000
Straits Hevea Plantation Co., Limited; November 3....	81,000

DUTCH EAST INDIES.

The Besoekei Plantations, Limited; November.....	£100,000
Nirmala (Java) Plantations and Land Co., Limited; August 16	180,000
Sungei Buaya (Sumatra) Rubber Co., Limited; August 13	75,000
The Sialang Rubber Estates, Limited; September	150,000
South-East Sumatra Syndicate, Limited; July 14.....	60
Simpang Sumatra Rubber Co., Limited; July 16.....	60,000
Sungei Kara (Sumatra) Rubber Estate, Limited; July 16	56,000
Langen (Java) Rubber Estates Co., Limited; September 22	100,000
Banjoewangi Syndicate, Limited; October 14.....	4,005
Tamiang Rubber Estates, Limited; September 30.....	120,000
Langen (Java) Rubber Estates Co., Limited; September 22	100,000
London Langkat Syndicate, Limited; August 26.....	50,000
The Bandor Sumatra Rubber Co., Limited; July.....	100,000
The Java Amalgamated Rubber Estates, Limited; November 5	175,000

BRITISH NORTH BORNEO.

Lok Kawi Rubber, Limited; October 20.....	£200,000
Bangawan Rubber, Limited; September 9.....	200,000
Kimanis Rubber, Limited; October 7.....	150,000
Membakut Rubber, Limited; August 12.....	150,000
Borneo Planters, Limited; August 27.....	2,550
South-East Borneo Rubber Plantations, Limited November 6	60,000

DUTCH WEST BORNEO.

The Sahang Rubber Estates, Limited; July 29.....	£65,000
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SOUTHERN INDIA.

The Nilambur Rubber Estates, Limited; October.....	£25,000
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WEST AFRICA.

The Ivory Coast Rubber Estates, Limited; August 19..	£150,000
Société Franco-Belge de la Cote d'Ivoire, Limited; August 12	150

EAST AFRICA.

The East African Rubber Plantation Co., Limited; September 20	£90,000
The Beira Rubber and Sugar Estates, Limited; July 20..	250,000
Gutta-Percha Concessions Syndicate, Limited; July 5..	10,000
G. E. A. Syndicate, Limited; July 12.....	1,000

MEXICO.

San Cristobal (Mexico) Rubber, Tobacco and Estates Co., Limited, July 13.....	£60,000
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BRITISH GUIANA.

The Consolidated Rubber and Balata Estates, Limited; September 8	£250,000
Balata Syndicate, Limited; July 10.....	4,880

BRITISH WEST INDIES.

The Jamaica Estates and Rubber Plantations, Limited; July	£300,000
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BRAZIL.

The Para Rubber and Produce Estates, Limited; August 7	£100,000
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COLOMBIA.

Magdalena Rubber Plantations, Limited; October 8....	£100,000
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FIJI ISLANDS.

Waidoi Para Rubber Plantations, Limited; July 24....	£60,000
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GENERAL.

Incorporated Investments, Limited; July 13.....	£10,000
Rubber Estates Trust and Investment Corporation....	30,000
Kedah Rubber Plantations, Limited; July 16.....	100
Rubber Proprietary Syndicates, Limited; July 31.....	5,000
Rubber and General Trust Co., Limited; August 23....	100
Walbrook Rubber Syndicate, Limited; September 24..	25,000
Wellesley Syndicate, Limited; September 29.....	5,000
Escot Rubber Estates, Limited; October 1.....	20,000
Marangu Rubber and Coffee Estates, Limited; July 24..	10,000

REPAIR MEN CHUCKLE.—Tires will no doubt advance in price again, as the demand is greater. The repair man chuckles each time the price advances, for he knows the owner will be calling for him each time the price goes up.—*Cleveland News*.

American Trade with the Amazon.

TO THE EDITOR OF THE INDIA RUBBER WORLD: My interest has been attracted lately by a number of articles in the New York newspapers on the subject of trade with South America, and as this is a matter which doubtless appeals to many of your readers, I venture to offer some suggestions. It seems appropriate that your journal should give space to such questions, since Brazil is the source of perhaps 60 per cent. of all the rubber produced in the world. My own views are based upon an experience of more than twenty years spent in Brazil as traveling salesman, commercial salesman, and journalist, together with an acquaintance meanwhile, and before, in the United States and Europe.

It may be of interest first to consider the volume of the commerce of Brazil, introducing for that purpose statistics from an official source. The year chosen is 1906, which is the latest date for which complete figures are just now available:

EXPORTS.

To—	Amazon and Pará.	All Brazil.
United States	£8,780,802	£18,627,520
Great Britain	5,158,973	8,544,904
Germany	1,470,362	9,341,357
France	1,881,504	6,507,470
Italy .....	.....	510,118
Portugal .....	.....	312,755
Other Countries	961,483	9,215,356
Total	£18,253,124	£53,059,480

IMPORTS.

Great Britain	£1,480,344	£9,294,707
Germany	987,715	4,873,140
France	474,103	3,057,305
United States	363,456	3,805,128
Portugal	286,068	2,174,690
Italy	79,098	1,094,826
Other countries	280,076	8,904,245
Total	£3,950,860	£33,204,041

These figures show that the United States is importing from Brazil yearly goods for which she pays £18,627,520, while exporting to that country merchandise, the returns of which only net £3,805,123. In the Amazon valley the difference is still more noticeable. When this country bought in 1906 \$42,674,997 (gold) worth of merchandise, principally rubber, there was the insignificant return of \$1,766,496 for goods sold there.

The question naturally arises, Why does the United States sell so little in Brazil? Is not the American manufacturer able to compete with the European market, the trade of which is so large in Brazil?

Among the many causes of the failure of American trade in Brazil, I can, from experience, point out the principal ones, which are:

- The lack of American transportation;
- The banking facilities;
- The untrained salesmen;
- The use of the Spanish language.

TRANSPORTATION.

The freight charges on many articles imported into Brazil, and especially at Pará and Manáos, are much less from Europe than from the United States.

The trip from Liverpool to Pará, for instance, is made in 21 days. The same steamer makes the trip from New York to Pará in 14 days. Notwithstanding the fact that the voyage is shorter, the charges on freight from America are 30 per cent. higher than those of Europe.

Many articles, such as typewriters, phonographs, electrical supplies, etc., although having their origin in America, are imported to Brazil from Europe. For this there is a definite reason.

The Brazilian government even attempted to aid the American commerce by making a reduction of 30 per cent. in the duties on many articles made in America. But this was to no avail, since the discount on duty did not cover the high freight charge on the goods purchased from the United States.

Not only is this detrimental, but there actually is a lack of navigating companies to carry on the American trade in Brazil. Only three regular steamship lines are running between here and Brazil: Lamport & Holt, the Booth Co., and Prince Line, and they are European companies. Since these ships do not have sufficient accommodation, and since their speed does not exceed 12 knots an hour, they could not supply a large demand for transportation to Brazil.

The service on board of these steamers could be much improved, and the time between sailings is fifteen days. On the other hand, the steamers from Europe, besides having good accommodations for passengers, appear in Brazil very often.

BANKING FACILITIES.

The American manufacturers and traders are giving away over \$1,000,000 yearly to the British banking concerns in Brazil. The following operations carried on by the foreign banks in Brazil during 1906 will corroborate my assertion:

THE LONDON AND RIVER PLATE BANK, LIMITED.

[Head office in London; branches and agencies all over Brazil.]

Dividends.			
1895	18%	1901	18%
1896	20%	1902	18%
1897	20%	1903	19%
1898	20%	1904	20%
1899	20%	1905	20%
1900	20%	1906	20%

Liabilities—September 30, 1907.

Capital paid up	£1,200,000	
Reserve fund	1,100,000	
Acceptances—Account branch	2,570,155	
Acceptances—Customers drafts under merchandise credits	836,729	
Bills advised, drafts in transit	1,226,015	
Current accounts and deposits	18,052,388	
Montevideo branch	31,585	
Bills for collection	2,184,941	
Buenos Aires Clearing Bank	644,398	
Rebate on bills not due	72,013	
Profit and loss	303,747	£28,221,971

ASSETS—September 30, 1909.

Cash on hand, at bankers	£6,571,527	
Cash on hand, Clearing Bank	644,398	
Bills discounted, securities	18,650,123	
Bills for collection	2,184,941	
Bank premises	170,982	£28,221,971
Gross profit, in 1906	£622,998	
Net profit	331,637	

THE LONDON AND BRAZILIAN BANK, LIMITED.

Capital	£750,000
Reserve fund	698,000
Gross profit	246,128
Net profit	122,071

THE BRITISH BANK OF SOUTH AMERICA, LIMITED.

Capital	£500,000
Reserve fund	450,959
Gross profit	236,985
Net profit	150,291

BRASILIANISCHE BANK FUER DEUTSCHLAND.

Capital	Marks, 10,000,000
Reserve fund	2,341,980
Gross profit	3,300,693
Net profit	1,709,819

These official statements serve to show that the four banks, operating only with £2,950,000 of capital, are clearing yearly, as

they did in 1906, profits aggregating the important sum of \$1,271,611, or \$6,180,023, American gold—more than 43 per cent.

Taking now in consideration the extent of American trade in Brazil, especially in the buying of rubber and coffee, it will not be exaggeration to assume that the American part of these profits amounts to \$2,000,000.

Could not the American manufacturers keep the couple of million dollars for themselves without being so philanthropic as to give it to their brothers, the Britishers?

Could they not have their own banks in Brazil?

Great enterprises born in America, such as the Madeira-Mamoré railway, the ports of Pará and the like, are obliged to be financed in Europe, because no American banks exist in Brazil to which they can apply, and the ultimate result is that the supplies they require are purchased in Europe.

A Brazilian importer buying goods from the states is obliged to pay three commissions in exchanging his money:

First, the local British bank, receiving from the American manufacturer a bill for collection, presents it to the Brazilian in pounds sterling. The Brazilian merchant pays it with the currency of the country, which the bank reduces to pounds sterling. Now, the bank settles the bill with the American manufacturer, exchanging again the pounds for dollars.

And yet there is no safer place in the world for the investment of money than the Brazilian market. Over all the Latin-American republics Brazil has won the supremacy, not only because of her stable government, but also because she has made every effort to improve the conditions of the country and to develop the immense natural resources. The government loans are paid punctually, and great funds are deposited in London for the future payments.

The inexhaustible rubber forests of the Amazon are furnishing and will still supply the world's need of crude rubber for a great while to come. Minerals are discovered everywhere in Brazil, and the constant European immigration is aiding to the forces needed to develop the riches of that country. Capital employed in Brazil not only is safe, but is sure to turn out a very good profit.

THE SALESMAN AND THE SPANISH LANGUAGE.

Other great factors in the failure of American trade in Brazil are the use of the Spanish language in propaganda work and the unpreparedness of the average traveling salesman for transacting business in that country.

The greatest mistake ever perpetrated by the American manufacturer in connection with the propaganda work, has been in sending his advertising literature to Brazil in Spanish. Still more inexcusable is it to send out salesmen who speak only Spanish.

Too many American manufacturers have the idea that Spanish and Portuguese are similar languages, since one is derived from the other. Yet it is a great mistake. The difference between Portuguese and Spanish is as marked as that which exists between Dutch and German. I don't suppose that an American manufacturer would send out to Germany a representative who could only speak Hollandish.

The truth is that the Portuguese-speaking people despise the Spanish language. The most expensive catalogue printed in Spanish, sent to Brazil, goes at once to the waste basket.

Imagine, now, a first class American salesman, however well acquainted with the methods of trade in the Spanish-American countries—which differ greatly from those of Brazil—employing in the latter country the same methods in selling his goods.

The Brazilian merchant is a highly educated person, with all the European refinements. It is not unusual there to find a man of university training behind the counter of a store, or a clerk in an office. The Brazilian merchant meets the foreign salesmen not only commercially but also socially. He extends his politeness even to inviting them to his home or introducing them to his club.

But unfortunately, not accustomed to these conditions, the American salesmen do not meet the expectations of the Brazilian merchant.

It is worth while for the American bankers, and especially the American manufacturers, to take into consideration the points which I have tried here to outline briefly but clearly.

Pará, Brazil.

MIQUEL P. SHELLEY.

RUBBER IN THE IVORY COAST.

UNDER the intelligent and progressive policy of the colonial authorities in French West Africa in relation to rubber, not only is the production of this material in that region steadily increasing, but it promises to be long maintained, not only through the conservation of the native resources but also on account of the gradual systematic planting of the species best suited to the different colonies. Of late the Ivory Coast has come to be of importance in the production of rubber, and the situation in that colony has been the subject recently of some very interesting studies.

Mention may be made particularly of a report on a scientific mission in East Africa by Mons. Aug. Chevalier in *Nouvelles Archives des Missions Scientifiques*, in connection with which is given an interesting map on a considerable scale of the forest regions of the Ivory Coast, indicating particularly the distribution of rubber species. He indicates many different *lianes* (creepers), in addition to the *Funtumia* trees.

The conclusions of this authority are supported in a later report by Mons. L. Nicolas, sub inspector of agriculture in French West Africa, in *L'Agriculture pratique des pays chauds* (Paris, October, 1909). Of special interest in the latter paper is the information regarding the *Funtumia* species. Formerly the rubber producing trees of Lagos and other West Africa were identified as *Kickxia Africana*, but latterly they have been included in the genus *Funtumia* (Stapf), of which no fewer than seven species are referred to by Mons. Nicolas, including *Funtumia elastica*, which perhaps is the most important.

The value of the *Funtumia* species has been referred to frequently in these pages (see THE INDIA RUBBER WORLD, October 1, 1909—page 28), and doubtless it will come into wide cultivation throughout the rubber zone of Africa, since its product is of a good quality and it is capable of cultivation under conditions where *Hevea* has not proved successful. Mons. Nicolas quotes results from the coagulation of *Funtumia* rubber through exposure to the air, by boiling with the juice of the "bossanga" vine, evaporation in the sun, and smoking.

There are also in the Ivory Coast several other rubber trees, including at least three species of *Ficus*, and finally may be mentioned several of the more important species of *Landolphia*. To sum up, the Ivory Coast appears to have valuable natural resources in rubber, and to be adapted for rubber cultivation both of which points seem likely to be taken advantage of in supplying the French markets, with every encouragement from the government.

Exports of rubber from the Ivory Coast increased from 456,377 kilos in 1907 to 915,642 kilos in 1908.

THE cable manufacturers of Austria and Hungary, about the first of October, announced a rise in the price of all their insulated wire products, from 15 to 25 per cent. on account of the advancing cost of rubber and other materials, and the recent increase in the scale of wages.

AMONG recent new articles of equipment for rubber plantations in the Far East may be mentioned carts for the transport of latex from the trees to the central factories. They are made in 80 gallons' capacity for bullock draft, and 40 gallons for hand draft. They are being introduced on several of the larger estates.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED NOVEMBER 2, 1909.

- N**O. 938,537. Tire protector anchor. S. C. Wolfe, Angola, Ind.
 938,731. Hose coupling and gasket therefor. J. E. Ward, assignor, to Ward Equipment Co., both of New York City.
 938,999. Vehicle tire. C. F. Fisk, Allentown, N. J.
 939,036. Hose coupling. W. F. Koper, assignor of one-half to F. Marzluff, both of Chillicothe, Ohio.
 939,096. Hose coupling. I. I. Rose, Thebes, Ill.
 939,190. Vehicle wheel. [With inflatable elastic tube.] E. Dettelbach and E. W. B. Powell, assignors of one-third each to A. Nisbet and T. W. Baird, all of Denver, Colo.
 939,195. Hose coupling. J. E. Ward, assignor to Ward Equipment Co., both of New York City.

TRADE MARKS.

- 38,574. The Star Rubber Co., Akron, Ohio. The words *Baby's Favorite*. For rubber nipples.
 42,734. The Revere Rubber Co., Boston. The representation of Paul Revere on horseback. For mechanical rubber goods, and pneumatic and solid tires.

ISSUED NOVEMBER 9, 1909.

- 939,209. Speed indicating or recording device. W. H. Bristol, Waterbury, Conn.
 939,211. Air hose coupling. E. L. Brown, Cleveland, assignor of one-third each to P. L. Andrews, Toledo, and C. Eisle, Cleveland, Ohio.
 939,327. Elastic tire for vehicle wheels. Bento Martins de Sá, Rio de Janeiro, Brazil.
 939,342. Vulcanizer. F. E. Smith, Hartford, Conn.
 939,428. Pneumatic tire. J. L. Maitland, Passaic, assignor of one-third each to W. A. Callanan, Jersey City, and C. Rider, Mountainville, N. J.
 939,434. Hose coupling. V. P. McVoy, Mobile, Ala.
 939,435. Hose coupling. *Same*.
 939,436. Hose coupling. *Same*.
 939,437. Hose coupling. *Same*.
 939,474. Tire protector. F. R. Colvin and C. R. Colvin, Lansing, Mich.
 939,491. Anti slipping attachment for tires. M. J. Frambach, assignor of one-half to E. F. Broders, Hartley, Iowa.
 939,520. Syringe or the like [with hot water bottle]. C. P. Leyner, Boston, assignor to J. G. Leyner, Denver, Colo.
 939,524. Cushion tire. W. E. Marengo, Worcester, assignor of one-half to J. B. Proulx, Southbridge, Mass.
 939,610. Tire for vehicle wheels. [Provided with a casing whose sides are composed of interlocked alternative flexible and inflexible members.] T. Midgely, Worthington, Ohio.
 939,611. Tire for vehicle wheels. *Same*.
 939,619. Tire fastener. [For solid rubber tires.] L. M. Nelson, Douglas, Wyo.
 939,638. Resilient tire. W. H. Rowling, Salinas, Cal.
 939,956. Superheater for use in connection with vulcanizers and other apparatus. J. Berliner, Hanover, Germany, assignor to E. Berliner, Washington, D. C.

ISSUED NOVEMBER 16, 1909.

- 940,014. Vehicle tire. C. O. Henderson, Dayton Ohio, assignor of one-third to W. A. Pickens, Indianapolis, Ind.
 940,243. Means for attaching demountable rims. H. H. Ford, assignor of one-half to H. H. De Loss, both of Bridgeport, Conn.
 940,337. Horseshoe. G. Loeffler, Tampa, Fla.
 940,460. Cushion tire. G. G. Hayes, Glenwood Springs, Col.
 940,528. Tire. W. D. Harris, assignor to Harris Tire and Rubber Co., both of Philadelphia.
 940,591. Tire armor. B. F. Ginn, Lenox, Ia.
Design.
 40,358. Interlocking tile. G. H. Quennard, Allendale, N. J.

ISSUED NOVEMBER 23, 1909.

- 940,670. Knife for tapping rubber trees. Q. Q. Bradford, Palolo Valley, Honolulu, Hawaii.
 940,919. Cushion tire. C. O. Baughman, assignor to W. J. Frank, both of Akron, Ohio.
 941,015. Resilient tire for vehicles. G. O. Draper, Hopedale, Mass.
 941,058. Wheel tire. [Cylindrical and cored.] F. L. Berg, Owatonna, Minn.
 941,150. Hose and pipe coupling. S. M. Johnson, Chicago.

REISSUES.

- 13,045. Protector for rubber tires. H. R. Palmer, Cleveland, Ohio, assignor to F. E. McEwen.

ISSUED NOVEMBER 30, 1909.

- 941,410. Hose rack. G. F. D. Trask, Orange, N. J.
 941,453. Cushioned wheel for vehicles. W. J. Higman, Denver, Colo.
 941,536. Piston packing ring. T. H. Renaud, assignor of one-third each to W. Bawden and E. L. Adreon, Jr., all of St. Louis.
 941,652. Air hose coupling. F. W. Rock, assignor of one-half to E. A. Field, both of Detroit, Mich.
 941,659. Elastic connection strap. J. J. Shea, Hartford, Conn., assignor to The Hartford Rubber Works Co.
 941,871. Pneumatic tire. C. M. Gautier, Putney, London, England.

- 941,926. Spring wheel. W. L. Johns, Soquel, Cal.
 941,962. Pneumatic tire shoe manufacturing machine. W. C. State, assignor to F. A. Seiberling, both of Akron, Ohio.
 941,990. Fire hose coupling. H. J. Hickey, Tomahawk, Wis.

TRADE MARKS.

- 43,318. Kautschuk Gesellschaft Schön & Co., Harburg a/d Elbe, Germany. The word *Feughlutu*. For raw india-rubber, gutta-percha, and balata.
 45,316. Boston Belting Co. The word *Roxbro*. For rubber hose.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of these listed below was in 1908. *Denotes Patents for American Inventions.*

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, NOVEMBER 3, 1909.]
 14,504 (1908). Pneumatic tire tread of hard and soft materials. S. Z. de Ferranti, Grindelford Bridge, Derbyshire.

- 14,554 (1908). Electrically heated vulcanizer for tire repairs. P. Allman, Manchester, and G. W. T. Leeson, Lymm.
 14,582 (1908). Protective band for pneumatic tires. G. H. Demougeot, Paris, France.
 14,610 (1908). Portable steam vulcanizer for tire repairs. J. Berliner, Hanover, Germany.
 14,645 (1908). Non-slipping device for tires. J. H. Hall, Sheffield.
 14,651 (1908). Separate tread for pneumatic tires. J. Jelley, Coventry.
 14,703 (1908). Tubular tire fabric of unextensible threads. A. Boden, Grossröhrsdorf, Germany.
 14,716 (1908). Chain protector for pneumatic tires. L. W. Williams, Cathcart, and W. T. G. Ellis, Glasgow.
 14,771 (1908). Pneumatic tire with tread of rubber blocks attached to a metallic band. H. Talasso, Paris, France.
 14,830 (1908). Method of utilizing india-rubber waste. B. Roux, Paris, France.
 14,833 (1908). Rim for pneumatic tires, single or dual. C. W. Pradeau, London.
 14,872 (1908). Metallic protective tread for tires. B. Clarke-Lens, Eastbourne.
 14,891 (1908). Wooden felly for use in connection with solid rubber tires. N. Macbeth, St. Annes-on-Sea.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, NOVEMBER 10, 1909.]

- 15,081 (1908). Tire inflating pump. C. Paterson, Birmingham.
 15,121 (1908). Pneumatic tire cover attached by rings and hooks. J. R. Trigwell, London.
 15,145 (1908). Elastic tire filled with a resilient composition consisting of oils and other materials. R. H. and E. M. Pybus, The Old Lodge, Derby.
 15,169 (1908). Puncture preventing band for tires consisting of overlapping plates of steel. A. F. Walker and J. Gilles, London.
 15,305 (1908). Tire inner tubes constructed of layers of rubber and open mesh bias fabric. I. S. McGiehan.
 15,371 (1908). Fabric for lining tire covers. M. Staamann, Walters hausen, Germany.
 15,460 (1908). Pneumatic tire tread with staggered rows of ribs. W. J. Thorold, London.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, NOVEMBER 17, 1909.]

- 15,546 (1908). Disk wheel with pneumatic tire. G. Davis and W. Brown, London.
 15,567 (1908). Teething pad. F. Schutze, trading as F. Schutze & Co., London.
 15,675 (1908). Elastic tire of wedge-shaped laminae of leather or other material and rubber. E. Sabata y Roca, Barcelona, Spain.
 15,870 (1908). Pneumatic tire with metallic reinforcement. A. Raimon, Paris, France.
 15,968 (1908). Tire filled with fluid composition which solidifies. Equatorial Trading and Mfg. Co., E. A. Muskett, and J. B. Scammell, London.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, NOVEMBER 24, 1909.]

- 16,322 (1908). Linen protective hand to be placed between the air tube and the cover of a tire. J. Cox, Tutbury.
 16,304 (1908). Tubular tire formed with continuous narrow radial chambers. W. Brameld, Paterson, New Jersey.
 16,424 (1908). Necks, stoppers and valves of hot water bottles, air beds, and the like.

THE FRENCH REPUBLIC.

PATENTS ISSUED (with Dates of Application).

- 402,818 (May 8, 1909). E. Neuhart. Pneumatic tire and protector.
 402,834 (May 8). H. Labre. Elastic wheel.
 402,835 (May 8). E. Lapsis. Pneumatic tire.
 402,909 (May 11). J. A. C. Merle. Elastic tire.
 402,970 (May 12). H. Robillard. Leather cover for pneumatic tires.
 403,012 (May 13). A. Roster. Attachment for tires.

Official India-Rubber Statistics.

For the United States Fiscal Year Ended June 30, 1909.

INDIA-RUBBER.

I.—Imports of Crude India-Rubber, by Countries.

FROM—	Pounds.	Value.
<i>Europe:</i>		
Belgium	3,635,990	\$2,720,723
France	1,967,774	1,571,329
Germany	4,503,286	2,995,125
Netherlands	112,163	96,134
Portugal	1,882,882	1,025,532
United Kingdom.....	12,825,192	11,168,879
Total	24,927,287	\$19,577,722
<i>North America:</i>		
British Honduras.....	24,263	\$16,960
Canada	4,311	3,324
Costa Rica.....	104,880	66,096
Guatemala	79,657	36,616
Honduras	76,133	39,985
Nicaragua	427,644	232,764
Panama	132,907	82,136
Salvador	16,152	9,901
Mexico	15,460,365	5,466,904
British West Indies.....	2,459	884
Cuba	14,486	7,881
Total	16,343,257	\$5,963,451
<i>South America:</i>		
Brazil	43,993,670	\$34,265,807
Colombia	416,045	258,999
Ecuador	690,579	365,399
Peru	266,340	213,567
Venezuela	590,550	423,631
Total	45,957,784	\$35,527,403
<i>Asia:</i>		
Chinese Empire.....	834	\$585
British India	14,098	11,094
Straits Settlements.....	753,451	239,753
Other British Indies.....	351,397	391,601
Dutch East Indies.....	7,840	5,258
Japan	200	103
Siam	2,638	1,615
Total	1,131,358	\$641,009
<i>Oceania:</i>		
Australia, Tasmania....	209	\$138
GRAND TOTAL.....	88,359,895	\$61,709,723
Total, 1907-08.....	62,233,160	\$36,613,185
Total, 1906-07.....	76,963,838	58,919,981
Total, 1905-06.....	57,844,345	45,114,450
Total, 1904-05.....	67,234,256	49,878,366

II.—Imports of Crude India-Rubber, by Customs Districts.

FROM—	Pounds.	Value.
Baltimore, Md.....	66,853	\$24,286
Boston and Charlestown..	324,348	197,282
New York	81,479,404	59,265,998
Galveston, Tex.....	4752	2,110
Mobile, Ala.....	2,203	874
New Orleans, La.....	174,792	67,406
Tampa, Fla.....	200	79
Corpus Christi, Tex.....	187,997	56,577
Paso del Norte, Tex.....	135,099	39,857
Salina, Tex.....	5,903,429	2,004,235
Puget Sound, Wash.....	209	138
San Francisco, Cal.....	72,066	43,391
Champlain, N. Y.....	387	351
Chicago	2,374	1,589
Cuyahoga, Ohio.....	5,008	4,381
Niagara, N. Y.....	847	906
Louisville, Ky.....	87	43
Total	88,359,895	\$61,709,723

III.—Imports of Manufactures of India-Rubber, by Countries.

[+ Indicates Increase; — indicates Decrease, compared with the preceding year.]

FROM—	Value.
Austria-Hungary	\$81,637—
Belgium	135,158+
Denmark	4
France	229,152—
Germany	544,511—
Italy	59,315—
Netherlands	216—
Norway	539—
Russia in Europe.....	10,666+
Spain	439+
Sweden	5
Switzerland	655+
Turkey in Europe.....	21

United Kingdom	315,721—
Canada	1,599
Panama	8
Mexico	517+
British West Indies.....	170
Cuba	1,537
Colombia	5
Chinese Empire.....	10
Hongkong	324+
Japan	448+
Australia and Tasmania.....	7
Philippine Islands	6
French Africa	85
Turkey in Africa—Egypt.....	6
Total	\$1,391,770
Total, 1907-08.....	\$1,956,590
Total, 1906-07.....	2,262,783
Total, 1905-06.....	1,992,413
Total, 1904-05.....	1,389,064

IV.—Imports of Manufactures of India-Rubber, by Customs Districts.

FROM—	Value.
Baltimore, Md.....	\$47,948
Bangor, Me.....	154
Boston and Charlestown..	131,444
Bridgeport, Conn.....	128
Fall River, Mass.....	6,807
Georgetown, D. C.....	245
Hartford, Conn.....	476
Newark, N. J.....	639
Newport, R. I.....	107
Newport News, Va.....	4,321
New York	1,036,128
Philadelphia	25,518
Porto Rico	2,404
Providence, R. I.....	443
Galveston, Tex.....	3,611
New Orleans, La.....	13,069
Alaska	137
Hawaii	943
Los Angeles, Cal.....	597
Puget Sound, Wash.....	3,640
San Diego, Cal.....	192
San Francisco, Cal.....	10,474
Willamette, Oreg.....	380
Buffalo Creek, N. Y.....	282
Champlain, N. Y.....	175
Chicago, Ill.....	28,369
Cuyahoga, Ohio.....	864
Detroit, Mich.....	12,957
Genesee, N. Y.....	1,197
Miami, Ohio.....	249
Milwaukee, Wis.....	347
Minnesota, Minn.....	1,945
Niagara, N. Y.....	135
Oswego, N. Y.....	177
Vermont, Vt.....	142
Albany, N. Y.....	265
Cincinnati, Ohio.....	2,905
Denver, Col.....	38,090
Dubuque, Iowa.....	545
Grand Rapids, Mich.....	487
Indianapolis, Ind.....	285
Kansas City, Mo.....	1,650
Pittsburg, Pa.....	225
St. Louis, Mo.....	9,988
Other ports	596
Total	\$1,391,770

V.—Exports of Manufactures of India-Rubber (and Gutta-Percha), by Customs Districts.

FROM—	Belted, Packing, and Hose.	Boots and Shoes.	All other Rubber.
Baltimore, Md.....	\$481	\$..	\$22
Bangor, Me.....	4,314	396	2,607
Bath, Me.....	298	..	..
Boston, Mass.....	7,075	358,602	260,522
Brunswick, Ga.....	1,634	..	..
New Bedford, Mass.....	28	..	..
New York.....	993,805	848,712	2,594,715
Passamaqu'd'y, Me.....	3,565	105	1,467
Philadelphia	27,132	..	698
Portland and Falmouth, Me.....	..	3	..
Galveston, Tex.....	235	..	708
Key West, Fla.....	100	..	5
Mobile, Ala.....	..	..	2,292
New Orleans, La.....	11,497	242	13,261
Arizona	61,479	143	6,311
Brazos de Santiago, Texas.....	61	..	76
Corpus Christi.....	24,626	823	36,113
Paso del Norte, Tex.....	46,266	494	8,877

Saluria, Tex.....	30,961	193	8,750
Alaska	20,892	24,341	589
Hawaii .....	..	66	..
Los Angeles, Cal.....	8	..	..
Puget S'd, Wash.....	11,661	12,924	26,226
San Diego, Cal.....	880	187	29
San Francisco.....	113,799	15,260	160,457
Buffalo Creek, N. Y.....	940	21	126,450
Cape Vincent, N. Y.....	..	..	1,170
Champlain, N. Y.....	3,484	13	62,696
Cuyahoga, Ohio.....	100	..	..
Detroit, Mich.....	30,867	9,102	47,129
Duluth, Minn.....	1,177	111	..
Huron, Mich.....	1,780	1,658	13,879
Memphemagog Vt.....	23,685	8,670	97,048
Michigan, Mich.....	7	..	..
Minnesota, Minn.....	2,149	46	22,165
Montana & Idaho.....	3,410	588	1,678
Niagara, N. Y.....	47,767	3,057	131,868
N. and S. Dakota.....	12,892	727	22,815
Oswegatchie, N. Y.....	..	35	56,957
Superior, Mich.....	2,220	..	14
Vermont, Vt.....	7,161	6,154	116,362
Total	\$1,408,445	\$1,292,673	\$3,823,956

GUTTA-PERCHA.

I.—Imports of Crude Gutta-Percha, by Countries.

FROM—	Pounds.	Value.
British East Indies.....	70,880	\$4,424
France	535	525
Germany	167,956	66,879
United Kingdom.....	7,457	7,856
Panama	8,731	2,461
Total	255,559	\$82,136
Total, 1907-08.....	188,610	\$100,305
Total, 1906-07.....	546,890	201,339
Total, 1905-06.....	500,770	188,161
Total, 1904-05.....	665,217	210,188

[NOTE.—The imports of Gutta-percha credited to South America are undoubtedly Balata.]

GUTTA-JELUTONG (PONTIANAK).

FROM—	Pounds.	Value.
Netherlands	3,325	\$182
United Kingdom.....	719,147	26,781
Straits Settlements.....	24,103,824	825,499
Total	24,826,296	\$852,372
Total, 1907-08.....	22,803,393	\$1,039,776
Total, 1906-07.....	28,437,660	1,085,098
Total, 1905-06.....	21,390,116	733,074
Total, 1904-05.....	19,104,911	641,319
Total, 1903-04.....	14,887,416	..
Total, 1902-03.....	13,084,817	..
Total, 1901-02.....	16,850,821	..
Total, 1900-01.....	9,371,087	..

BALATA.

FROM—	Pounds.	Value.
Netherlands	19,600	\$11,321
Portugal	111,743	46,995
United Kingdom.....	17,787	8,837
Canada	2,009	1,205
British West Indies.....	80,758	29,927
British Guiana	258,149	129,021
Dutch Guiana	8,073	3,636
Venezuela	658,809	291,930
Total	1,157,018	\$522,872
Total, 1907-08.....	584,582	\$276,756
Total, 1906-07.....	799,201	305,041
Total, 1905-06.....	374,220	152,680

II.—Value of Imports of Manufactures of Gutta-Percha, by Countries.

FROM—	Value.
Belgium	\$18,207
France	2,403
Germany	43,744
Netherlands	4
United Kingdom.....	4,763
Canada	2,610
Mexico	28
Total	\$71,819
Total, 1907-08.....	\$93,545
Total, 1906-07.....	191,064
Total, 1905-06.....	208,172
Total, 1904-05.....	117,735

SCRAP RUBBER.

I.—Quantity and Value of Imports, by Countries.

FROM—	Pounds.	Value.
Austria-Hungary	136,536	\$3,936
Belgium	222,795	15,636
Bulgaria	27,200	1,162
Denmark	385,371	27,854
France	1,295,919	107,946
Germany	4,567,289	360,154
Italy	7,475	443
Netherlands	673,999	45,908
Norway	584,681	37,821
Russia in Europe	3,299,367	274,864
Sweden	519,243	45,826
Switzerland	65,041	5,458
Turkey in Europe	718,490	56,514
United Kingdom	3,050,019	209,679
Bermuda	2,897	113
Canada	4,366,115	320,375
Newfoundland, Labrador	61,814	4,835
Panama	630	32
Mexico	47,856	2,999
British West Indies	8,465	693
Cuba	86,948	5,773
Chile	900	72
Colombia	426	17
Chinese Empire	100,800	3,387
Hongkong	185,153	7,452
Russia in Asia	40,839	2,369
Turkey in Asia	9,000	786
Australia, Tasmania	24,640	812
New Zealand	7,787	351
Total	20,497,695	\$1,543,267
Total, 1907-08	16,331,035	\$1,496,822
Total, 1906-07	29,335,193	2,608,987
Total, 1905-06	24,756,486	1,721,678
Total, 1904-05	15,575,214	953,439

II.—Quantity and Value of Exports, by Countries.

To—	Pounds.	Value.
Belgium	49,494	\$5,635
France	398,532	43,103
Germany	327,470	49,178
Italy	127,433	10,710
Netherlands	171,189	17,126
Norway	11,406	1,140
Spain	27,000	2,700
Sweden	26,102	2,621
United Kingdom	1,633,209	164,649
Canada	1,283,615	104,186
Mexico	49	4
Japan	16,206	1,845
Total	4,071,795	\$402,897
Total, 1907-08	4,255,789	\$449,727
Total, 1906-07	4,756,621	548,605
Total, 1905-06	a	339,507
Total, 1904-05	a	204,945

a—Not officially reported.

RECLAIMED RUBBER.

I.—Quantity and Value of Exports, by Countries.

To—	Pounds.	Value.
Belgium	80,947	\$12,900
France	326,245	38,030
Germany	87,811	13,803
Italy	225,591	25,736
Netherlands	36,140	5,625
United Kingdom	907,310	108,871
Canada	1,433,547	196,363
Japan	98,960	13,533
Total	3,196,551	\$314,861
Total, 1907-08	2,947,974	\$418,738
Total, 1906-07	4,550,788	665,109
Total, 1905-06	4,084,696	511,843
Total, 1904-05	a	522,902

a Not officially reported.

III.—Quantity and Value of Exports, by Customs Districts.

FROM—	Pounds.	Value.
Bangor, Me.	2,231	\$66
Boston and Charlestown	190,885	29,476
New York	2,380,444	254,799
Philadelphia	212,108	13,739
San Francisco, Cal.	4,743	697
Buffalo Creek, N. Y.	158,697	8,888
Champlain, N. Y.	148,060	10,818
Detroit, Mich.	103,619	7,731
Huron, Mich.	598,498	50,715
Memphremagog, Vt.	227,924	22,266
Niagara, N. Y.	22,389	1,865
Vermont, Vt.	22,197	1,847
Total	4,071,795	\$402,897

II.—Quality and Value of Exports, by Customs Districts.

FROM—	Pounds.	Value.
Boston and Charlestown	85,795	\$12,600
New York	690,693	82,897
Philadelphia	963,441	119,890
Puget Sound, Wash.	16,419	2,254
San Francisco	2,027	685
Buffalo Creek, N. Y.	328,232	48,177
Champlain, N. Y.	464,428	66,811
Detroit, Mich.	16,564	1,567
Huron, Mich.	91,252	8,582
Memphremagog, Vt.	15,506	2,899
Niagara, N. Y.	595,145	66,905
Vermont, Vt.	14,949	1,594
Total	3,196,551	\$314,861

EXPORTS OF AMERICAN RUBBER GOODS, FISCAL YEAR ENDED JUNE 30, 1908.

EXPORTED TO—	Belting, Packing, and Hose.	Boots and Shoes.	Other Goods.	Total.
EUROPE:	Pairs.	Value.	Value.	Value.
Austria-Hungary	\$4,450	11,254	\$5,520	\$13,544
Azores, etc	74	230	144	760
Belgium	6,930	128,598	56,904	138,299
Bulgaria	.....	9	5	5
Denmark	12,947	34,233	15,945	21,334
France	20,010	82,876	39,668	148,662
Germany	32,272	261,973	138,159	384,074
Gibraltar	.....	280	179	179
Greece	.....	150	81	100
Italy	1,691	76,484	47,449	53,236
Netherlands	2,387	984	463	95,757
Norway	4,592	29,744	14,956	26,566
Portugal	869	1,070	506	2,421
Roumania	.....	9	5	5
Russia in Europe	1,133	1,676	997	20,034
Spain	1,327	56,819	30,685	8,229
Sweden	1,240	32,966	17,767	3,980
Switzerland	1,914	60,481	31,744	23,147
Turkey in Europe	.....	221,030	109,080	170
United Kingdom	153,579	742,543	338,105	1,270,046
Total, Europe	\$245,415	1,743,409	\$848,392	\$2,122,397
NORTH AMERICA:				
Bermuda	\$1,008	353	\$184	\$2,084
British Honduras	499	220	314	173
Canada	182,052	46,695	64,787	707,058
Newfoundland	4,608	46,521	31,283	2,485
Costa Rica	8,560	322	177	7,157
Guatemala	6,990	18	54	1,672
Honduras	3,057	.....	.....	873
Nicaragua	4,933	24	12	2,805
Panama	149,066	1,355	1,239	46,787
Salvador	0,692	.....	.....	6,439
Mexico	205,141	2,859	2,616	188,551
West Indies, British	3,292	480	402	13,652
Cuba	81,108	1,870	2,386	208,645
Danish	510	44	23	292
Dutch	268	24	14	342
French	.....	.....	.....	76
Haiti	674	75	123	479
Santo Domingo	1,794	1,357	677	3,236
Total, North America	\$755,192	102,217	\$104,291	\$1,192,866
SOUTH AMERICA:				
Argentina	\$24,287	47,871	\$25,506	\$45,126
Bolivia	2,452	.....	.....	738
Brazil	25,310	41,599	23,746	35,406
Chile	11,313	641	804	17,558
Colombia	4,901	1,117	641	5,720
Ecuador	8,435	1,184	554	3,478
Guiana—British	1,742	2,888	1,351	1,766
Dutch	.....	.....	.....	498
Paraguay	.....	.....	.....	103
Peru	12,567	804	403	6,717
Uruguay	730	10,379	6,106	12,799
Venezuela	2,132	60	35	7,054
Total, South America	\$93,869	106,543	\$59,146	\$136,959

ASIA:					
Chinese Empire	\$10,172	386	\$461	\$6,455	\$17,088
British India	15,026	1,081	816	6,771	22,615
Straits Settlements	578	.....	.....	2,801	3,379
Other British	.....	72	21	.....	21
Dutch East Indies	.....	.....	.....	702	702
Hongkong	2,398	14,751	4,951	3,198	10,538
Japan	29,139	86,648	67,358	115,715	212,212
Korea	1,739	169	115	316	2,170
Russia, Asiatic	156	37	234	643	1,033
Siam	76	.....	.....	115	191
Turkey in Asia	.....	28,066	14,116	98	14,214
Total, Asia	\$59,275	131,210	\$88,072	\$136,814	\$284,161
OCEANIA:					
Australia and Tasmania	\$88,220	241,920	\$126,071	\$76,465	\$290,756
Japan	9,951	50,287	46,379	43,892	100,222
Other British	.....	.....	.....	136	136
French Oceania	247	3,042	2,637	1,475	4,359
German Oceania	.....	.....	.....	553	553
Philippine Islands	39,691	2,997	2,204	73,652	115,547
Total, Oceania	\$138,109	298,246	\$177,291	\$196,173	\$511,573
AFRICA:					
British, West	\$632	.....	.....	\$288	\$920
British, South	55,547	12,354	\$13,416	17,023	85,986
British, East	754	.....	.....	650	1,404
French Africa	2,426	.....	.....	397	2,823
Liberia	.....	19	26	11	37
Portuguese Africa	146,799	1,243	913	20,201	169,913
Egypt	427	1,194	1,126	177	1,730
Total, Africa	\$206,585	14,810	\$15,481	\$38,747	\$260,813
GRAND TOTAL	\$1,498,445	2,396,435	\$1,292,673	\$3,823,956	\$6,615,074
Grand Total, 1907-08	\$1,347,775	3,080,253	\$1,614,290	\$3,743,040	\$6,705,105
Grand Total, 1906-07	1,253,369	2,310,420	1,231,898	3,729,643	6,214,910
Grand Total, 1905-06	1,221,159	2,693,690	1,505,082	2,966,144	5,692,385
Grand Total, 1904-05	994,100	2,390,539	1,214,342	2,572,375	4,780,817
Grand Total, 1903-04	880,010	2,310,808	1,086,364	2,469,750	4,436,124
Grand Total, 1902-03	918,985	2,307,401	1,056,491	2,299,875	4,176,351
Grand Total, 1901-02	634,146	2,594,708	1,046,315	1,781,941	3,462,402
Grand Total, 1900-01	565,726	1,459,100	724,015	1,727,527	3,017,268

A CEYLON newspaper prints a letter from an old subscriber, asking "if it is possible for a well grown Ceará rubber tree, 6 years old, to yield 80 pounds of rubber per annum." Such figures probably were suggested to his mind by some rubber plantation prospectus, and if the whole document was similarly optimistic it doubtless would make mighty good reading.

THE visiting agents for rubber estates in the Federated Malay States have had a profitable experience. One is mentioned in *The Times of Ceylon* as having made £4,000 this year by reports upon properties.

Growth of a Rubber Library.

THE development of the india-rubber and allied industries during the past 20 years is notably illustrated by the extent of the literature which has come into existence regarding them. At the date of the establishment of THE INDIA RUBBER WORLD there were few books in any language devoted solely or chiefly to any branch of the rubber interest.

For English readers the chief books in this field were those of Goodyear, in America, and Hancock in Great Britain, regarding their work in connection with the rubber industry. But these were not only out of print but had become very inadequate as an exposition of the scope of the rubber interest as a whole. One who desired to be informed in regard to the nature of rubber, its sources, and its applications was obliged to search through libraries, where one might chance to fall upon a paper of value hidden away in a volume of scientific transactions, or in a public document, a book of travel, or something of the kind.

But there were few if any libraries, twenty years ago, in which pains was taken to catalogue such scattered papers, and the search under such circumstances was not one to promise results of value. It was useless to go to a bookseller for anything in print on rubber, and the manufacturer or rubber worker who desired to inform himself fully in regard to the business in which he was engaged had to depend upon oral information rather than printed books.

Twenty years ago the rubber industry was largely in the hands of what might be termed one-man companies, where the head of the establishment was expected to know the whole scope of the business so far as his own particular company was concerned, and those with which it came into competition, without much regard to whether there were rubber factories in other lands, and with little thought to where the raw material originated or under what conditions.

The fact that rubber factory secrets were still so sedulously guarded had no slight effect in discouraging the writing of books or papers on rubber, and will help to explain the paucity of rubber literature up to the past two decades. While what has been written here relates more particularly to the United States and England, the condition was practically the same in France and Germany, the other leading rubber manufacturing countries of the time.

The illustration on this page of a corner in THE INDIA RUBBER WORLD library will serve to indicate how conditions have changed. Just as the Editor's desk, absolutely bare on the first opening of the office, is now crowned with a row of twenty bulky—and we may say handsome—bound volumes showing the production of the paper continuously for as many years, the neighboring and surrounding shelves are filled with books relating to rubber which have come into existence in the meanwhile.

There are books written by manufacturers, books written by chemists and other experts, books written for rubber planters, and so on.

There are books which relate only in part to rubber, such as general works on chemistry or books relating to certain materials applicable to rubber compounding; there are books which each contemplate a comprehensive treatment of the rubber industry; and others devoted to a single branch such as tires, dental work, or even rubber stamps. The richness of the special literature which has come into existence is such that no man whose business touches upon any of the lines which have here been referred to can fail to find in printed pages helpful information or suggestions emanating from recognized authorities.

It is not intended here to present any catalogue of rubber books—much less a complete bibliography of rubber—but to mention for purposes of illustration only a few titles. As the new books have come from the press earlier productions out of print have been picked up from time to time, so that the library goes back to 1745, in which year in the "Histoire de L'Academie Royale des Sciences," La Condamine reported his discovery up the Amazon of the *resine elastique*, or "Cahoutchou," believed to be the first published scientific reference to what the world has come to know as india-rubber. This volume is in our library, as well as later volumes in the same series, including that for 1751, in which appears a fuller report by La Condamine, together with plates of the tree, for which the spelling had now been changed to "caoutchouc" in French with a different spelling for Spanish.

The crude rubber situation is better comprehended with the aid of the collection of books which has grown up regarding the opening to the world's knowledge the various



"THE INDIA RUBBER WORLD" LIBRARY.

[Mr. Pearson's desk at the left. Cabinet of rubber specimens, compounding materials, substitutes, and the like, partially shown on the right.]

countries which yield rubber, including the greater part of tropical Africa. There are rows of volumes relating to the "dark continent" alone, as well as South America, Central America, and Mexico. The rubber planting interest which practically was non-existent twenty years ago has latterly given rise to a vast amount of printed matter, theoretical or practical, including not only treatises but a vast amount of material in the shape of company reports, which, taken as a whole, embody much that is of interest and value.

Not the least interesting feature of the rubber library is the collection of reports of rubber patent litigation. There are, for instance, nine bound volumes of "Charles Goodyear v. Horace H. Day," dating back to 1852, followed by the other cases wherein Goodyear was a litigant, and coming down to the latest decisions in tire patent cases. A valuable part of the library is the complete set of files of all the

india-rubber periodicals in any language, beginning with the pioneer of them all, *The Rubber Era*, of New York, started in September, 1880. There are also files of other periodicals having a relation more or less to rubber, or to planting, or to countries which yield rubber.

Then there are patent specifications, information regarding tariffs, trade directories, consular reports, and statistics of commerce, particularly of india-rubber—and collections of maps of photographs, all making THE INDIA RUBBER WORLD'S collection of books a most valuable working library.

The value of trade catalogues as giving an idea of the state of the rubber industry in any country at any time has always been recognized in THE INDIA RUBBER WORLD, and such publications have been collected systematically since the paper had its beginning. These catalogues are arranged in readiness for constant use.

The Rubber Trade at Akron, Ohio.

By a Resident Correspondent.

RECORD OF THE YEAR'S PROGRESS.

WHILE the year 1908 was notable for the awakening of rubber manufacturers to the importance of the automobile tire field, and the consequent construction of numerous factory additions, the year just closed has seen not only a continued growth in the demand for tires, but a steady increase in all other lines of rubber goods, especially mechanicals.

Besides adding to their manufacturing facilities, Akron rubber companies have been constantly increasing the strength of their selling forces. New territory in the west and south have been invaded with the establishment of branch offices and selling agencies, the object of which is not only to seek the business already existing but to prepare for the trade of years to come.

The past twelve months have seen the largest year's development in the history of the B. F. Goodrich company. With their unexcelled department organization they have been quietly and steadily advancing by long strides. As an exterior indication of the company's growth most important is the replacement of the main buildings of the old factory with three new fireproof structures, six stories high. Soon after the new year these buildings will be ready for occupancy and the company will be enabled to double and treble the capacity of the plant in proportion to the ground area occupied. Purchases of real estate have increased the property to 24 acres and the number of employés has been increased since January 1, 1909, from 4,200 to 5,000.

The Diamond Rubber Co., by the statement of one of their officials, have increased their output more than 25 per cent. and their floor area 35 per cent. during 1909. The number of employés on the pay roll has reached 4,500, including a large construction force. Two important events in the year's chronicle of The Diamond Rubber Co. have been the addition of a boot and shoe department and the issue of a 100 per cent. stock dividend at the October annual meeting, increasing the capital stock to \$10,000,000.

The year has been important for The Goodyear Tire and Rubber Co. by reason of the development of their tire making machine, which, to quote Mr. G. M. Stadelman, secretary of the company, will enable the company to increase their 1910 output by 200 per cent., without making a proportionate increase in floor space. The number of men employed has been increased to 1,200, the floor space increased 71,000 square feet, and additions planned which will afford 210,000 additional square feet by April 1.

The rapid growth of The Firestone Tire and Rubber Co. is evidenced by the recent decision of the directors to abandon the present plant and build an entirely new factory, nearer to the outskirts of the city, on land already purchased. Mr. H. S. Fire-

stone, president of the company, states that \$500,000 will be invested in new buildings on the newly acquired site.

The year's history of The Swinehart Clincher Tire and Rubber Co. marks some important changes in the organization and breadth of manufacture and sales. Though they have been engaged for six years in making solid tires exclusively, pneumatic tires have now been added to the list of products. During the latter part of the year the floor space has been increased 50,000 square feet in the factory, and by greatly strengthening their selling force, the company are advancing into a much wider field of trade than they have sought heretofore.

The Buckeye Rubber Co. suffered two disastrous fires on August 12 and 14, which resulted in the loss of \$100,000 worth of property. Since that time, however, the damaged building, formerly a story and a half high, has been rebuilt three stories high of fireproof material. Work has also been started on a new fireproof building affording 15,000 square feet of space and enabling the company to supply the increased demand for their pneumatic tires, marketed by The Consolidated Rubber Tire Co.

The Miller Rubber Co. during the year past have met with such success that they have determined to add tires to the product of the plant. For this purpose a large brick factory is being put up. Jacob Pfeiffer and W. F. Pfeiffer are respectively president and manager of the company.

The Star Rubber Co. since last spring have been making pneumatic tires of the clincher and quick detachable type. Experiments with these have warranted the company in starting the addition of a new factory building, to house a mill room and engine room for the purpose of increasing the output of tires. The capital stock of the company has been increased from \$100,000 to \$250,000.

The past year has carried the Stein Double Cushion Tire Co. already prominent in the solid tire trade, into the manufacture of the patented "Stein Lap Lock" pneumatic automobile tire. The factory is now making more than 40 of these tires a day at the present time, and new machinery is now being installed so that the output may be doubled in thirty days. The death of Jacob Neuman, vice-president and general manager of the company, last March, brought J. Haber, of Cleveland, into the company in the same position.

During 1909 the Motz Clincher Tire and Rubber Co. have added to their output an auto buggy tire and a truck tire with a quick detachable rim. Contracts for 1910, which will call for 1,000 sets of tires, have been made with the Rausch Lang Carriage Co., of Cleveland, the Kenmore Manufacturing Co., of Chicago, the Waverley Co., of Indianapolis, the Auto-Engineering Co., of Detroit, and others.

The present year has seen the birth of the Falls Rubber Co., at Cuyahoga Falls, Ohio. Their plant is now in operation, making rubber molded and dipped goods, as well as automobile and bicycle tires.

GOODYEAR TIRE AND RUBBER ANNUAL.

THE annual meeting of The Goodyear Tire and Rubber Co. was held in their Akron offices on December 6. The following officers were elected: F. A. Seiberling, president and general manager; Charles W. Seiberling, vice-president; G. M. Stadelman, secretary; Frank H. Adams, treasurer; and P. W. Litchfield, superintendent. A new office was created, that of assistant treasurer, to which W. E. Palmer was elected. The board of directors chosen at the shareholders' meeting is composed of F. A. Seiberling, Charles W. Seiberling, G. M. Stadelman, P. W. Litchfield, Frank H. Adams, James P. Loomis and Henry B. Manton.

The Goodyear Tire and Rubber Co. were successful in obtaining from the city council an order vacating Prune street, a highway running through the company's property, and the improvements announced in the last number of THE INDIA RUBBER WORLD are to be carried on without delay. The condition imposed by the council was the payment of \$1,500 by the company. This was agreed to. The Goodyear company have secured the rights to the manufacture in America of the Doolittle detachable demountable rim. It will be known as the "Goodyear-Doolittle" detachable demountable. The advantages claimed for it are its lightness and the ease with which it may be detached. It will be manufactured in the Akron factory of the company.

GOODRICH COMPANY AFFAIRS.

THE B. F. Goodrich Co. have made arrangements to buy from the State of Ohio a strip of land in the rear of their plant, along the Ohio canal and extending north to Exchange street. It has been appraised at \$20,000. It will afford considerable additional room for expansion of the plant. To replace the land the State has bought a piece from the property of the Adamson Machine Co. across the canal. The latter company expect to move into their new plant in the east end of the city, on Carroll street in February. They are engaged largely in the manufacture of rubber working machinery.

The inside of a rubber factory was deemed sufficiently interesting by picture film makers to make it the subject of a film recently issued. Moving pictures of workmen in The B. F. Goodrich Co.'s factory were taken early in December, one showing the process of making a golf ball from start to finish.

PERSONAL MENTION.

MR. FRANK A. SEIBERLING, president of the Goodyear Tire and Rubber Co., was elected president of the Garfield Republican

Club of the old Nineteenth Congressional district, at its annual meeting early in December. The club is one of the principal political organizations of Ohio. Mr. Seiberling was not chosen on account of his political activities, but through a desire of the members to honor a manufacturer of Akron.

Mr. A. H. Noah, treasurer of The Diamond Rubber Co., added eight acres to his estate on Portage path recently by the purchase of a part of an adjoining farm for \$29,000. Mr. Noah's home is now under construction. When it is completed he will have one of the most beautiful country estates about the city.

During the past month Mr. Harry W. Tew, of Jamestown, New York, visited Akron, staying with his son, Mr. James D. Tew, of The Diamond Rubber Co. Mr. Tew was associated with the late Dr. B. F. Goodrich in the establishment of the first rubber factory in the city, in 1860. He continued nine years in that company and then left to enter the oil business, to which he devoted the rest of his business career. Mr. Tew is now seventy-eight years old. While in Akron he went through the Diamond and Goodrich factories.

THE CITY OF AKRON.

It will be good news to those who visit Akron to hear that the project to build a new \$350,000 hotel here has met with success. During the last month the Akron Hotel Co. have completed the subscription of the necessary amount of stock, have purchased the property on which stands the old Empire Hotel and are ready to let a contract for a seven story building to John Gill & Sons, of Cleveland. The hotel will be leased for thirty years to a syndicate which controls a chain of hotels in New York cities. It will be named "The Portage," after the historic portage trail west of the city which at one time marked the western boundary of the United States.

Akron was the only American rubber manufacturing town mentioned in the recent quarter-centennial number of *The India Rubber Journal*, of London. A short description of the city is given, accompanied by a photograph taken on one of the main streets.

BREVITIES.

A SMALL mill for the manufacture of dipped rubber goods was recently started at Barberton, Ohio, by the Red Cross Rubber Co. Melvin Swisher is managing the business.

The Swinehart Tire and Rubber Co. have secured for their sales department the services of Mr. Frank R. Talbot, formerly in charge of the Los Angeles branch of the Firestone Tire and Rubber Co.

MR. R. G. Treitler, formerly chief clerk in the Boston office of The Diamond Rubber Co., has taken a position with The Goodyear Tire and Rubber Co. in Akron.

The Rubber Trade at Trenton, New Jersey.

By a Resident Correspondent.

TRENTON rubber manufacturers interviewed for THE INDIA RUBBER WORLD predict an unusually good condition of the rubber industry for 1910. Their general statement is that, considering the depression of 1907-08, the past year has been a fair one. But through the fall there has been generally a decided growth of business all over the country, and already the rubber industry is responding to the rising tide of trade.

A. Boyd Cornell, of the Empire Rubber Manufacturing Co. and the Empire Tire Co., states that his concerns believe the new year will be an exceptionally good one for the rubber business. He says the tire business is pretty certain to be good, and the mechanical line also will doubtless show up exceedingly well. Western buyers seem very anxious to get their orders in and filled; a very healthy improvement in trade is also manifesting itself in the East.

John S. Broughton, secretary and treasurer of the United and Globe Rubber Manufacturing Cos., is very confident that 1910 will bring good business to rubber goods makers. Considering everything, including the financial slump, the past year has been a fair one. The railroads are economizing less, and are planning for big business. The general outlook is for very encouraging trade for the coming twelve months.

Officials of the Whitehead Brothers Rubber Manufacturing Co. think trade conditions look good for the new season. They have just closed a year that was all they could expect in view of the commercial depression. During the year they have installed a new type of machine for weaving cotton hose.

Harry L. Boyer, general manager of the Joseph Stokes Rubber Co., is looking forward to a season of trade as good as any they ever had. He says the prospects are exceptionally bright

in their branch, which is hard rubber goods. They have added a new line the past season, the making of hard rubber parts of automobiles, and it is proving successful. The outlook in this line, Mr. Boyer says, is very good, as there is every indication that the automobile business will see a pronounced boom.

J. Russell Kelso, manager of the Woven Steel Hose and Rubber Co., joins in the general opinion that 1910 will bring big business to the rubber mills. He says the railroads and big contractors all over the country are planning to extend their business, with the result that orders are already coming in and there is every promise of increased trade. Mr. Kelso says the demand for armored hose, which is one of the main lines of this company, is increasing. The company has added a complete line of packings in which the business has been quite successful, and the prospects for this are also bright.

Horace M. Royal, secretary of the Home Rubber Co., said when interviewed: "In so far as we are concerned the trade outlook for 1910 is very promising. Orders are coming in well for the first six months of the year, and our salesmen are writing letters which are encouraging as to the prospects for the entire year."

"The rubber business certainly is improving," declared Harry E. Evans, manager of the Consolidated Rubber Co. "We are looking for a better season during 1910 than we have had for several years." Mr. Evans had just returned from an extended trip through the west and northwest, and he said he had found trade conditions in excellent shape. He said that on the Pacific coast the railroads were finding it almost impossible to handle the traffic.

Wilson H. Harding, president of the Union Rubber Co., also thought the trade outlook good. His company handles the products of the Trenton Oilcloth and Linoleum Works, owned largely by the Cooks of the Hamilton and Acme Rubber companies, and its business in this line has outstripped that of the rubber goods.

William L. Blodgett, secretary of the Hamilton Rubber Manufacturing Co., says his concern has all the business it can handle, and the outlook is for a very busy year. They have completed several improvements to their factory during the year.

General C. Edward Murray had just returned from a two weeks' hunting trip in North Carolina when he was asked for an opinion as to the trade outlook for 1910. He replied: "We are looking for more business than we will know how to handle." Then he outlined how preparations are being made to care for increased trade. He said the Empire Rubber Manufacturing Co. contemplate doubling the capacity of their mill room; while the Crescent Insulated Wire and Cable Co. have placed an order for 300 additional spindles. This concern and the plant of the Crescent Belting and Packing Co. are being operated until 10 o'clock each evening. General Murray is one of the heads of the three companies. Incidentally he said he had a fine hunting trip.

"Trade for 1910 looks very encouraging to us," declared John A. Lambert, secretary of the Acme Rubber Manufacturing Co. He said the high price of crude rubber would cut into the profits, but notwithstanding that the business outlook was good.

JAR RING PATENT CASE DECIDED.

JUDGE JOSEPH CROSS filed in the United States circuit court at Trenton December 18 an opinion deciding in favor of the Empire Rubber Manufacturing Co. in the two suits brought against it by William P. Coldren on the charge of infringements of patents for the manufacture of lipped rubber fruit jar sealings. Judge Cross dismissed both suits with costs on the complainant. He held that both patents were invalid because they did not embody any new principle. The patents were No. 738,295 (September 3, 1903.) for the apparatus for making the rings, and No. 738,885 (September 15, 1903.) for the process of the manufacture.

The two suits were heard and decided together. Judge Cross,

discussing the first patent, said that it involved no more invention than if a person having a machine in which was inserted a die for stamping square pieces from steel metal should substitute a round die for the square one. The judge quoted from the defendant's expert:

"The prior patented art shows that the Coldren machine was old and well known except, possibly for the particular form of his die --- the form of ring produced by this machine was common property many years before Coldren entered the field; --- it was a common expedient to make packing rings for any desired purpose by cutting the same from lengths of tubing. --- Reduced to its lowest terms, it would appear that the Coldren invention, as far as the machine patent is concerned, resides solely in the form of the die to produce a rib or projection longitudinally of and on the side of the tube."

The expert then proceeded to show that tubing with longitudinal projections or flutings had been produced many times before.

Taking up the other patent—for the lipped ring itself—Judge Cross decided: "There was nothing new in the described process. Sealing rings and like articles were always formed by first taking a piece of tubing and then cutting it cross sectionally into lengths to form rings. The process is essentially the same whatever the shape or configuration of the tubing from which the rings are cut. Tubes of various forms and shapes were old in the plastic art, and so, too, was the method of cutting them into rings for use. The complainant's patent disclosed nothing new in the art, and is invalid."

RUBBER MEN IN PUBLIC OFFICE.

MR. WILLIAM J. B. STOKES, president of the Home Rubber Co., treasurer of the Thermoid Rubber Co., and an officer of the Joseph Stokes Rubber Co., retires as treasurer of the City of Trenton on January 1, after having held the office continuously since June 1, 1894, or 15 years and 6 months. No other treasurer of the city ever held the office so long. Mr. Stokes was born in 1836 and is the son of Joseph Stokes, for many years superintendent of the plant of the New Jersey Steel and Iron Co., at Trenton, founded by Cooper, Hewitt & Co., of New York. Not only has Mr. Stokes been one of the leaders in building up the Trenton rubber industry but he has also had an important part in the municipal progress. From 1886 to 1891 he was a member of the common council of the city, and during the six years took an active part in the direction of city affairs. During the time Mr. Stokes was city treasurer about \$25,000,000 in city funds passed through his hands, besides which he attended to many other fiscal duties of the municipality.

It is very likely that for the next three years another rubber man will hold the office of city treasurer, as Harry E. Evans, manager of the Consolidated Rubber Co. and a director in the Empire Rubber Manufacturing Co., is the choice of the Republicans to succeed Mr. Stokes. The city administration will remain in the hands of the Republicans in 1910 and so Mr. Evans will undoubtedly be elected by common council. Mr. Evans was born in New Brighton, Pennsylvania, but has resided in Trenton 25 years. For the past 7½ years he has been manager of the Consolidated Rubber Co. Mr. Evans is a member of the board of park commissioners of Trenton, but will resign that place to take the treasurership. He is president of the National Union in the United States.

THE ACME COMPANY MAKE ADDITIONS.

THE Acme Rubber Manufacturing Co. have just completed an addition to their plant, and are equipping it with machinery. Additional machinery is also being placed in the other departments, about \$30,000 worth having been ordered. The addition is a substantial brick structure 250 x 55 feet, three stories high. About one-half of the new floor space will be devoted to their tire line, which is greatly increasing with this concern. The balance of the new mill will be used for needed expansions in other departments. When the new wing is in operation the company

will have a capacity for making from 500 to 600 tires a day, besides about 800 inner tubes. The company have increased the capacity of the carriage cloth department also. Secretary John H. Lambert states that next spring another addition to the main building 75 x 80 feet, three stories high, will be erected. This will make the main building of the plant 650 feet long.

A BURNED FACTORY REBUILT.

THE Elwell Rubber Manufacturing Co., whose mill was badly damaged by fire December 7, has practically completed repairs and the business is under way again. The upper floor was completely burned out, and it was necessary to erect an

entirely new roof, besides considerable other work. R. T. Elwell, president of the company, states that the shutdown caused by the fire lasted only a few days. The fire was the third in the mill within a few weeks, the other two not being serious. It is believed all were caused by friction of the machinery.

The Textile Rubber Co., composed of Brooklyn manufacturers, conducted on the top floor the business of rubberizing silk for ladies' storm coats and other purposes, and following the fire this business was removed to Brooklyn. It is likely that the Elwell company will later occupy the entire building. They manufacture "Panther tread" rubber heels and other molded goods.

The Rubber Trade at San Francisco.

By a Resident Correspondent.

THIS is the most quiet time of the year for those who are depending on the rubber trade, as the holiday season has practically stopped all active business. The traveling men are returning home, and as far as business changes are concerned, if there are any to be made, the promoters are putting off until after the first of the year before making any important moves. The threatened further increase in the price of rubber is a continued source of anxiety. This, however, they make the best of, and would welcome any way or means whereby they could profitably raise the price of goods accordingly, and still retain the business. The filling of back orders has kept the houses fairly busy this month, and if business picks up as good as most of them expect it to after the first of the year, the period of idleness will be brief. Most everybody expects to see a good business begin with the new year, and although they have been looking forward from season to season to big improvement for over two years and it has not come, yet they now prophesy with more determination than ever, and certainly everything is favorable to good times. The city has been completely rebuilt, everybody is permanently established, the worst of a long period of unsettled times has been passed through safely, there are no dissensions on the part of labor unions, and the country districts are in unusually prosperous condition.

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THE Empire Tire and Rubber Co. have recently been incorporated and will have headquarters in Los Angeles, California.

Mr. C. H. Chase, manager of the Bowers Rubber Works, has been away on a trip to the northern cities. This firm has kept quite busy, and are turning out about the regular quota of stock from the factory at Black Diamond.

Ben Alexander has sold his interest in the Plant Rubber and Supply Co., located at 32 Beale street, and has now gone in with the Pacific Mill Mine and Supply Co., at No. 508 Mission street. Both of these firms state that the mechanical line is very quiet, although they are looking forward to a good increase of business during the coming spring.

* * *

A NEW enterprise will be launched after the first of the year under the supervision of Mr. U. R. Grant, well known in the rubber interest on the coast. Mr. Grant, together with A. B. Cochrane, backed by strong capital, have bought out the Young Sanitary Manufacturing Co., of San Francisco. After the first of the year they will commence manufacturing and begin the active work of the new concern with Mr. Grant as the practical man in charge. The concern which they have bought out is the firm which had control of the new invention of detachable sanitary seats for toilets. The principle of the invention is an adjustable seat of hard rub-

ber, hollow so that it can be supplied with a disinfecting solution, and containing little ducts to carry and spread the fumes so that germs cannot exist on the seat. This article was first introduced to the market by the Phoenix Rubber Co., but Messrs. Cochrane and Grant were the successful bidders for the concern and its output, and the new firm will commence the manufacture on a large scale.

* * *

FRANK SARGEANT, manager of the Gorham Rubber Co., states that business was first class up to the time of the commencing of the holiday present buying season. His idea is, he says, that the trade has seen the worst of conditions, and that they will not see dull times again for many years to come. The outlook is very favorable. The heavy rains have made some nice business for the footwear and clothing departments.

Mr. William J. Gorham, of the Gorham Rubber Co. is now in Seattle, Washington, visiting the company's branch in that city. He will return to San Francisco next week.

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THE Smith and Eccles Co., located on First street, near Mission, now are handling the "Victor" balata belting, which they find to be an easy seller to the trade.

The local rubber dealers' association have called a meeting to be held next week. The meeting is called to discuss trade matters generally, and there is nothing of particular interest before the association at present. The members hope soon to make some changes which will be beneficial to the trade at large.

Mr. Gregory, manager for the New York Belting and Packing Co., Limited, on First street, will return to this city from his trip some time next week. General business keeps up well considering that this is the time of the year, when it is not expected that there will be any great amount of new business.

F. S. Winslow, who has charge of the Pacific Coast Rubber Co. on Mission street, states that the recent rains have done much during the past month to take business out of its quiet rut which the mechanical lines had fallen into. The country is in good shape for the rubber business, as there is heavy snow on the mountains and it is generally a heavy winter, so that there are many calls on the wholesale establishments. The retailers are only buying from hand to mouth so that they order in small and frequent quantities. Mr. Winslow believes that next year will result in better business than the trade has known for some time.

EARLY DAYS IN THE COAST RUBBER BUSINESS.

MR. RICHARD H. PEASE, the dignified, quiet, kindly and eminently successful head of the old-established house of the Goodyear Rubber Co., of San Francisco, is the oldest man in the rubber

business on the Pacific coast, and he is in charge of affairs now with that same degree of activity and efficiency which has been marked by his employees for many years past. He has gained a place of the highest respect and esteem in the rubber trade in San Francisco and the adjacent territory by his kindly treatment of all with whom he had to deal, particularly his employees. There are hardly any of the more mature rubber salesmen of this city that did not start with Mr. Pease, and all of them honor him highly. Mr. Pease came to San Francisco in 1869, and became connected with the Goodyear Rubber Co. which had been established here in 1865.

"The business then was comparatively very small," he said, "and we had a small store under the Continental Hotel, on Montgomery street. From here we moved under the Grand Hotel, on Market street, in 1873, having increased the space to a first floor and basement. Business had been flourishing all along, so that in 1876 they moved into their large building on Second and Market streets, 65 feet frontage and 155 feet deep, with six floors and basement, and here they remained until the big fire forced us to move until we could have our present building reconstructed on the same site. Business increased every year so that in 1893 we found it necessary to open a store in Portland, Oregon. This made it possible to handle the northern territory



RICHARD H. PEASE.

from Portland, and California and Arizona from San Francisco. Since that time the northern territory has developed wonderfully and San Francisco has long since ceased to be the chief distributing point for the entire west.

"When I first came here San Francisco was the distributing point for the entire Pacific coast, and goods for Seattle, Portland, or Los Angeles had to come here first, also goods for the Orient, and from here it was distributed by steamer to the various ports. Everything by rail came here. There was only one railroad, but the rates were so high that it paid much better to keep up the old system of shipping "around the Horn," and this was done for many years after the first railroad came through in 1869. Everything was carried on sailing vessels, which came along every week or two; some came by steamer via the Isthmus. Small lots of goods were kept on the way for a long time ahead and the ships acted in the capacity of storage houses too.

"In those days we had a fine business. In Nevada they were opening the Comstock mines. In opening the new mills rubber belting and large quantities of heavy boots and shoes and waterproof clothing were sold. Throughout California immense quantities of rubber boots were used where they were doing hydraulic mining. It was a thing unknown to sell a short boot then, and the very best quality of mining coats were bought everywhere.

We had unusually large sales of miners' white coats. A much better quality of goods were being used here than in the east. The retailers bought liberally and in large quantities, and a firm then could do a much larger business than with one-tenth of the force than now, with the latter day competition and the high price of rubber. In 1869, 1870, and 1871 we sold everything in gold, and when we sent our gold drafts in to New York we at first got a premium for them of 60 per cent. above currency; gold was that much more valuable than currency at that time. As everything was in currency in the east and we settled in currency, it made us a nice side profit of 60 cents on the dollar. The amount of the premium gradually diminished after 1869.

"We do not have the easy money that came in those days under modern conditions, but by keeping abreast of the times with every modern facility for doing business in close competition we have always continued successful and find that our trade prospers just as it did in the days of old. We have all been compelled to do closer figuring than ever during the past two years, but the better times are already showing up, and next year will begin another era of prosperity."

GOOD WORDS FROM AUSTRALIA.

TO THE EDITOR OF THE INDIA RUBBER WORLD: I notice that you purpose making your January number a special one, commemorating the fact that twenty years have elapsed since the introduction of THE INDIA RUBBER WORLD. As one of the fast depleting number who constitute the original subscribers, permit me to congratulate you on the continued success of the journal, from both a literary and a trade standpoint.

I can distinctly recollect a visit which you paid to the office of the rubber company with which I was connected in Boston, in the summer of 1889. On that occasion you spoke of introducing a journal devoted to the interests of the rubber and electrical trades, believing that these industries had become so important that a trade journal was indispensable. In due course the paper appeared, and was favorably received by the rubber trade generally.

I have been a constant reader of THE INDIA RUBBER WORLD for the past twenty years, and have found it to be a source of valuable information on all matters relating to the rubber industry. I have on file in my office all the publications in the world devoted to the rubber trade; but I consider the information I obtain from THE INDIA RUBBER WORLD to be of more value to me than that contained in any other publication on the subject. With kind regards, Yours very truly,

JOHN KEARNS,

Factory Manager, Dunlop Rubber Co.

Melbourne, Australia, November 16, 1909.

OBITUARY.

WILBUR SHERWOOD UNDERHILL, son of the late Caleb Fowler and Emily Sherwood Underhill, died at Yonkers, New York, on December 10, of heart disease. He was born July 5, 1852, at New Rochelle, educated in the Yonkers public schools and engaged in business in New York for a short time, after which he accepted a position in the factory of the Hodgman Rubber Co., where in the course of time he became assistant superintendent. He was much respected by the firm and the employees, and upon the completion of twenty-five years of connection with the factory was presented with a handsome silver cup, fittingly inscribed. Mr. Underhill resigned about two years since. He was a lover of music, and for thirty-three years was organist and choir master at St. John's Episcopal Church, Tuckahoe. On January 12, 1876, Mr. Underhill married Miss Jane Odell Dusenberry, who survives him. Mr. Underhill died at the residence of his father-in-law, Charles R. Dusenberry, of Yonkers.

The Editor's Book Table.

AGRICULTURE IN THE TROPICS. AN ELEMENTARY TREATISE. By J. C. Willis, M. A., Sc. D., director of the Royal Botanic Gardens, Ceylon; organizing vice-president Ceylon Agricultural Society; editor of *The Tropical Agriculturist*. [In the Cambridge Biological Series.] Cambridge: University Press, 1909. [Cloth. 8vo. Pp. xviii. + 222. Price 7 shillings.]

NO attempt has been made by Dr. Willis to write a book for the practical man to use in connection with his field work. Whoever will may buy useful treatises on growing onions, or cocoanuts, or what not, and profit from intelligent use of them. But our author has confined himself rather to certain general principles underlying agriculture—something which neither the individual agriculturist nor people in general in the past have always recognized as having an existence. Almost from the beginning of the human race there has been tillage of some kind, necessity having impelled men to labor to tempt food products from the soil. Yet even today the remuneration of agricultural effort on the whole is limited vastly by the failure of those engaged in it to study means of lightening labor, or the value of cooperation in lessening costs.

Such considerations are foremost in this work by Dr. Willis, and particularly with regard to tropical agriculture, in which so many things are to be considered that differ from farming in New England, for example, or in any of the countries of Europe. Agriculture in the tropics involves the production of commodities which for the most part are not thought of in other climates, in connection with farm work, but rather as the wares of the grocer or chemist or the like—as coffee, tea, sugar, spices, quinine, opium, and so on.

The latest notable addition to the products of agriculture in the tropics is india-rubber, which up to twenty years ago was solely a forest product. It is the inclusion of india-rubber among the commodities discussed by Dr. Willis, and the important relation which this gentleman, in an official capacity, has sustained to the scientific culture of rubber, that leads to a review of his book in these pages. It is distinctly not a manual of rubber planting, nor a guide to that industry any more than to the production of rice or cocoanuts. But whatever tropical products may be demanded by the peoples of the temperate zones, the principles underlying their growth are the same, and in outlining these principles our author has conferred a service of very great value.

Under the American system, the tiller of the soil is its owner, and, as a rule, each farm is self-contained and self-sustaining, producing the chief part of the food required for the farmer's family, and in addition a specific crop for sale—grain, or cotton, or tobacco, or the like—the proceeds of which pay for clothing and the other wants of the family, including the means of education, besides the general sustenance and development of the farm establishment. This system extends over millions of square miles of territory, employing more than half the population of the United States, and giving rise to countless rural communities of intelligent and vigorous people, from whom are recruited the leaders of industry, commerce, finance, and the government. It would be disastrous to the world if the existing American agricultural system, with its salutary results, should disappear. But no such possibility is meant to be suggested here.

Agriculture in the tropics under the system just referred to, however, is out of the question. It is to be considered that the products discussed by Dr. Willis cannot be brought into existence outside the tropics. Also, that their production must always be the result of the labor of tropical peoples. A third point is that the direction of such enterprise on any scientific or economical basis, must be in the hands of other than tropical peoples. Being a native of England, our author naturally uses the word

"Europeans" in referring to the leaders of modern tropical planting.

Not the least important feature of this book is its pointing out the difference between the results of native agriculture in the Far East and those attained by the employment of coolies under European direction. A parallel might be found in comparing the quality and cost of cloth as between the old time household employment of distaff and loom and the modern factory system. Or, again: What would be the cost of steel to-day, if every man who might need some were to produce it in leisure moments in his back yard, instead of buying it from such centralized mammoth establishments as the United States Steel Corporation, or Krupp's, in Germany?

This article is not based upon quotations from Dr. Willis, but is suggested by reading his book. We are interested in india-rubber, and to sum him up, this material is produced more economically by tropical labor, on a large scale, under European direction, than if this or that or the other coolie should be depended upon to bring to market now and then a few pounds derived from his undirected labor.

Dr. Willis, by the way, makes no suggestion as to any change of agricultural methods outside of the tropics. A study of his work, however, suggests that, ultimately, the world's dependence for wheat, for example, will not be upon the small individual producers in this or that or another country, but upon large concentrated enterprises, managed by boards of directors in financial centers represented on immense plantations by capable resident managers. Boards of directors today supply the world with steel and cotton and woolen goods; they are coming to supply the world with india-rubber; why not with wheat and whatever else the world requires that comes out of the soil? If this should prove an economical necessity it will come about, of course, but the American agricultural system—and what compares with it in other countries—may be depended upon to endure, just as it did when American housewives ceased to spin and weave and began to buy drygoods from the "department store."

VEHICLES OF THE AIR. A POPULAR EXPOSITION OF MODERN Aeronautics. With Working Drawings. By Victor Loughheed, member of the Aeronautic Society, former member of the Society of Automobile Engineers, former editor of *Motor*. Chicago: The Reilly & Britton Co. [1909.] [Cloth. Large 8vo. 11p. 479 + plates. Price, \$2.50.]

The appearance of this book contemporaneously with the Twentieth Anniversary Number of THE INDIA RUBBER WORLD suggests the fact that, twenty years ago, nothing could have been printed in a trade paper in any country more apt to offend the intelligence of its readers than a reference to human flight as a practical proposition. THE INDIA RUBBER WORLD, though never inimical to the idea of what people nowadays call "automobiles," was eight years old before these new fangled machines were referred to in its pages as filling a place in practical life. Today one may order an aeroplane with the same assurance of having the order filled as if he should require an automobile, or a boot-jack, or a dozen eggs.

What is more, whoever will, may employ a sky pilot to assist him in navigating the air in one of the new vehicles with safety. The fact is that the "vehicles of the air" have come to stay; manufacturers of them in America and in Europe advertise them as definitely as makers of sewing machines or watches advertise their products, and they are getting orders. At the second Paris Aëroneautical Salon, in October last, orders were booked for 110 monoplanes of a single make. The mere fact of the appearance of Mr. Loughheed's substantial volume is convincing that the flying machine interest has reached an important stage. And as this article is being written one happens to see in a leading

New York newspaper a half page report of a day's court proceedings in a case where a million dollar company—capital actual—are claiming damages for infringement of patents on an aeroplane. These things do not happen in regard to an invention without practical value.

Mr. Loughheed, our author, made an admirable record as editor of the important journal, *Motor*, and the thoroughness of the book before us indicates that he has studied the matter of monoplanes and biplanes, not to mention ornithopters and helicopters—and, of course, balloons—no less carefully than in the case of automobiles in earlier days. The book is actually up to date. There are 270 illustrations—many of them “half-tones” of exceptional merit—patent specifications, a glossary of aeronautical terms, and other interesting features in this book too numerous to recount in a journal interested in flying machines only in so far as rubber is used in their construction. Incidentally it may be stated that the rubber requirements for these new machines form by no means the least important item of cost.

HANDBOOK OF BRITISH GUIANA, 1909, COMPRISING GENERAL and Statistical Information Concerning the Colony. Edited and Compiled by George D. Bayley (of the British Guiana Civil Service). Published under the authority of the Permanent Exhibitions Committee. Georgetown: “The Argosy” Co., Limited. 1909. [Cloth, 8vo. Pp. xxv + 607 + plates. Price, 5 shillings.]

The natural resources of British Guiana compare favorably with those of any other English-speaking colony in the world, and it is of interest to note the efforts now being made to promote their long delayed development. Not only are there great riches in the forests, and in the as yet little worked mines of the colony, but there are large areas fitted for tillage and grazing, the whole giving the colony great potential wealth. The book before us has been compiled under official auspices, with a view to educating the colonists themselves as to the country in which they live, and merchants, farmers and capitalists elsewhere as to the opportunities which British Guiana offers for investments. There is scarcely any character of information regarding the colony likely to be called for in any quarter which is not fully set forth in this handsome volume, the interest of which is greatly enhanced by nearly threescore excellent photogravures.

INDISCHE CULTUUR ALMANAK (MET SUPPLEMENT) VOOR 1910. Samengesteld A. H. Berkhout en M. Greshoff. 24e Jaargang. Amsterdam; J. H. De Bussy, 1909. [Cloth. 32mo. Pp. 372 + vii. Price, 3 florins.]

The comprehensiveness and variety of the contents of this yearly handbook of Dutch planting interests in the East Indies indicate more thoroughly than does any other single publication the vast importance of these interests. There are statistics of sugar, coffee, tobacco, cacao, tea, spices, rice, quinine, kapok, coconuts, indigo, tapioca and other products. Attention is given also to india-rubber and gutta-percha, though the production of these to date under cultivation is as yet only beginning. There are tables of weights, measures, temperatures, prices, etc., of mutual interest to estates managers in Sumatra and Java and investors at home in the plantation enterprise. Professor Berkhout, one of the compilers, was the former conservator of forests in the Dutch East Indies, and Dr. Greshoff, the other, is director of the Colonial Museum at Haarlem. The supplement referred to (64 pages) is a list of books and periodicals relating mainly to planting interests.

HENDRICKS' COMMERCIAL REGISTER OF THE UNITED STATES, for Buyers and Sellers. Especially Devoted to the Interests of the Architectural, Mechanical, Engineering, Contracting, Electrical, Railroad, Iron, Steel, Hardware, Mining, Mill, Quarrying, Exporting and Kindred Industries. . . . New York: Samuel E. Hendricks Co., No. 14 Lafayette street. 1909. [Cloth. Large 8vo. Pp. LXXVII + 1,220. Price \$1.]

This is the eighteenth annual edition of a work which has proved its usefulness to a very great number of business men in a wide field. It embraces the names and addresses of over 350,000 manufacturing firms and individuals, under 35,774 business classifications, the mere listing of which, in the index, requires 77 four-column pages in small type. While not offered as a complete directory of any branch of industry, its lists

under each general heading are sufficiently full to make the work one of value for reference, to which are to be added the advantage of its being accurate and brought up to date.

A MANUAL OF STEAM ENGINEERING, COMPRISING INSTRUCTIONS, Suggestions, and Illustrations for Progressive Steam Engineers Concerning the Application to Modern Daily Practice of the approved Theory of Steam Engineering. By W. H. Wakeman. . . . New York; New York Belting and Packing Co., Limited [1909.] [Cloth. 32mo. Pp. 409.]

The author of this handy book has written extensively for steam engineers, and is an authority in his field. The present work has been prepared at the suggestion of a leading firm of rubber manufacturers, for distribution among their customers. It cannot fail to be of interest, not only to engineers as a book of reference, but also to those who have to do with the administration of industrial enterprises which make use of steam power.

DISEASES OF A GASOLINE AUTOMOBILE AND HOW TO CURE Them. A practical Book for the Gasoline Automobile Owner, Operator, Repair Man, Intending Purchaser, and Those Wishing to Learn the First Principles of an Automobile. Also for Launch Owners. . . . By A. L. Dyke and G. P. Dorris. [St. Louis, A. L. Dyke Automobile Supply Co. 1903.] [Cloth. 12mo. Pp. 201. Price \$1.]

This is avowedly not a theoretical work, but one designed to answer briefly but clearly a series of practical questions concerning gasoline automobiles. As every such automobile calls for rubber tires, and as these have “diseases” as well as the other parts of a car, a chapter is devoted to the application of tires, caring for them, and making repairs when they are needed. This section of the work appears to be of a practical character, from which it may be assumed that the same is true of the remaining chapters.

THE TENSILE PROPERTIES OF INDIA-RUBBER. BY PHILIP Schidrowitz, P.H.D., F.C.S., Member of British section International Testing Committee. [Reprinted from *The India-Rubber Journal*, March 22-May 31, 1909.] [Paper. 4to. Pp. 15.]

This paper is devoted to the desirability of standardizing india-rubber goods, together with suggestions toward physical tests for this purpose, by a physicist who has devoted much attention to this subject. Illustrations are given of some testing machines designed by him for this work.

IN CURRENT PERIODICALS.

Cacao et Castilloa. By H. Hamel Smith. = *Journal d'Agriculture Tropicale*, Paris. IX-07 (July 31, '09). Pp. 196-197.

La Saignée du Funtumia par Incisions Verticales. By O. Laoroy. = *Journal d'Agriculture Tropicale*. Paris. IX-07. (July 31, '09). Pp. 197-200.

Organization Générale d'une Plantation d'Hevea. [In French Indo-China.] By G. Verner, agricultural engineer. = *Journal d'Agriculture Tropicale*, Paris. IX-06 (June 30, '09). Pp. 161-164; IX-07 (July 31, '09). Pp. 201-204.

Exploitation et Culture des Linnés à Caoutchouc en Afrique Occidentale. By E. De Wildman. = *Journal d'Agriculture Tropicale*, Paris. IX-06 (June 30, '09). Pp. 172-174.

Principales Clases Comerciales de Caucho y Plantas que las Producen. By Paul Beckman [Translated from *Aus der Natur.*] *Boletín der Ministerio de Fomento, Caracas.* I-1 (July, '09). Pp. 19-37.

The Modern Telephone Cable. By Frank E. Jewett. [Deals with paper insulation.] = *Proceedings of the American Institute of Electrical Engineers*, New York. XXVIII-7 (July, '09). Pp. 947-961.

Cinchona-und Kautschukkultur in Ceylon. By Charles Böringer. = *Der Tropenpflanzer*, Berlin.. XIII-6 (June, '09). Pp. 209-274.

GREAT JOY ON THE ACRE.

THE following report of a joyful celebration in the upriver rubber country comes to us in a Pará newspaper. It does not appear from the paper in what “city” the event occurred:

“Referring to the high price of rubber, our contemporary, *O Estado do Acre*, in its edition of August 26, published the following: ‘The people of this city received yesterday the grateful news of the value of 11\$300 per kilo [=about \$1.56 per pound] of rubber. The joy was so great that immediately was organized a parade of many citizens led by Colonels Laudelino Benigno, Avelino Chaves, Childerico Fernandes, and Raymundo Custodio. They marched through the principal streets of the community and congratulated his Excellency, Dr. José Martins de Freitas, the government delegate, and the other authorities, being on this occasion treated with champagne, etc. The *Estado do Acre* was represented at this meeting, which proved once more the spirit of cordiality that exists between us.’”

THE AERONAUTIC INTEREST.

THE right to work all the patents of Wilbur and Orville Wright for making aeroplanes in Germany will be controlled by a new company, Flugmaschine Wright, G. m. b. H., formed in Berlin by leading German industrial concerns. Among the participants are the famous Krupp steel manufacturing company, of Essen, and the Allgemeine Elektrizitäts-Gesellschaft, of Berlin.

Orville and Wilbur Wright have received the Cross of the Legion of Honor, the greatest reward which the French republic can confer, as a recognition of their labors in the field of aviation. The ceremony took place on November 6 at the French consulate in New York, and Consul-General George Lancl, acting in behalf of the French president, made the presentation.

Attorneys for the Aeronautic Society of New York have filed in the United States circuit court their answer to the patent infringement suit brought by the Wright brothers against the building of the Curtiss aeroplane, on the ground that the Wright patents are not valid.

Wilbur Wright is quoted as believing that aeroplanes can be built capable of going 100 miles an hour, to continue for 1,000 miles, and carrying six persons.

Lieutenant Frank Lahm, of the United States army signal corps, got the honor badge of the army school of aeronautics at College Point, Maryland, on November 1, when he kept a Wright aeroplane in the air 58½ minutes.

The American record for duration in a balloon flight was made by Clifford B. Harmon in the balloon "New York," starting from St. Louis at the time of the centennial celebration in that city. Harmon remained in the air 48 hours and 26 minutes—the second longest official flight ever made.

A prize of 10,000 marks [≈\$9,528.40] offered by Dr. Lanz, of Manheim, in a competition limited to aeroplanes constructed in Germany by German builders, and propelled by German-made motors, was won at Johannisthal on October 30 by Hans Grade. He flew 2.5 kilometers [≈1.55 miles] in 2 minutes 43 seconds.

A company is being formed in London to organize an aeroplane service across the English Channel, between Calais and Dover.

The government of Italy has decided to have a fleet of dirigible balloons for military use.

The first Association of International Aeronautic Pilots was organized in Boston on November 1. Throughout the world there are already about 250 persons entitled to membership. Charles J. Glidden, of Boston, is president, and A. Holland Forbes, of New York, vice-president.

Two members of the Canadian Aerodrome Co., near Baddock, Nova Scotia, on November 1, gave the aeroplane "Baddeck No. 2" her first official tryout. It is the second heaviest and longest aeroplane in the world. Sixteen miles were covered in 20 minutes 17 seconds, the machine landing at the starting point after circling the course sixteen times.

Mr. Clifford R. Hendrix, of Brooklyn, New York, is mentioned as having ordered a 1910 model Blériot aeroplane, to cost about \$2,400.

Experiments are to be begun shortly by the bureau of ordnance of the United States Army, at Sandy Hook, in shooting balloons and other air craft while flying. Recent experiments in Germany of firing upon a balloon in flight have resulted in three types of balloon cannon. One is mounted on wheels, another on a pedestal, and a third on an automobile. The work in Germany has demonstrated that ordinary field artillery is ineffective against airships.

The inventory of the estate of the late Robert D. Evans, of Boston, included an interest of \$125,000 in the Boston and Bolivia Rubber Co., engaged in exploiting crude rubber in the neighbor-

NEW TRADE PUBLICATIONS.

THE NEW YORK LEATHER BELTING CO. (New York), publish a pamphlet, "From Forest to Factory," devoted to the "Victor" brand of balata belting, which is illustrated with views of more than a score of factories where this belting is in use. [6 x 9 inches. 63 pages.]

JOHN ROYLE & SONS (Paterson, New Jersey), issue their Catalogue No. 214, devoted to Tubing Machines Fixtures. It is illustrated with a number of cuts of parts and fixtures in their line. [4 x 6 inches. 63 pages.]

THE WATSON MACHINE CO. (Paterson, New Jersey), send out a collection of leaflets, each describing and illustrating one of the machines of their production adapted to the insulated wire industry. [6 x 9¼ inches. 62 leaves.]

WOVEN STEEL HOSE AND RUBBER CO. (Trenton, New Jersey), issue a catalogue of mechanical rubber goods and packings. A feature of their products is a patented woven steel armor which is adaptable in different forms to hose for different uses. The packing department of the company has now become extensive and a number of its products are illustrated here. [5¾ x 8 inches. 40 pages.]

FRED MEDART MANUFACTURING CO. (St. Louis), sends Catalogue G. of Gymnastic Apparatus, of which the company are large manufacturers. This cannot be classed as a catalogue or rubber goods, though not a few of the Medart specialties embrace a certain amount of rubber. [5½ x 8¼ inches. 112 pages.]

THE BEACON FALLS RUBBER SHOE CO. (Beacon Falls, Connecticut) have introduced a new feature in their advertising which is unique—a small monthly periodical, *Rubber*, which is readable as well as attractive in looks. The initial number is dated September, 1909. [4 x 4¾ inches. 16 pages.]

ENTERPRISE RUBBER CO.—William E. Barker, president and treasurer (Boston)—issue "Our Salesmen in Print, No. 6," covering the latest catalogue of Candee Rubber, with some special remarks to dealers. [3½ x 6½". 76 pages.]

ELECTRIC HOSE AND RUBBER CO. (Wilmington, Delaware) issue a catalogue of designs in colors, of their Interlocking Rubber Tiling. The pages of this attractive publication are trimmed in the shape of a section of tiling, which makes it somewhat unlike any other trade publication that has reached THE INDIA RUBBER WORLD. [4⅞" v 4⅞". 14 leaves.]

THE BRISTOL CO. (Waterbury, Connecticut) devote their Bulletin No. 13 to Bristol's Patent Steel Belt Lacing, which is made in various sizes and styles for all kinds of arine and conveyor belts—rubber, leather, and cotton. [8" x 10½". 8 pages.]

WOVEN STEEL HOSE AND RUBBER CO. (Trenton, New Jersey), issue a catalogue of Mechanical Rubber Goods and Packings. A feature of their products is a patented woven steel armor which is adaptable in different forms to hose for different uses. The packing department of the company has now become extensive and a number of its products are illustrated here. [5¾" x 8". 40 pages.]

MASSACHUSETTS CHEMICAL CO. (Walpole, Massachusetts), issue a new edition of their catalogue of liquid, plastic and solid insulations, tapes and fabrics, and molded rubber goods. [6" x 9". 32 pages.]

THE latest catalogue issued by JOHN ROYLE & SON (Paterson, New Jersey), relates to Insulating Machine Fixtures, of which they make a great number. [4" x 6". 58 pages.]

ALSO RECEIVED.

THE Bristol Co. (Waterbury, Connecticut)—Bulletin 111—Bristol Class II Recording Thermometers. 8 pages.

The Coile Bed Bath Co., Knoxville, Tennessee—The Coile Bed Bath. 16 pages.

Firestone Tire and Rubber Co., Akron, Ohio—"Firestone" Demountable Rims. 12 pages.

E. J. Willis Co., New York—Fall Bargain List of Automobile Supplies. 4 pages.

News of the American Rubber Trade.

SHAREHOLDERS of the Revere Rubber Co. (Boston) lately received circulars offering \$200 for their stock, to be deposited with the Safe Deposit and Trust Co., and the First National Bank of New York, on or before December 24. It was soon reported that a majority of the holders had assented to the proposition, which was made with a view to merger with the Rubber Goods Manufacturing Co. The latter are understood to have experienced a shortage of plant capacity. Through the control of the Rubber Goods Manufacturing Co. by the United States Rubber Co., the latter will thus succeed to the ownership of the Revere Rubber Co.

The Revere company are capitalized at \$2,000,000, in \$100 shares, with approximately 300 holders. Recently shares were reported to have changed hands at \$195. For some years 8 per cent. dividends have been paid. No authorized public statement has come out as yet, but it is understood that the intention of all concerned that the Revere company is to keep its individuality, as has been the case with other important factories acquired by the United States Rubber Co.

The result of the annual election of the Revere Rubber Co., to be held on January 12, is looked forward to with interest. At present the directorate embraces Costello C. Converse (president), E. S. Williams (treasurer and clerk), H. M. Rogers, E. S. Grew, Henry C. Morse, I. W. Chick, and F. W. Pitcher.

The Revere Rubber Co. succeeded the Boston Elastic Fabric Co., which was organized in 1863 under the presidency of Liveras Hull, to whom a large part of the first share capital was issued in respect of some patents of his. In February, 1864, the company bought a brick factory at Chelsea, Massachusetts. Three years later the company took on the manufacture of mechanical rubber goods, after having elected to the presidency Charles McBurney, who had been with the Boston Belting Co. There were various changes in the board, and in 1883 the reorganization of the business, since which time it has been continuously successful. It may be mentioned that Mr. Henry C. Morse, still on the board and so long known as the efficient treasurer, first became a director 29 years ago.

UNITED STATES RUBBER CO.—INCREASE OF CAPITAL.

THE shareholders of the United States Rubber Co. have received a circular dated December 23 inviting subscriptions to 37,370 shares (\$3,737,000) of the first preferred stock of the company, now in the treasury, to be distributed proportionately with the present holdings of the subscribers, at the price of \$110 per share, the privilege being open until February 1. The directors also purpose selling to a syndicate (including among its participants President Samuel P. Colt and some other directors) \$2,500,000 of the first mortgage bonds of the company, and at the option of the company on or before December 20, 1910, to sell to the syndicate \$2,500,000 additional in bonds, all at par. The syndicate agree in the meantime to lend to the company \$2,500,000 upon the pledge of the second lot of bonds, and also to take at \$110 per share any of the preferred stock which under the offer already mentioned may not be taken by the shareholders. The bonds referred to are a part of the \$20,000,000 issue of December, 1908, of which thus far only \$15,000,000 have been allotted. The directors of the company in announcing the new issue say:

"The increase, as well as the extension of the business of the United States Rubber Co., including the acquisition of properties deemed advisable and advantageous for the company, during the year 1909, has been such as to require from its officers attentive consideration of its steadily increasing cash requirements, especially in view of the unprecedented rise in the price of crude rubber and the corresponding increase in the amount of cash

locked up in materials and in the manufactured stock awaiting sale. This condition has been brought before the directors, who are of opinion that these needs should be met by permanent provision, and not by short time loans or discounts."

REMOVAL OF GEORGE BORGFELDT & CO.

THE importing house of George Borgfeldt & Co. (New York) have removed from the premises long occupied by them in West Fourth street to the large new building which they constructed recently at Sixteenth street and Irving place. The removal occurred on Saturday afternoon, December 4, and on Monday morning at 8 o'clock the employees took up their duties in the new building, without confusion or disorder. There were ten floors in the old building, each a block long, from which thousands of samples had to be checked and packed, but every article was in its proper place in the new building at the opening of the next business day. Besides, an office force of 500 persons was promptly placed, with their desks and other fixtures. Although unofficially Messrs. Borgfeldt & Co. were fully established in their new headquarters as stated, the official day for visitors will remain as originally planned, January 3, as by that time the new samples now arriving from Europe will be opened up.

BOSTON BELTING CO.'S NEW BUILDING.

THE Boston Belting Co., during the past year, have added a new factory building to their extensive plant at Roxbury Crossing, in Boston, and now have it in full operation. A piece of land directly across a private way from the main plant was purchased; the old building situated on it torn down or removed, and a new building, 105x64 feet, erected thereon. It is of brick, four stories high, and of slow burning mill construction, built in accordance with the best ideas of modern mill design. It is used exclusively for the cotton weaving and braiding departments which the company have developed of late years. The walls are built with narrow thick pilasters, permitting wide windows which extend up to the under side of the floors, thus insuring an abundance of sky light so essential to a textile factory. The lower floor is of concrete, but the other floors are of plank four inches thick. A large hydraulic plunger elevator with a 9-foot square platform, situated near the center of the building, serves all departments. Power is furnished by a Westinghouse gas engine, whose cylinder jackets are made use of for heating the wash water for the mill. Steam for heating is supplied from the



BOSTON BELTING Co.'s NEW BUILDING.

boilers in the main plant through a pipe laid under the private way mentioned above. In the design of this mill, special attention was paid to the subjects of light, heat, ventilation, and to the safety and comfort of the operatives, resulting in a mill well adapted to care for the growing needs of the textile branches of the Company's business.

CONVENTION OF EUREKA FIRE HOSE FORCES.

THE selling forces of the Eureka Fire Hose Manufacturing Co. met the management of the company on Dec. 2-3 at the Waldorf-Astoria Hotel, in New York, in the State apartment. The object of the meeting was to discuss the unusual conditions in the business due to the high costs of the rubber and cotton yarn which enter into the products of the company. It was agreed that rather than permit the quality of the high grade, well known, standard brands of fire hose manufactured by the company to become deteriorated, the selling prices should be advanced. Luncheon was served at the Waldorf on Dec. 2 and dinner at the Hotel Lafayette, after which a theater party was arranged. The business discussion was resumed on the second day, and after luncheon all the members of the party visited the factory at Jersey City, going from New York in automobiles. In view of the success of the meeting it was agreed that a similar one should be held in New York during the coming year. Those present were:

OFFICERS.

Benjamin L. Stowe, president.
Isaac B. Markey, vice-president.
George A. Wics, treasurer and general manager.
N. F. McKeon, secretary and general factory manager.
F. R. Grady, assistant to general factory manager.

THE SALESMEN.

P. O. Herbert, Atlanta, Georgia.
L. S. Russell, Dallas, Texas.
H. F. Pratt, Columbus, Ohio.
C. H. Dixon, Fargo, North Dakota.
E. M. Yarrell, Kansas City Missouri.

M. J. and W. P. Burke, Syracuse, New York.
G. F. Hand, Chicago.
F. P. Hoy and W. E. McGuffin, Minneapolis, Minnesota.
J. M. Hardy, Boston.
A. T. Shearer, Omaha, Nebraska.
J. Quinlan and P. W. Outwater, New York City.

MESSRS. APPLETON INCORPORATE.

PAPERS of incorporation were filed with the secretary of state of Maine, on November 10, 1909, for F. H. Appleton & Son., Inc. The capital stated is \$250,000, and the directors Francis H. Appleton, Brookline, Massachusetts; and Francis H. Appleton, Jr., and F. L. Tufts, Franklin, Mass. The firm have been making reclaimed rubber for several years at Franklin, where they acquired the plant used formerly for the same purpose by the Colonial Rubber Goods Co. They have been adding to the premises a storehouse 50 x 150 feet.

ASBESTOS STEAM HOSE.

THE patented "Bonnerbestos" steam hose, one of the new specialties of the Empire Rubber Manufacturing Co. (Trenton, New Jersey), is offered for the critical inspection of the trade. It is pointed out that the length of service of ordinary hose is limited to the life of the cotton fabric contained, while that of the rubber is usually twice as long. The asbestos fabric used in this hose is woven of brass wire cored asbestos thread, strictly fireproof, which feature is as durable as the rubber itself. Railroads will be supplied with enough for trial tests.

THE GROWING MOTORCYCLE TIRE TRADE.

THE motorcycle field is rapidly developing great possibilities for the tire manufacturer. Both the Goodrich and the Diamond companies have put motorcycle tires on the market during the last year, and are preparing to meet a large demand for them in 1910. "While the number of motorcycles manufactured this year was hardly greater than 20,000," said E. C. Tibbits, advertising manager of the B. F. Goodrich Co. (Akron, Ohio), to a



CONVENTION OF OFFICERS AND SALESMEN OF THE EUREKA FIRE HOSE MANUFACTURING CO.

[Photographed in front of the company's factory, at Jersey City, New Jersey.]

correspondent of THE INDIA RUBBER WORLD, "in 1910 some 75,000 new machines will be put on the market. The simplifying of engine will work wonders in popularizing the motorcycle and will have the effect of cutting the weight of the machine in two." The Goodrich company have put sufficient importance on the motorcycle tire field to issue among their advertising publications a monthly paper of 16 pages, named *The Clincher*, devoted entirely to the motorcycle trade, and especially designed to promote the popularity of the sport. Clubs have been rapidly forming in the middle west, for women as well as men, since the invention of a rumble seat attachment for cycles has made motorcycling a social pastime as well as a sport.

CONVERSE RUBBER SHOE CO.

THIS company, scarcely more than a year old, having been organized in November, 1908, has already taken an important place in the rubber footwear trade. The work of erecting a factory was begun in the last days of December, and the buildings were completed and the machinery installed and in operation by May 1. Salesmen started on the road with samples on May 10, and came off the road on July 10, with the year's production practically sold. The officers of the company are experienced handlers of rubber footwear. The president is M. M. Converse, formerly of the firm of Converse & Pike, in the footwear trade in Boston, and later manager of the Beacon Falls Rubber Shoe Co., Boston. J. S. Capen, the treasurer, some time with the Enterprise Rubber Co., was also later with the Beacon Falls company.

TO MAKE BALTA BELTING AT YOUNGSTOWN.

THE Republic Rubber Co. (Youngstown, Ohio) announce that they have acquired the balata belting business of Robins New Conveyor Co. (New York), and, in conjunction with the original English manufacturers of this product, are erecting a large and modern plant at Youngstown for its manufacture in the United States. This belting has heretofore been sold in this country under the name of "Robins Genuine Balata Belting," but in the future will be sold as "Lanco" Genuine Balata Belting, the brand under which it is marketed throughout the eastern hemisphere.

The Republic Rubber Co. have secured from the Irwell and Eastern Works (Salford, Manchester) the exclusive manufacturing rights in America for the belting referred to. Mr. James Tinto, president and general manager of the English company referred to, is at present in Youngstown, accompanied by the company's chief constructing engineer, Mr. Gomersoll. These gentlemen are there for the purpose of directing the starting of the large plant to be erected by the Republic company for their new line, which they purpose making an important part of their business.

NEW MACHINE COMPANY IN AKRON.

THE Akron Rubber Mold and Machine Co. were incorporated December 21, under the laws of Ohio, with a capital stock of \$10,000. They have bought the plant of the Federal Machine Co., of Akron, and will make a specialty of the manufacture of rubber tire molds, having contracts with tire-making companies. Stanley W. Harris, now superintendent of the Taplin-Rice-Clerkin machine shop of this city, will be manager and with him will be associated William D. Morris, mechanical engineer of the Federal Rubber Co., of Youngstown, Ohio, and Frank Hobach, of this city.

ADDITIONAL AKRON NEWS.

WITH the beginning of the new year the Swinehart Tire and Rubber Co. will put in operation their new factory, in which they will make pneumatic tires. The company announce that they have actual orders for over 30,000 pneumatics.

The B. F. Goodrich Co. are planning to erect two additional six-story factory buildings early in the spring. One will be put on Falor street, across from the Diamond plant, and the other on the canal in the rear of the main buildings.

The Diamond Rubber Co. expect to put the product of their

boot and shoe department on the market shortly after the first of the year, when a sales manager for that department will arrive to take up his duties. It is probable that a separate selling force will be organized for this line.

The keen competition for 1910 tire business will result in a large representation by rubber companies at the New York automobile shows, beginning December 31 and ending January 15.

Mr. C. B. Raymond was re-elected president of the Akron Chamber of Commerce, at the annual meeting early in December. Though it is against the policy of the chamber to re-elect presidents, Mr. Raymond's efficiency prompted the directors to lay aside the rules.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for five weeks, ending December 25

COMMON STOCK, \$25,000,000.

[Less \$1,344,000 in treasury of a subsidiary company.]

Last Dividend, April 30, 1900—1%.

Week November 27	Sales 12,900 shares	High 52 ³ / ₄	Low 50
Week December 4	Sales 15,450 shares	High 54	Low 50
Week December 11	Sales 4,223 shares	High 53 ¹ / ₂	Low 52 ¹ / ₂
Week December 18	Sales 17,900 shares	High 54 ⁷ / ₈	Low 52 ¹ / ₂
Week December 25	Sales 5,515 shares	High 54 ⁷ / ₈	Low 53

For the year—High, 57³/₄, Aug. 19; Low, 27, Feb. 24.
Last year—High, 37¹/₂; Low, 17¹/₂.

FIRST PREFERRED STOCK, \$36,263,000.

Last Dividend, Oct. 30, 1909—2%.

Week November 27	Sales 10,200 shares	High 118	Low 115 ³ / ₄
Week December 4	Sales 2,680 shares	High 117 ³ / ₄	Low 115
Week December 11	Sales 1,400 shares	High 118	Low 116 ¹ / ₈
Week December 18	Sales 2,210 shares	High 117 ¹ / ₂	Low 117
Week December 25	Sales 1,850 shares	High 118 ¹ / ₂	Low 116 ⁷ / ₈

For the year—High, 123¹/₂, Aug. 24; Low, 98, Jan. 29.
Last year—High, 108; Low, 76.

SECOND PREFERRED STOCK, \$9,065,000.

Last Dividend, Oct. 30, 1909—1¹/₂%.

Week November 27	Sales 3,810 shares	High 85	Low 80 ³ / ₄
Week December 4	Sales 1,800 shares	High 82 ³ / ₈	Low 80
Week December 11	Sales 580 shares	High 84	Low 82
Week December 18	Sales 950 shares	High 84	Low 83
Week December 25	Sales 46 shares	High 84	Low 83 ¹ / ₂

For the year—High, 89¹/₂, Aug. 23; Low, 67¹/₂, Feb. 25.
Last year—High, 75¹/₂; Low, 42.

SIX PER CENT. CERTIFICATES, \$20,000,000.

\$15,000,000 issued.

Week November 27	Sales 31 certs.	High 104 ¹ / ₂	Low 104
Week December 4	Sales 63 certs.	High 104 ³ / ₈	Low 104
Week December 11	Sales 7 certs.	High 104 ¹ / ₄	Low 104 ¹ / ₈
Week December 18	Sales 67 certs.	High 104 ³ / ₄	Low 104
Week December 25	Sales 48 certs.	High 104 ³ / ₈	Low 104 ³ / ₈

TRADE NEWS NOTES.

THE corporation Alling Rubber Co. have filed with the secretary of state of Connecticut a certificate of change of location from New Haven to Bridgeport.

The American Mills Co., manufacturers of elastic fabrics at Waterbury, Conn., have increased their capital from \$150,000 to \$400,000.

The Millville factory of the Woonsocket Rubber Co., devoted to making boots, resumed work on December 16, after having been closed for a month.

Fred H. Jeffrey has been appointed manager of the branch at St. John, New Brunswick, of the Canadian Rubber Co. of Montreal, Limited, to succeed Paul R. Hanson. Mr. Jeffrey has been in the employ of the company at Montreal for several years.

The Rubber Goods Manufacturing Co. declared the regular quarterly dividend of 1³/₄ per cent. on the preferred stock, payable on December 15.

An agreement has been made by the fire hose manufacturers that after January 1, 1910, samples of fire hose submitted with bids shall not measure over 6 inches in length.

The Converse Rubber Shoe Co. (Malden, Massachusetts), have taken on the manufacture of a line of tennis goods.

BOSTON BELTING CO.'S ANNUAL.

At the annual meeting of Boston Belting Co., on November 29, in Wesleyan Hall, Boston, the annual reports were received and approved. The directors were reelected: Thomas A. Forsyth, J. H. D. Smith, Lewis M. Crane, Charles H. Moseley, Francis H. Stevens, William H. Furber and George A. Miner. Thomas A. Forsyth was reelected president; J. H. D. Smith, treasurer and clerk; and Thomas Lang, Jr., and Charles J. Upham, auditors. The usually quarterly dividend—No. 161—has been declared payable January 1, to shareholders of record December 15, 1909. The balance sheet as of September 30, 1909, is appended:

ASSETS.		
Real estate—land and buildings.....	\$254,281.85	
Machinery	250,702.48	
Tools, furniture, and fixtures.....	97,661.80	
Cash	40,065.26	
Bonds Receivable, Notes Receivable, Investment Account, Accounts Payable.	708,420.67	
Merchandise	911,366.04	
Trade marks	100.00	
Sundries	550.00	
		\$2,353,148.10
LIABILITIES.		
Capital	\$1,000,000.00	
Reserve fund	800,000.00	
Profit and loss.....	379,148.10	
Notes payable	174,000.00	
		\$2,353,148.10

NEW INCORPORATIONS.

MONAQUOT Rubber Works Co., October 21, 1909, under the laws of Massachusetts; capital \$50,000. Incorporators: Robert Jackson Cram, No. 14 Mount Vernon street, Boston; Frank M. Sawtelle, Malden; and Atherton N. Hunt, Braintree, Massachusetts.

Interborough Rubber Co., November 24, 1909, under the laws of New Jersey; capital \$50,000. Incorporators: Francis C. Lowthrop and Elwood W. Moore, Jr., of Trenton, and William N. Cooper, of Burlington, New Jersey. This is a sales company and it is stated that the business office probably will be in New York.

International Rubber Co., November 23, 1909, under the laws of Delaware; capital, \$1,000,000. Incorporators: David A. Sullivan, C. J. Brooks, and Fred Burkhardt, all of Brooklyn, New York.

Monroe Spring Tire Co., November 22, 1909, under the laws of New Jersey; capital, \$100,000. Incorporators: Edwin T. Monroe and Frederick G. Brown, Riverton, New Jersey, and Preston T. Rhodes, Philadelphia.

The E. H. Holstein Rubber Co., November 17, 1909, under the laws of Connecticut; capital, \$10,000. To deal in rubber goods. Incorporators: Eva H. Holstein, Joseph S. Holstein, and Abraham Kusnitsky, all of Hartford, Connecticut.

Maitland Tire and Tube Co., December 10, 1909, under the laws of Delaware; capital, \$500,000. Incorporators: F. M. Shive, S. E. Roberson, and H. W. Davis, all of Wilmington, Delaware.

The Guatemala Rubber and Plantation Co., November 29, 1909, under the laws of Maine; capital \$500,000, of which \$150,000 is stated to be paid in. Incorporators: Lindley M. Webb (president), Charles J. Nichols (treasurer), and George E. Height, all of Portland, Maine.

Essex Manufacturing Co., November 18, 1909, under the laws of Maine; capital \$100,000. To manufacture rubber heels and arch supporters. Incorporators: Albert H. Peavey (president), E. J. Burnham (clerk), and G. E. Burnham (treasurer, all of Kittery, Maine.

The Slip-Over Tire Co., October 11, 1909, under the laws of Indiana; capital \$3,000, of which \$2,000 preferred. Directors: John W. Fudge, Fred O. Gephart, and George M. Kocker. Place of business, Marion, Indiana.

West Borneo Rubber Co., December 2, 1909, under the laws of Illinois; capital \$3,000. Directors: William B. Mey, William Wyers, and Henry W. Huttman, who also were the incorporators. Principal office, No. 172 Washington street, Chicago.

Barnett Automobile Tire Co., November 15, 1909, under the laws of New York; capital, \$80,000. Incorporators: Frank A. Barnett, Patrick W. Barnett, and Patrick J. Leahon, all of New Rochelle, New York.

TRADE NEWS NOTES.

THE Firestone Tire and Rubber Co. announce additional distributing agencies for Firestone tires and demountable rims as follows: Whitaker Tire and Rubber Co., Memphis, Tennessee; Harris Tire Co., Savannah, Georgia, and Central Automobile Co., Vancouver, British Columbia.

So that room may be provided to build an addition to their extracting plant, The Diamond Rubber Co. have petitioned the council of the village of Kenmore, a suburban corporation south of Akron, to vacate part of a street adjoining the plant.

George A. Alden & Co., india-rubber merchants, who for so many years maintained their offices and warehouses at No. 60 Chauncy street, have removed to the Merchants Building, Nos. 77-79 Summer street, where they have handsomely equipped offices most conveniently arranged.

The recent purchase by D. Lorne McGibbon, president of the Canadian Consolidated Rubber Co., and his associates, of important holdings in La Rose Consolidated Mines Co., in Canada, has been followed by the election of Mr. McGibbon to the presidency of the latter company. Among Mr. McGibbon's associates who have joined the board of the mining company are several directors in the rubber company.

Mr. T. H. Peaty, of the Raw Products Co. (New York), recently returned from Europe, having established new connections in London, Liverpool, Paris, Antwerp and Hamburg. The Raw Products Co. distribute a general line of crude rubber.

Mr. Paul Schindler, who is in charge of the Berlin, Germany, office of the Hodgman Rubber Co., was in New York recently and reported a steadily increasing demand in Germany for certain lines of rubber goods of American manufacture.

The U. S. Rubber Reclaiming Works (New York) will be represented in Boston from February 1 next by Mr. Ernest Jacoby, who, for some nine years past, has been the Boston representative of A. T. Morse & Co.

The Eureka Fire Hose Manufacturing Co. have opened an office in San Francisco, for the handling of their fire hose business on the Pacific coast, under the management of Mr. W. A. Daggett, with headquarters in the Postal Telegraph building.

The Atlantic Rubber Co. (Hyde Park, Massachusetts) are erecting a special fireproof building of cement stone for their proofing department, which will greatly increase their present capacity on this line of work. They have been greatly handicapped heretofore on account of limited space for this constantly increasing business on custom proofing.

Mr. Ephraim L. Corning, who was a recent visitor to his old home in Boston, was long one of the larger shareholders in the Boston Rubber Shoe Co. and a close friend of the late President Converse. He was for many years a director of the Boston company, and for a while a director in the United States Rubber Co. Mr. Corning's father, the late H. K. Corning, was a rubber importer in New York as early as 1850, and the Corning firm at one time occupied a commanding position in this trade. Mr. Corning for several years has resided at Geneva, Switzerland.

The Revere Rubber Co. were incorporated under the laws of Massachusetts, in 1883. The first board of directors embraced the late Joseph Banigan, the founder of the Woonsocket Rubber Co.; Henry L. Hotchkiss, now president of the L. Candee & Co.; the late Hon. Elisha S. Converse, of the Boston Rubber Shoe Co.; the late George A. Alden, india-rubber merchant; Franklin W. Pitcher, now general manager of the Easthampton Rubber Thread Co.; Henry Rogers, and Henry C. Morse.



ALBERT, KING OF THE BELGIANS.

[Succeeds Leopold II. who died December 17. The new King is a nephew of Leopold, aged 34 years. He lately visited the Belgian Congo, in the development of which he has taken a live interest.]

CHRISTMAS AT THE "NATIONAL" FACTORY.

THE long established custom of making Christmas presents at the factory and offices of the National India Rubber Co. (Bristol, Rhode Island) was observed this season. The salesmen and the treasurer (Mr. Brown) made a present to Le Baron C. Colt, manufacturing agent. The officers and clerks at the factory made a present to Mr. Brown. The factory foremen remembered Superintendent Cashman. And, generally, the heads of departments were the recipients of gifts from the workers in the departments, while members of the working force who were ill were particularly well remembered by those in charge.

NEW RUBBER FIRM AT HARTFORD.

THE E. H. Holstein Rubber Co. (Hartford, Connecticut), the incorporation of which is reported in another column, has been formed to conduct a retail rubber goods store. They succeed to the business of the Connecticut Rubber Co., incorporated November 1, 1901, having bought the stock and good will from the receiver.

ASSIGNMENT OF THE RICKABY COMPANY.

A GENERAL assignment for the benefit of creditors was made on December 21 by the Rickaby Rubber Manufacturing Co. (South Framingham, Massachusetts), rubber reclaimers. The firm was organized in the latter part of 1906 by Frank B. Rickaby, who had an extensive acquaintance with the trade, first in crude rubber and later in the reclaiming line.

TRADE NEWS NOTES.

AN artistic New Year's card from Mr. J. Schnurmann, of London and New York, ornaments the desks of the firm's many customers on both continents.

Seneca G. Lewis has resigned the position of sales manager of the Winchester Repeating Arms Association (New Haven, Connecticut) to become general manager of the Pennsylvania Rubber Co., the change taking place on February 1.

The Thermoid Rubber Co. (Trenton, New Jersey), hitherto known more especially for its "Thermoid" brake lining, are preparing to take on the manufacture of a line of pneumatic tires, to be known by the same trade mark.

Not the least interesting item in connection with the change of control of the Revere Rubber Co. (Boston), reported in another column, is that it further concentrates the manufacture of pneumatic tires in the United States. The Revere factory make the "Continental" tires sold in this country.

PERSONAL MENTION.

THE death is announced of Dr. Moritz Greshoff, the distinguished director of the Colonial Museum at Haarlem, Netherlands. It occurred in the night of December 7-8, in his forty-eighth year.

Mr. W. J. Gallagher has been appointed director of agriculture and government mycologist in the Federated Malay States, to succeed Mr. J. B. Carruthers, whose transfer to Trinidad has been reported in this journal.

Dr. Alexander Petrunkevitch, an honorary curator at the American Museum of Natural History, at New York, returned recently from an extended visit to Mexico, in quest of specimens. He was a guest for ten days on Mr. James C. Harvey's rubber plantation, "La Buena Ventura," on the Isthmus of Tehuantepec.

An interesting letter of travel dated from Cimiez-Nice, France, in the Medford (Massachusetts) *Mercury*, is from the facile pen of Mr. Allison M. Stickney, of the Wellman Co., of Medford. Mr. Stickney is known to the rubber trade in every country, and his talent for writing to all the readers of THE INDIA RUBBER WORLD.

Mr. Richard P. Hood, foreign representative of the Hood Rubber Co., with headquarters at 17, rue Richer, Paris, came home to spend Thanksgiving with his brothers, and returned to Europe early in the past month.

Mr. William Vernon Backus, of Mexico City, where he is an important member of the bar as well as being interested largely in the rubber planting interest, was a recent visitor to the United States.

TRADE NEWS NOTES.

THE Apsley Rubber Co. have removed their Boston offices to the Haynes building, No. 146 Summer street. The new premises embrace private offices for President L. D. Apsley and Secretary William B. Loughton, and sample and sales rooms for footwear and waterproof clothing.

L. J. Muttly Co., rubber goods merchants of Boston, have removed their offices and salesrooms to Nos. 91-93 Federal street.

The Vaughn-Upton Co., December 10, 1909, was incorporated under the laws of Massachusetts; capital, \$50,000. Incorporators: Frank M. Vaughn, Jr. (president), Medford; William F. Cushman (treasurer), Henry J. Upton (clerk), Boston.

The Goodyear Tire and Rubber Co. (Akron, Ohio) have taken a ten years' lease on premises in Seventh street, Cincinnati, for their branch in that city. The contract calls for a rental of \$54,000 for the ten years.

A. H. Alden & Co., Limited, india-rubber merchants in London, have removed from 39 Mincing lane, to larger premises, Ocean House, 24 and 25 Great Tower street, E. C.

Felix Dorn, long connected with Hecht, Levis & Kahn, has started in business as C. F. Dorn & Co., general produce brokers, devoting special attention to india-rubber, at Hartley buildings, 11 Old Hall street, Liverpool.

THE THOMPSON TAPPING KNIFE.

WHAT appears to be an exceedingly practical tapping tool is the knife shown in the accompanying engraving. It is made wholly of iron, so that it is indestructible. The cutting device is exactly adapted for the grooved cuts that have been found to be most effective and safe. A very simple gage allows of a very effective measuring for the depth of the cut. Two



THE THOMPSON TAPPING KNIFE.

dozen of these knives are already in successful use on "El Encanto" rubber plantation in Chiapas, Mexico. The inventor of the knife, Mr. George T. Thompson, of Canandaigua, New York, is prepared to fill orders at \$2.50 a knife.

The Season's Automobile Shows.

THE tenth international automobile show under the auspices of the American Motor Car Manufacturers' Association, was opened on Friday evening, December 31, at the Grand Central Palace, New York. The description "independent" as applied to the great majority of automobile exhibitors at the Palace show is used to distinguish these makers from the members of the Association of Licensed Automobile Manufacturers, whose annual show at Madison Square Garden, beginning on the evening of January 8, will succeed, with an interval of only one day, the one now in progress.

The members of the Licensed Automobile Manufacturers build their cars under license from the Selden patent on gasoline automobiles; the others are outside that association. At the Palace show now in progress, however, the peculiar condition presents itself of half a dozen makes being on exhibit that have been produced under the Selden patent. The reason is that several firms, following the recent decision in the United States court sustaining the Selden patent, joined the A. L. A. M., but too late to disturb show arrangements already made.

While the scope of this journal does not extend to reporting on automobile types, it may be mentioned here that in the Palace show more attention is devoted to European types than will be true at the Madison Square show. It is this feature which entitles the former to be termed an "international" show. While the exhibits of the importers at the Palace may be less striking than in the recent London show, the display contains many of the features that made the Olympia exhibition the greatest ever held across the Atlantic. It is to be remembered that the lack of automobile shows this season in Paris and in Berlin lent particular importance to Olympia as an exhibition place for novelties in European automobile construction. There are in the Palace show, it is estimated, foreign cars totaling in value nearly \$500,000.

If the makers of motor car tires are introducing decided novelties in types of tires at this year's show they have concealed with care any advance information regarding the same. But every evidence exists that the tendency at this moment is toward the use of larger car wheels, and of larger tires, not only in diameter, but in cross section. Not even the higher cost of rubber—and this does not lessen the cost of tires—has checked this tendency. It has been admitted on all sides that too many cars have been equipped with pneumatic tires of too small dimensions for economic or even safe operation. These two considerations appeal to the intelligent motorist—when supported by the prominent tire makers—and the larger tire comes into use as a matter of course.

There are cars at the Palace show equipped with pneumatics ranging from 28 in.x3 in. to 40 in.x4 in., the smaller being applied of course, to the machines of lighter weight. The striking feature of the show is the pronounced use of 36-inch tires, both in the 4 in. and the 4½ in. section, there being fourteen exhibitors listing these sizes, both front and rear. Tires of 5 in. section are shown on machines, on wheels with diameters from 36 to 39½ inches. But all the tires of more than 36 inches in diameter are used only on the largest and highest powered cars. The 34 in.x4 in. tire is most common on "popular priced" cars.

More and more the development of commercial vehicles appeals to the interest of the rubber tire manufacturer, and this year's shows in New York mark no exception to the rule. Hitherto huge trucks, self propelled and equipped with rubber tires of suitable size, usually have been the center of attraction, apart from automobiles proper. But this season will be exhibited an unusual number of small trucks, many of not more than one ton capacity, and at prices surprisingly low as compared with

former quotations. There has been noted particularly a demand for commercial auto trucks from merchants who now employ single horse vehicles for their delivery work. But they all increase the demand for rubber tires.

AUTOMOBILES AND TIRES AT OLYMPIA.

THE eighth International Motor Exhibition at Olympia, London, November 12-20, under the patronage of the King and the Prince of Wales, was unusually notable this season from the fact that it was the only large automobile show in Europe, none being held in Paris or Berlin. In consequence the leading Continental makers were represented at Olympia to an unusual extent, making it a truly international show. A few leading American makes were represented, and particularly American accessories, including The B. F. Goodrich Co., in the tire department.

The tire exhibits were unusually numerous, representing 27 firms—British, French, German, and American. It cannot be said that any real novelties were exhibited in the way of tires, but there were new features in tire accessories on many of the stands. There were new rims, valves, and security bolts; tire protectors; repair outfits; non-skidding devices, and so on, so that the tire department proved one of the most attractive features of the show to very many of the visitors.

The Olympic show was, as usual, arranged by The Society of Motor Manufacturers and Traders, Limited, in connection with The Royal Automobile Club. The membership of the society first named embraces most of the rubber tire manufacturers in Great Britain and on the continent, and also The B. F. Goodrich Co., Limited, of 7, Snow Hill, London.

THE STANLEY SHOW.

AT Royal Agricultural Hall, Islington, London, was held on November 19-27 the thirty-third annual Stanley Show, described this year as devoted to "cycles, motorcycles, motor vehicles, aeroplanes, and accessories." Originally it was a bicycle show alone, but while the bicycle in England still attracts visitors to a show, the newer inventions naturally share larger in the interest of the public. The tire makers were, as usual, much in evidence at the Stanley Show, most of them giving prominence to their equipment for motorcycles, the popularity of which in England is constantly on the increase.

THE LATEST PLANTATION HANDBOOK.

THE growth of the rubber planting interest is illustrated in an interesting way by comparing the size of the three editions published to date of the important handbook, "Rubber Producing Companies," brought out by Messrs. Gow, Wilson & Stanton, Limited, tea and rubber brokers, of London. The first (1906) edition was comprised in 62 pages. The second (1908) contained 284 pages. The third (1909) edition embraces no fewer than 551 pages. The increase in size of these successive volumes is due chiefly to the greater number of plantation companies reported on, though it must be said that an additional amount of space is necessary year by year on account of the additional information available in regard to the longer established companies, in respect of planting, rubber yields, dividends, and the like. The value of the latest compilation is enhanced by the inclusion in it of particulars supplied by the publishers in the *Times of Ceylon* in relation to rupee and dollar comparisons, this department of the book being in effect a second edition of the valuable "Tropical Investors' Guide" published by the *Times* at Colombo, two years ago.

The book is substantially and handsomely got up and sells at 5 shillings.

American Imports of Scrap Rubber.

THE development of the reclaimed rubber interest in the United States has been accompanied by a large importation of waste or scrap rubber, a class of material twenty years ago of little commercial value outside this country. It may be of interest to have a record of details of such imports showing the countries of origin and the quantities (in pounds) of the

rubber scrap imported as shown by official statistics for fiscal years ending June 30. It will be seen from our table that whereas less than 500,000 pounds of scrap were imported in 1890-91 from seven countries, the imports in 1908-09 reached 20,497,695 pounds and were derived from 28 countries. Today more scrap is utilized abroad than formerly.

From—	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	
Austria-Hungary										
Belgium					3,510	12,229	16,928	74,683	196,790	
Bulgaria										
Denmark			24,238		52,053	46,628	15,424	129,811	90,075	
France			24,610	68,211	52,045	42,868	41,264	84,760	64,782	
Germany	108,175	319,853	104,653	707,647	742,259	1,910,033	1,291,353	2,857,606	3,560,065	
Greece										
Italy										
Netherlands								4,433	4,653	
Norway										
Portugal					13,637					
Roumania										
Russia	21,668	15,102	22,000		131,361	398,321	864,813	1,715,052	3,323,258	
Spain										
Sweden and Norway		11,516		10,075	15,540			14,207	33,800	
Sweden										
Switzerland										
Turkey in Europe	20,593	59,230	65,233	131,621	67,405	51,437	18,178	50,988	115,143	
United Kingdom	246,257	896,787	117,929	188,997	254,489	349,439	593,798	269,652	426,790	
Bermuda										
British Honduras										
Canada	87,008	534,817	548,067	664,498	583,871	659,830	398,913	2,051,207	2,673,547	
Newfoundland, Labrador		767						410	1,600	
Costa Rica										
Mexico						3,140		17		
Miquelon, Langley, etc.							600			
British West Indies					112,266				4,220	
Panama										
Cuba	2,033		3,813	2,350	3,721		4,524			
Danish West Indies							15,212			
Brazil										
Columbia		1,000								
British Guiana								39,042		
Dutch Guiana										
Chile								40,403		
Venezuela								2,470		
Chinese Empire							3,700			
British East Indies	2,429					409,752	389,238	2,140,358		
Straits Settlements										
Hongkong		2,717								
Turkey in Asia								13,069	17,881	
Australia, Tasmania										
New Zealand									1,000	
Hawaii										
Total	488,163	1,841,786	910,543	1,774,008	2,032,565	3,874,677	3,653,945	9,488,327	10,513,604	
From—	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.
Austria-Hungary	7,060	32,086					107,455	102,818	105,480	136,536
Belgium	309,419	264,700	399,630	338,912	82,731	32,413	31,700	266,175	123,493	222,795
Bulgaria										27,200
Denmark	7,273	54,970			19,104	54,045	112,346	355,762	239,981	385,371
France	199,901	225,792	316,281	531,032	537,626	837,975	1,331,536	1,075,836	1,095,170	1,295,919
Germany	9,810,311	5,797,120	8,716,907	8,290,920	3,126,742	2,277,221	5,212,716	7,402,928	3,649,805	4,567,289
Greece								2,541		
Italy	3,797					5,952	11,858	300	28,032	7,475
Netherlands			111,315	1,860	2,905	13,450	114,993	310,594	249,037	673,999
Norway				573,575	591,510	492,634	497,614	490,012	228,435	584,681
Portugal		2,530								
Roumania					18,899		5,684	15,576		
Russia	5,047,516	6,212,765	8,536,237	10,454,897	12,466,187	6,788,582	7,891,040	7,766,304	4,694,731	3,340,766
Spain		4,300								
Sweden and Norway	95,175	251,940	363,448							
Sweden				11,447	169,222	584,767	1,000,319	667,544	616,771	519,243
Switzerland							24,451	42,503	10,677	65,041
Turkey in Europe	123,866	83,498	243,352	316,606	239,501	473,521	613,116	610,757	342,340	178,490
United Kingdom	1,006,513	996,484	1,089,082	1,851,168	1,224,990	1,367,262	3,989,394	5,250,490	1,671,666	3,050,019
Bermuda		1,150	700	900	100		2,650	15,031	3,116	2,897
British Honduras				165						
Canada	2,496,852	1,297,645	3,078,532	2,205,745	1,788,155	2,624,417	3,646,384	3,873,218	2,684,461	4,366,115
Newfoundland, Labrador		1,056	1,625	11,146		22,698		39,237	20,766	61,814
Costa Rica							363			
Mexico	1,458			16,414	5,225	18,389	23,791	20,631	46,761	47,856
Miquelon, Langley, etc.			1,277	3,370	634	1,383	478	506		
British West Indies	1,050	2,150	3,000	6,670	2,349		79,889	988		8,465
Panama										630
Cuba		4,775	23,988	44,567	57,410	53,475	60,565	136,931	95,816	86,948
Danish West Indies										
Brazil									219,197	
Columbia										426
British Guiana									1,041	
Dutch Guiana										
Chile										900
Venezuela						250				
Chinese Empire								14,507	60,333	100,800
British East Indies										
Straits Settlements							38,220	162,600	16,775	
Hongkong									120,036	185,153
Turkey in Asia		1,600							6,720	9,000
Australia, Tasmania		106							20,883	24,640
New Zealand										7,787
Hawaii										
Total	19,093,547	15,235,236	22,894,900	24,659,394	20,270,970	15,575,214	24,756,486	29,335,193	16,331,035	20,497,695

Review of the Crude Rubber Market.

THE feature of the month has been a heavy decline in prices on all grades, but more particularly on Pará sorts. The fall in fine Pará since one month ago is 8 to 10 cents a pound. Good Congo sorts have been better maintained. Guayule rubber, which continues to come forward in good amounts, is quoted higher at the end of the month than at the beginning.

At the London auction, on December 14, about 24 tons of Plantation from Ceylon were offered, and 130 tons from Malaya. Prices were lower than a fortnight before, but at the drop competition was good and everything was sold.

THE LATEST QUOTATIONS.

Following are the quotations at New York for Pará grades, one year ago, one month ago, and December 30, the current date:

PARÁ.	Jan. 1, '09.	Dec. 1, '09.	Dec. 30.
Islands, fine, new.....	113@114	173@174	163@164
Islands, fine, old.....	none here	174@175	none here
Upriver, fine, new.....	121@122	194@195	180@178
Upriver, fine, old.....	124@125	195@196	none here
Islands, coarse, new.....	55@ 56	71@ 72	@ 70
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	92@ 93	117@118	111@112
Cametá	61@ 62	82@ 83	79@ 80
Caucho (Peruvian), ball..	83@ 84	105@106	101@102
Caucho (Peruvian), sheet..	71@ 72	none here	@ 85
Ceylon, fine, sheet.....	129@130	207@208	179@180
Ceylon, crepe .....	.....	208@210	181@182

AFRICAN.	Jan. 1, '09.	Dec. 1, '09.	Dec. 30.
Lopori, ball, prime.....	112@113	136@137	133@134
Lopori, strip, prime.....	86@ 87	none here	none here
Aruwimi .....	.....	118@119	116@117
Upper Congo, ball, red....	.....	123@124	121@122
Sierra Leone, 1st quality..	94@ 95	118@119	...@117
Massai, red	94@ 95	118@119	...@117

Soudan niggers	85@ 86	107@108	...@106
Cameroon, ball	62@ 63	86@ 87	77@ 78
Benguela	62@ 63	75@ 76	...@ 74
Madagascar, pinky	83@ 84	98@ 99	98@ 99
Aeera, flake	21@ 22	22@ 23	22@ 23

CENTRALS.

Esmeralda, sausage	81@ 82	99@100	...@100
Guayaquil, strip	69@ 70	84@ 85	84@ 85
Nicaragua, serap	81@ 82	96@ 97	97@ 98
Panama	60@ 61	82@ 83	82@ 83
Mexican, scrap	80@ 81	96@ 97	96@ 97
Mexican, slab	58@ 60	82@ 83	82@ 83
Mangabeira, sheet	56@ 57	67@ 70	67@ 72
Guayule	30@ 33	59@ 60	60@ 63

EAST INDIAN.

Assam	92@ 93	94@ 95	94@ 95
Pontianak .....	.....	6@ ..	6@6½
Borneo	35@ 45	55@ 64	55@ 64

Late Pará cables quote:

	Per Kilo.	Upriver, fine	Per Kilo.
Islands, fine	7\$600	.....	10\$200
Islands, coarse	2\$900	.....	4\$700
Latest Manáos advices:		Exchange	15 15/32d.
Upriver, fine	10\$100	.....	.....
Upriver, coarse	7\$000	Exchange	15½d.

NEW YORK RUBBER PRICES FOR OCTOBER (NEW RUBBER).

Upriver, fine	\$2.02@2.15	\$1.03@1.13	\$0.98@1.06
Upriver, coarse	1.20@1.32	.72@ .82	.84@ .88
Islands, fine	1.83@2.02	.95@1.04	.91@ .99
Islands, coarse .....	.72@ .82	.47@ .54	.56@ .59
Cametá .....	.83@ .96	.53@ .56	.55@ .62

NEW YORK RUBBER PRICES FOR NOVEMBER (NEW RUBBER).

	1909.	1908.	1907.
Upriver, fine	1.93@2.03	1.12@1.30	.83@ .99
Upriver, coarse	1.17@1.21	.82@1.00	.68@ .85
Islands, fine	1.72@1.84	1.04@1.24	.72@ .92
Islands, coarse .....	.69@ .72	.54@ .70	.44@ .56
Cameta .....	.80@ .84	.56@ .72	.42@ .56

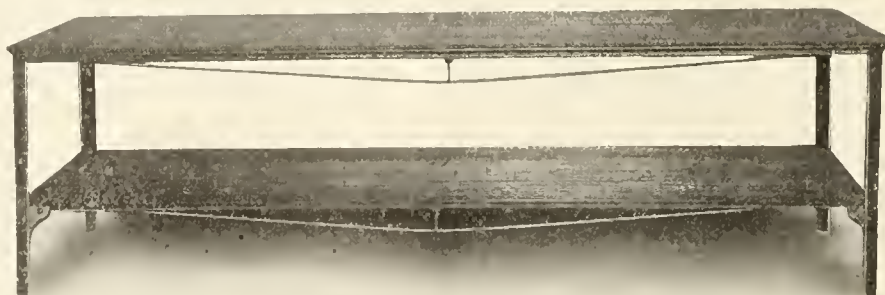
MILL ROOM COOLING TABLE.

THE cut relates to an important line of products of The Ornamental Iron Work Co. (Akron, Ohio), who specialize in metal requirements for rubber factories, having had many years of experience in this branch. Their mill room cooling tables are well constructed, with capacity from 1 to 2 tons made to any size, with two or three decks high. The top and decks are made of wire cloth, through which the air passes, cooling the rubber quickly. The chief feature of these tables is that there is not a part constructed of wood, which often clings to the rubber and is the source of a great deal of trouble, causing defective goods and unsatisfied customers. The value of the table will first be appreciated after these facts have been proved, and the advantages are shown.

THE latest indication of progress in the upper Amazon regions is the establishment of a commercial association in the prefecture

of Alto Juruá, which is one of the three divisions of the federal territory of the Acre. It appears from the *Estatutos* that the interests with which the association is concerned are principally rubber, sugar, and grazing. It is planned to hold once in two years a congress of rubber workers, farmers and merchants. The headquarters are at Cruzeiro do Sul and the president is Senhor Zeferino da Silva Ramos. A list of thirty-nine members is published.

IN a recent pageant presented to represent the development of Akron, it was a problem to represent in some artistic way the india-rubber industry. The result was the invention of an "india-rubber dance," cleverly executed by Miss Helen Harter. Dressed in a black spangled costume, the dancer jumped to the stage from an electric coupe. In the steps and movements which followed were suggestively represented the resilient and rebounding properties of india-rubber. The dance attracted considerable attention.



MILL ROOM COOLING TABLE.

Statistics of Para Rubber (Excluding Caucho.)

	NEW YORK.		Total 1909.	Total 1908.	Total 1907.	
	Fine and Medium.	Coarse.				
Stocks, October 31..	130	86	= 216	221	170	
Arrivals, November.....	1291	443	= 1734	1799	1331	
Aggregating	1421	529	= 1950	2020	1501	
Deliveries, November...	1240	492	= 1732	1772	1366	
Stocks, November 30..	181	37	= 218	248	135	
	PARA.		ENGLAND.			
Stocks, October 31.....	230	520	417	230	265	595
Arrivals, November.....	4370	3230	2945	1220	1646	1411
Aggregating	4600	3750	3362	1450	1911	2006
Deliveries, November...	3215	3275	3222	950	1775	1366
Stocks, November 30..	1385	475	140	500	136	640
World's visible supply, November 30..	tons		3,757	2,362	2,796	
Pará receipts, July 1 to November 30....			11,830	11,060	10,615	
Pará receipts of Caucho, same dates....			1,530	1,370	1,075	
Afloat from Pará to United States, Nov. 30			839	700	893	
Afloat from Pará to Europe, Nov. 30....			815	654	988	

African Rubbers.

NEW YORK STOCKS (IN TONS).

November 1, 1908	134	June 1, 1909	156
December 1	179	July 1	268
January 1, 1909	156	August 1	130
February 1	157	September 1	123
March 1	200	October 1	67
April 1	178	November 1	134
May 1	268	December 1	134

Antwerp.

At the inscription sale on December 16 about 530 tons were offered, of which 466 tons (including 408 of Congo sorts) found buyers at prices generally lower than at the preceding sale. A considerable quantity of Plantation rubber was included, and the prices realized showed a more marked decline than for the good Congo sorts. It is evident that Antwerp is becoming an important market for plantation rubber from the Straits Settlements and the Dutch East Indies. The offering included 34,160 kilograms from the Straits and 10,846 kilograms from Java. The next sale, about the end of January, will comprise some 500 tons.

ZELLER, VILLINGER & Co., report [December 16]:

In spite of the price of Pará fine having lowered by about 1 franc per pounds since lots sold in today's auction here were valued, the auction's result may be considered satisfactory, as prices paid average only about 4 per cent. below valuations. Practically all lots of current quality and condition have been sold; up to 15.05 francs per kilo has been paid viz., for a fine lot of prime Equateur. Next auction here will take place the second fortnight of next month and very likely include about 400 tons or so.

The Pará market has been very unsteady lately; the price for Pará fine hard cure has gone down to 7s. 3d. at a certain moment without buyers. Since yesterday a strong upward reaction has taken place, and England telegraphs now sellers less than at 7s. 6d. per pound.

It is very risky to say whether the lowest level has been reached at 7s. 3d. Very much depends upon arrivals, i. e., to say if the large arrivals of November and December up to now have come forward at the expense of those of the next months, or if there will really be a heavy increase of the crop. At any rate, we think manufacturers having covered their requirements lately will scarcely find themselves disappointed.

RUBBER ARRIVALS FROM THE CONGO.

NOVEMBER 29.—By the steamer *Leopoldville*:

Bunge & Co.....	(Société Générale Africaine) kilos	72,000
Do	(Comptoir Commercial Congolais)	19,000
Do	(Comité Spécial Katanga)	5,600
Do	(Chemins de fer Grands Laes)	2,800
Do	(Société Abir)	8,700
Do	(Société Anversoise)	1,300
Société Coloniale Anversoise.....	(Belge du Haut Congo)	2,000
Do	(Cie. du Kasai)	91,900
L. & W. Van de Velde.....		3,000
		206,300

RUBBER STATISTICS FOR NOVEMBER.

DETAILS.	1909.	1908.	1907.	1906.	1905.
Stocks, Oct. 31... kilos	464,831	662,104	723,816	621,081	554,483
Arrivals in November.	533,623	297,243	532,612	373,370	624,385
Congo sorts	417,392	224,772	499,441	311,315	462,907
Other sorts	116,231	72,471	33,171	62,055	161,478
Aggregating	998,454	959,347	1,256,428	994,451	1,178,868
Sales in November....	262,838	355,177	241,146	279,532	543,572
Stocks, November 30..	735,616	604,170	1,015,282	714,919	635,296
Arrivals since Jan. 1..	4,369,961	4,515,162	4,534,929	5,135,602	5,239,553
Congo sorts	3,276,349	3,807,830	4,156,141	4,014,059	4,006,203
Other sorts	1,093,612	707,332	678,788	1,121,543	1,233,350
Sales since Jan. 1....	4,230,080	4,917,886	4,477,831	5,155,870	5,145,618

Rubber Receipts at Manaus.

DURING November and five months of the crop season, for three years (courtesy of Messrs. Scholz & Co.):

FROM.	November.			July-November.		
	1909.	1908.	1907.	1909	1908.	1907.
Rio Purús-Acre..... tons	1,579	556	528	3,475	3,071	2,635
Rio Maderia	310	289	259	1,638	1,464	1,295
Rio Juruá	322	389	283	941	987	748
Rio Javary-Iquitos.....	480	331	420	1,514	1,227	1,454
Rio Solimoes	225	256	216	465	500	611
Rio Negro	76	13	27	90	10	30
Total	2,992	1,834	1,733	8,123	7,277	6,773
Caucho	357	224	150	1,533	1,070	934
Total	3,349	2,058	1,883	9,656	8,347	7,707

Para.

R. O. AHLERS & Co. report [December 11.]:

Since the beginning of this month prices of Island rubber have receded almost daily, while for Upriver there seems to be no demand at all at present. It must, however, be borne in mind that the now existing excess of entries (which was provoked by high prices) will soon be leveled out in January and February, as the increase on the total crop will not amount to much.

Liverpool.

WILLIAM WRIGHT & Co., report [December 1]:

Fine Pará.—The market, generally speaking, has been active throughout the month. At the close there was a sharp break in prices for the near positions, November declined about 11d. and December 7d. per pound; the distant positions, however, are in good demand at full rates; in fact there have been, and are, more buyers than sellers; doubtless the large discount in price has induced some of the buying, but it seems to us that there must be a trade demand behind it, which is a factor that will have its due effect later on. Receipts are coming forward liberally, but despite this, in Brazil there is active buying at prices fully 4d. per pound above those ruling here. There seems little doubt that we shall have at least a 7s. [= \$1.70] basis for this crop, as a drop of 3d. to 4d. per pound from present prices for next year's deliveries would result in heavy buying.

OLD RUBBER SHOES IN RUSSIA.

TO THE EDITOR OF THE INDIA RUBBER WORLD: I have just had an interview with one of the largest Russian dealers in old rubber, who expressed himself as follows:

"The outlook for the business in old rubber shoes in 1910 points to very high prices, as the supply of these goods is very small, while the entire production of Pará rubber in 1910 is reported to have been sold in advance at very high rates.

"Prices of old rubber shoes, in fact, should be high, even at this time, but as sales to America have been small during the past two years, in consequence of the financial panic, comparatively large stocks have accumulated, and the trade has been selling at any price. By this time, however, all the old stock has been disposed of, and it is now difficult to buy goods. Moreover, all the reclaiming works are working up their supplies on hand, and they will later require large amounts of old rubber shoes, which will result in a great advance in prices."

Prices of old rubber shoes may, in fact, be expected to advance very considerably in the near future, since visible supplies are very small and considerable time will have to elapse before the next season for collecting old rubber shoes opens, while the reclaiming works will soon require large supplies.

A CORRESPONDENT.

Moscow, Russia, November 28, 1909.

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for carload lots, per pound—show a slight decline since last month:

Old rubber boots and shoes—domestic.	10½@10¾
Old rubber boots and shoes—foreign...	9¾@ 9¾
Pneumatic bicycle tires.....	7 @ 7½
Automobile tires	7½@ 7¾
Solid rubber wagon and carriage tires..	9¾@ 9½
White trimmed rubber	10 @ 11
Heavy black rubber.....	6½@ 6¾
Air brake hose	5 @ 5¼
Garden hose	2¾@ 3
Fire and large hose	3¼@ 3¾
Matting	1¾@ 2

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weight in Pounds.]

Nov. 26.—By the steamer *Benedict*, from Manáos Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
General Rubber Co.....	448,200	65,300	81,000	3,200=	598,600
New York Commercial Co..	259,600	55,600	103,000	36,700=	454,900
Poel & Arnold.....	187,700	20,200	83,400	3,300=	294,600
A. T. Morse & Co.....	63,000	3,900	80,500	.....	155,900
Hagemeyer & Brunn.....	11,500	300	11,900	.....	23,700
G. Amsinck & Co.....	1,100	.....	1,300	.....	2,400
Edmund Reeks & Co.....	.....	.....	.....	1,500=	1,500
TOTAL	971,100	145,300	362,000	53,200=	1,531,600

DEC. 7.—By the steamer *Dunstan*, from Manáos Pará:

General Rubber Co.....	496,000	94,500	116,600	25,500=	732,600
Poel & Arnold.....	286,100	37,400	134,100	61,500=	519,100

New York Commercial Co..	201,800	52,700	48,400	43,300=	346,200
A. T. Morse & Co.....	112,700	2,600	86,300	.....	201,600
Hagemeyer & Brunn.....	37,500	2,500	13,200	.....	53,200
G. Amsinck & Co.....	14,300	3,900	1,400	19,100=	38,700
Edmund Reeks & Co.....	6,800	1,800	.....	.....	8,600
TOTAL	1,155,200	195,400	400,000	149,400=	1,900,000

DEC. 15.—By the steamer *Cearense*, from Manáos and Pará:

General Rubber Co.....	528,900	91,400	158,400	23,900=	802,600
New York Commercial Co..	251,500	71,800	90,400	27,500=	441,200
Poel & Arnold.....	284,000	26,900	101,200	20,000=	433,000
A. T. Morse & Co.....	29,300	.....	87,800	20,600=	137,700
Hagemeyer & Brunn.....	27,500	1,800	25,700	.....	55,000
C. P. dos Santos.....	22,500	1,100	4,600	.....	28,200
Edmund Reeks & Co.....	8,200	2,500	10,600	.....	21,300
L. Johnson & Co.....	.....	.....	9,900	.....	9,900
TOTAL	1,152,800	195,500	488,600	92,000=	1,928,000

PARA RUBBER VIA EUROPE.

	POUNDS.
Nov. 22.—By the <i>Coronia</i> =Liverpool:	
New York Commer. Co. (Fine)	38,000
General Rubber Co (Fine)....	31,000
Nov. 26.—By the <i>Mauretania</i> =Liverpool:	
General Rubber Co. (Fine)....	50,000
New York Commer. Co (Fine)	9,000
Livesey & Co. (Fine).....	5,500
Nov. 26.—By the <i>Waldersce</i> =Hamburg:	
A. T. Morse & Co. (Fine)....	27,000
New York Comm. Co. (Coarse)	11,000
Nov. 29.—By the <i>Baltic</i> =Liverpool:	
Poel & Arnold (Fine).....	22,500
DEC. 3.—By the <i>Lusitania</i> =Liverpool:	
General Rubber Co (Coarse)...	29,000
Livesey & Co. (Coarse).....	7,000
DEC. 7.—By the <i>Arabic</i> =Liverpool:	
New York Commer. Co. (Fine).....	11,500
DEC. 7.—By the <i>Bulgaria</i> =Hamburg:	
New York Commer. Co. (Fine).....	7,000
DEC. 8.—By the <i>Allianca</i> =Mollendo:	
W. R. Grace & Co (Coarse).....	13,500
DEC. 9.—By the <i>Majestic</i> =London:	
Poel & Arnold (Coarse).....	9,000
DEC. 11.—By the <i>Campania</i> =Liverpool:	
New York Commer. Co. (Fine)	67,000
General Rubber Co (Fine)....	30,000
Livesey & Co (Fine).....	11,500
General Rubber Co. (Coarse)...	11,000
DEC. 13.—By the <i>Celtic</i> =Liverpool:	
New York Commer. Co. (Fine)	22,500
New York Comm. Co. (Caucho)	56,000
DEC. 16.—By the <i>Grant</i> =Hamburg:	
New York Commer. Co. (Fine)	15,000
New York Comm. Co. (Coarse)	5,000
DEC. 20.—By the <i>Cymric</i> =Liverpool:	
New York Commer. Co. (Fine)	150,000
Poel & Arnold (Coarse).....	22,500
Poel & Arnold (Caucho).....	75,000
Livesey & Co. (Caucho).....	22,500
Raw Products Co. (Fine)....	7,000
DEC. 20.—By the <i>Minneapolis</i> =London:	
General Rubber Co. (Coarse).....	11,000
DEC. 21.—By the <i>Napo</i> =Iquitos:	
Edmund Reeks & Co (Caucho)	10,000
C. Ahrenfeldt Sons (Caucho)...	8,000

Nov. 24.—By the <i>El Alba</i> =Galveston:	
Continental-Mexican Rubber Co.....	*55,000
Nov. 26.—By the <i>Togus</i> =Colombia:	
A. M. Capen's Sons	5,500
Gravenhorst & Co.....	3,500
Brandon & Bros.....	2,500
L. Hagenaers & Co.....	2,500
Fruit Despatch Co.....	1,500
Suzarte & Whitney	1,500
Nov. 26.—By the <i>Hugin</i> =Tampico:	
Ed. Maurer	*150,000
New York Commercial Co.....	*80,000
Poel & Arnold.....	*55,000
Nov. 26.—By the <i>El Norte</i> =New Orleans:	
A. T. Morse & Co.....	3,500
Eggers & Heinlein.....	1,000
Nov. 27.—By the <i>Merida</i> =Mexico:	
H. Marquardt & Co.....	6,000
Harburger & Stack	2,500
E. Steiger & Co.....	1,500
American Trading Co.....	1,000
DEC. 2.—By the <i>Proteus</i> =New Orleans:	
A. T. Morse & Co.....	3,000
Manhattan Rubber Co.....	3,000
West Coast Rubber Co.....	1,500
DEC. 1.—By the <i>Baltic</i> =Liverpool:	
Rubber Trading Co.....	22,500
DEC. 3.—By the <i>Matanzas</i> =Tampico:	
Ed. Maurer	*45,000
New York Commercial Co.....	*33,000
Poel & Arnold.....	*29,000
DEC. 3.—By the <i>Panama</i> =Colon:	
Isaac Brandon & Bros.....	13,500
G. Amsinck & Co.....	6,000
J. Sambrada & Co.....	5,500
Mecke & Co.....	5,000
Piza, Nephews & Co.....	5,000
Dumarest Bros. & Co.....	2,500
Andean Trading Co.....	3,000
American Trading Co.....	1,000
Bartluco & De Leon.....	1,000
Meyer & Hecht.....	1,000
DEC. 4.—By the <i>El Monte</i> =Galveston:	
Continental-Mexican Rubber Co.....	*225,000
DEC. 4.—By the <i>Sigmund</i> =Colombia:	
Maitland, Coppell Co.....	4,500
Kunhardt & Co.....	3,500
DEC. 4.—By the <i>Esperanza</i> =Mexico:	
Harburger & Stack.....	4,500
E. Steiger & Co.....	1,500
W. L. Wadleigh.....	1,000
DEC. 4.—By the <i>Yumuri</i> =Tampico:	
Ed. Maurer	*70,000
For Akron, Ohio.....	*80,000
New York Commercial Co.....	*33,000
Rosing Bros. Co.....	4,500
DEC. 6.—By the <i>El Dorado</i> =Galveston:	
Continental-Mexican Rubber Co. *	110,000
E. Boehringer	5,500
DEC. 6.—By the <i>Lapland</i> =Antwerp:	
Poel & Arnold.....	*15,000
DEC. 8.—By the <i>Alliance</i> =Colon:	
G. Amsinck & Co.....	10,000
Mecke & Co.....	3,500
Dumarest Bros. & Co.....	2,000
W. L. Gough Co.....	2,000
A. Rosenthal's Sons.....	1,500
J. Sambrada & Co.....	1,500
Harburger & Stack.....	1,000
DEC. 8.—By the <i>El Valle</i> =Galveston:	
Continental-Mexican Rubber Co.....	*190,000
DEC. 9.—By the <i>Oruba</i> =Colombia:	
L. Hagenaers & Co.....	8,000
Maitland, Coppell Co.....	5,000
Suzarte & Whitney.....	1,000

DEC. 9.—By the <i>Voltaire</i> =Bahia:	
A. Hirsch & Co.....	22,500
J. H. Rosback & Co.....	3,500
DEC. 9.—By the <i>Sibiria</i> =Greystown:	
G. Amsinck & Co.....	2,000
L. Johnson & Co.....	2,000
Isaac Brandon & Bros.....	2,000
DEC. 9.—By the <i>Antilles</i> =New Orleans:	
Manhattan Rubber Co.....	4,000
G. Amsinck & Co.....	2,500
A. N. Rotholz	2,500
Eggers & Heinlein.....	1,500
DEC. 10.—By the <i>Morro Castle</i> =Mexico:	
Harburger & Stack.....	3,000
George A. Alden & Co.....	1,500
E. N. Tibbals & Co.....	1,000
DEC. 14.—By the <i>Prins August</i> =Colon:	
A. Santos & Co.....	6,500
New York Commercial Co.....	5,000
Roldan & Van Sickle.....	1,500
Pablo, Calvet & Co.....	1,000
G. Amsinck & Co.....	1,000
Isaac Brandon & Bros.....	1,000
DEC. 15.—By the <i>Proteus</i> =New Orleans:	
A. T. Morse & Co.....	3,500
DEC. 15.—By the <i>Colon</i> =Colon:	
Isaac Brandon & Bros.....	18,500
Andean Trading Co.....	5,000
New York Commercial Co.....	4,500
Dumarest Bros. & Co.....	3,000
G. Amsinck & Co.....	2,000
Piza, Nephews & Co.....	1,500
Henry Mann & Co.....	1,500
DEC. 16.—By the <i>El Norte</i> =Galveston:	
Continental-Mexican Rubber Co. *	55,000
E. Boehringer.....	*10,000
DEC. 17.—By the <i>Tergipe</i> =Pernambuco:	
A. D. Hitch & Co.....	8,000
DEC. 17.—By the <i>Frederick</i> =Colombia:	
A. Held	2,500
L. Hagenaers Co.....	2,000
Cabello & Blacho.....	1,000
DEC. 17.—By the <i>Grant</i> =Hamburg:	
Rubber Trading Co.....	13,500
DEC. 17.—By the <i>Thespis</i> =Bahia:	
New York Commercial Co.....	22,500
A. Hirsch & Co.....	15,000
A. D. Hitch & Co.....	13,500
DEC. 18.—By the <i>El Siglo</i> =Galveston:	
Continental-Mexican Rubber Co.....	*75,000
DEC. 20.—By the <i>Manzanillo</i> =Tampico:	
Ed. Maurer	*140,000
Poel & Arnold.....	*50,000
New York Commercial Co.....	*33,000
DEC. 20.—By the <i>Zeeland</i> =Antwerp:	
Poel & Arnold.....	*33,000
DEC. 20.—By the <i>Cymric</i> =Liverpool:	
Livesey & Co.....	8,000
DEC. 21.—By the <i>Advance</i> =Colon:	
New York Commercial Co.....	15,500
J. Sambrada & Co.....	4,000
J. H. Rosback & Bros.....	5,000
G. Amsinck & Co.....	4,000
American Trading Co.....	2,000
L. Johnson & Co.....	2,000
L. Hagenaers Co.....	1,500
Thos. N. Morgan.....	1,500
Silva Basenus Co.....	1,500
Wessels, Kulenkampff & Co..	1,500
A. Rosenthal's Sons.....	1,500
A. M. Capen's Sons.....	1,000
Jose Julia & Co.....	1,000
DEC. 23.—By the <i>El Rio</i> =Galveston:	
Continental-Mexican Rubber Co.....	*165,000

OTHER NEW YORK ARRIVALS.

CENTRALS.

[*This sign, in connection with imports of Centrals, denotes Guayule rubber.]

Nov. 22.—By the <i>Corsican</i> =Bahia:	
New York Commercial Co.....	27,000
A. Hirsch & Co.....	6,000
Nov. 22.—By the <i>El Mar</i> =Galveston:	
Continental-Mexican Rubber Co.....	110,000
Nov. 22.—By the <i>Colon</i> =Colon:	
G. Amsinck & Co.....	12,500
Andean Trading Co.....	3,500
J. Sambrada & Co.....	3,000
Isaac Brandon & Bros.....	2,500
Piza, Nephews & Co.....	3,000
Dumarest Bros.....	1,500
Eggers & Heinlein.....	1,500
National Machine Co.....	1,000
Nov. 23.—By the <i>Tennyson</i> =Bahia:	
J. H. Rosback Bros.....	27,000
A. D. Hitch & Co.....	18,000
New York Commercial Co.....	13,500
Poel & Arnold.....	13,000
Nov. 23.—By the <i>Vaderland</i> =Antwerp:	
Poel & Arnold.....	*33,500

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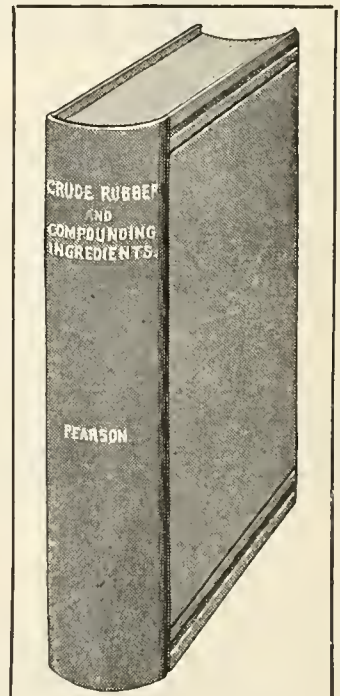
A Text Book of the Rubber Manufacture

By **HENRY C. PEARSON**

Editor of THE INDIA RUBBER WORLD

IN view of the general acquaintance of the trade in all countries with the above work it does not seem necessary to go into details here as to its scope and character. The ten years which have elapsed since its first appearance, however, have called for many additions and some changes, and these have been made with care, with a view to bringing the book up to date.

The India Rubber Publishing Company 395 BROADWAY
NEW YORK



Price \$10.

Prepaid



Vol. 41. JANUARY 1, 1910. No. 4.

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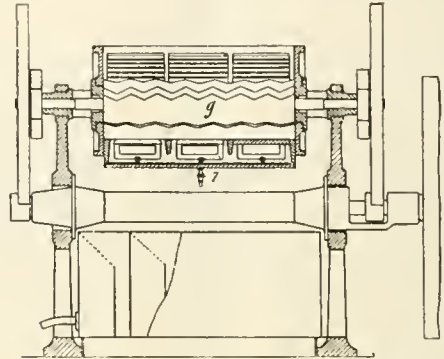
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A NEW TYPE OF WASHING MACHINE.

A MACHINE for washing india-rubber and gutta-percha which is somewhat insufficiently described in the patent specification, is shown in the accompanying illustration. It consists

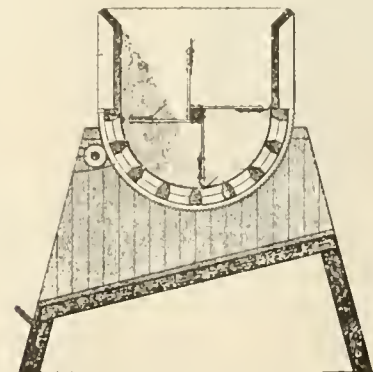


NEW TYPE OF WASHING MACHINE.

of a pair of rolls with a concave bottom section beneath each roll, the whole in an enclosing tank. In other words, it is apparently a washer built very much like a two-roll masticator. It is patented in the United States (Nos. 935,849-936,635) by Fritz Kempton, of Stuttgart, Germany.

THEFTS FROM A RUBBER FACTORY.

THE discovery has been made that the Continental Caoutchouc und Guttapercha Compagnie (Hanover) have been the victims of extensive robberies and defalcations. The thieves, who have been at work for a considerable time past, have stolen considerable amounts of rubber goods of every description, although they appear to have given the preference to bicycle supplies and pneumatic tires for motorcycles. They disposed of their booty by selling it to bicycle dealers. The band of robbers was composed of workmen in the company's night shift. The fact that several of the thieves spent a great deal more money than their earnings warranted led to the discovery of the thefts. The men were watched, and it was found that their knowledge of the works was exceedingly useful to them. They removed the stolen goods from the works through a secret passage, unseen by the door-keeper, who would otherwise have barred their way. Six persons, all of whom have been arrested, were concerned in the thefts. A book kept by one of the members of the gang shows that the thieves were doing a flourishing business. The goods taken and disposed of were regularly entered in the book, which is consequently a rather important item of evidence in the hands of the police. A large lot of the stolen goods which had not as yet been sold was recovered by the detective bureau.—*Gummi-Zeitung.*



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Vol. XLI. No. 5.

FEBRUARY 1, 1910.

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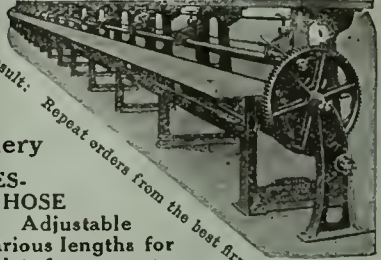
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THE COUNTRY OF TO DAY.

THIS term doubtless is applicable to the United States as to no other country. There are countries, like South Africa and the Amazon valley, which may reach a state of development in a relatively near future, of which present conditions suggest only possibilities. There are countries—it is needless to name them here—in which exists a fixed order of things which brooks no change in a generation, if in a century. Still other countries, based upon solid foundation, financially and politically, are prevented by a matured conservatism from doing anything today radically different from what was done yesterday, and yet which keep pace with the universal progress of the human race in making this planet serve its needs and its pleasures.

The United States, however, seem to exist in a class of their own. Founded by strong, brave men from every civilized nation, the American nation has inherited the principles of conservatism without being wedded to particular forms in government or business. On the other hand, being the newest of great nations, and confronted from the beginning by unique problems, the United States and its people have not yet lost the habit of doing day by day what seems for their present good, without a too rigid regard for precedent.

These lines, penned in an office on Broadway by an American citizen, appear here in no spirit of boastfulness. They represent rather a careful attempt to portray certain characteristics which are making this the world's first industrial nation. The weakling nation of the days of General Washington, who never heard of Japan and knew Russia only as a name, has grown to a stature which entitles it to be considered in world politics, with responsibilities involved which cannot be ignored by the statesmen at Washington city. This growth has been promoted to a very great extent by the industrial American, which fact is to-day recognized in every branch of the government.

THE INDIA RUBBER WORLD regrets lack of space in which to reproduce the recent communications to the Congress by the President, which indicate his recognition that business lies at the foundation of the national structure—that, apart from their individual business, the citizens of the United States, are each and every one shareholders in one vast corporation, and their chosen officers are comparable to a board of directors charged with promoting the general prosperity.

In calling this "the country of today" we mean that it is the country of present opportunity, illustrated in no sense more fully than in the development here of the india-rubber industry. Leaving everything else aside, the growth of the rubber factories proves our contention. A few years ago a few lines in these pages chronicled the formation of a \$50,000 rubber manufacturing company—a small affair indeed. Today it is capitalized at \$10,000,000, on which amount it pays substantial dividends. The record in THE INDIA RUBBER WORLD of a member of the trade recently deceased was confined largely to two definite mentions. The first related to his becoming a traveling salesman for a factory capitalized at \$30,000—say at a salary of \$3,000 a year. The second reported his death, when his standing in the trade was such as to command a yearly salary of \$85,000 for only one of the positions which he held, and his opportunities had been such as to enable him to leave a fortune expressed in millions.

The growth of the rubber industry in the United States alone guarantees the future of rubber culture in whatever part of the world it is pursued under proper conditions. It assures the continued profits of rubber production on the Amazon, which long will be a necessity, even in the face of the success of plantations of rubber elsewhere. The stability of crude rubber prices and of the prices of rubber goods in being brought about by such American corporations as one which recently was able to borrow \$20,000,000 for its operations, through the sale of "notes" to the best financial institutions in New York.

The beneficial effects of such conditions will be felt ultimately by the smallest rubber factory in America, and by the large and small concerns in every other country in which rubber goods are made. What is more, doing things in the industrial line on a large scale in the United

States is now so regulated and so understood that it no longer alarms the public mind as threatening "restraint of trade"—a term which for a time suggested the evil to which the term "monopoly" used to be applied in English law.

THE START OF RUBBER PLANTING.

THE appearance on another page of this issue of the first of a series of articles on rubber culture in Mexico, by a scientific gentleman of repute, recalls the priority of that republic in the matter of planting rubber as a commercial proposition. There is little merit in the contention as to who first suggested rubber plantations. As early as 1850 London had its Caoutchouc Joint Stock Co., for operating in India, due probably to something written by Forbes, the botanist, but we believe that it never progressed beyond the formality of incorporation.

Mr. Clements R. Markham has told THE INDIA RUBBER WORLD that as early as 1870—when connected with the government of India—he reached the conclusion that the culture of rubber should be undertaken. But by that time he had introduced the *cinchona* plant from the new to the old world, and had become experienced in such matters. Collins's "Report on Caoutchouc" came out in 1872, as a government document; Wickham arrived at Kew in June, 1876, with seeds of *Hevea* from Brazil; and a few months later (as Dr. Willis told in the last INDIA RUBBER WORLD) 70 plants of this species were established successfully in Ceylon, by scientists, in publicly maintained gardens. This was the beginning of rubber planting in the Far East.

But in 1872, the late Señor Don Matias Romero, before and later Mexico's diplomatic representative at Washington—without other scientific education than falls to the lot of the Mexican gentleman, and with no knowledge that any book on rubber existed in any language—while enjoying a respite from public life, was "very much struck with the great future of the india-rubber culture, and became satisfied that it was the most lucrative branch of agriculture that could then possibly be undertaken."

With Romero to think was to act, and within a year he had chosen a location, bought land, and *planted one hundred thousand rubber trees*. A private citizen now, on his own initiative, spending his own capital—and especially with no idea that any similar undertaking was in prospect elsewhere—this progressive Mexican based his plantation upon a careful study of the inevitable decline of forest rubber supplies. The details of that study he contributed to the public through the medium of the bulletin of the Mexican agricultural society, in a paper dated December 12, 1872.

The Romero plantation, due to the recall to public life of its proprietor, and lacking his attention, was not a distinct success, but a rereading of his essay—then purely speculative—shows that if still alive he would have little to learn from the practical experience of his successors

in planting rubber of the species with which he had to deal, and in the region which was his home.

It happens that the scene of Romero's activity in rubber—and he knew his Mexico well—was in the same department of Soconusco, in the state of Chiapas, to which our present contributor has devoted his interesting description. And it may be added that whatever good results may be attained by Romero's latter day successors in rubber planting will be due in no small degree to his studies and to his constant and unselfish encouragement of this new interest until the day of his death.

THE STORY OF THE FIGURES.

THE growth of the india-rubber industry, to a greater extent than almost any other, can be gauged by means of statistics which are dependable. For instance, it is plain that if more rubber is imported into the United States in one year than in another, it means a larger consumption and an increased sale of goods. A raw material costing the manufacturer \$4,000 a ton or more is not likely to lie in the stock room long without being used, nor is the importer likely to store such material in warehouses much in excess of the current demand for the material. Such figures as we print, therefore, relative to the yearly importations of rubber, whether into the United States or other countries, are a guide to the growth of consumption of this material—more nearly accurate perhaps than is true of any other commodity in industrial use.

Among the many statistical details regarding rubber in the present issue of THE INDIA RUBBER WORLD not the least interesting is the fact that during December the New York customs authorities took account of more rubber than in any other month in the history of the service—*i. e.*, 10,274,128 pounds. What is notable in respect of these figures is that imports at New York are almost exclusively for consumption in the United States (and Canada), only a very small percentage of such imports finding their way across the Atlantic, and then only in exceptional circumstances. These figures do not embrace balata, gutta-percha, Pontianak, and other gums not officially recognized here as "india-rubber." Nor do they include waste rubber. This distinction is pointed out here for the reason that in some other countries everything that in any sense relates to rubber is grouped under one heading, which explains why Russia figures so largely as a source of the rubber imported into Great Britain.

The New York customs statistics for December also shows that the import value of rubber entered during the month of all grades—Pará, African, guayule, Borneo, and the like—averaged a fraction over \$1.10 per pound. This does not cover the cost of transportation, the loss from shrinkage, or the importer's profit. These figures are commended to the attention of those students of economics who are trying to figure out why the cost of living is higher than in those good old times when the

price of the best rubber at Pará was 10 pence a pound. And the tariff has nothing to do with crude rubber.

Another item of statistics of interest relates to the output of plantation rubber. The exports from Ceylon and the Malaysian ports have increased from 397,347 pounds in 1905 to 8,165,082 pounds as shown by our latest advices for 1909, which do not include the total shipments for the month of December. We may safely estimate the plantation rubber from British Asia at 8,700,000 pounds for 1909 or nearly 380 tons per month. This may be referred to as the most interesting fact in the development of modern rubber interests, particularly as it points to an even larger production when the newer plantations "come into bearing." It must be noted also that much other plantation rubber is being marketed—from Africa, the Dutch East Indies, Mexico, and so on—the statistics of which are as yet less thoroughly organized.

The appearance on the market of this new class of rubber has not tended to lower price levels, which is evidence that the demand for rubber goods is constantly on the increase. At the same time, it is to be considered that, with the exception of the Amazon region, no natural source of rubber is maintaining its output. The Congo region produced 20 per cent. less rubber last year than in the year of the largest production, and various other colonies in Africa and elsewhere can be pointed to as yielding less rubber, so that the new plantation product is not a net addition to the world's supply.

THE NAMING OF THE RUBBERS.

THAT this a world of change is nowhere better illustrated than in the india-rubber interest. When this journal was founded not even the best informed members of the trade knew, except in a casual way, where the raw material used in their factories came from. It is safe to assert that not ten rubber goods manufacturers in the world knew one botanical name in connection with rubber. The rest of the business world knew less.

To-day, when every man, woman, and child buys rubber goods, there is none who has not an opportunity to know, through newspaper advertisements and otherwise, the difference between "Pará" and other qualities of rubber, and in North America, at least, the fullest advantage is taken of this knowledge. Who, that buys or uses automobiles, for example, does not know the source of the best rubber available for tires? And in other countries what investor in advertised securities, or what reader of financial market reports, does not know the merits of *Hevea* as compared with other species of rubber yielding plants?

The introduction to the market just now of a new grade of rubber connects it with a botanical name which was applied to the tree producing it long before that tree was known to contain rubber. And this points to the suggestion that ultimately all the commercial grades of

rubber may be known by designations conferred by our friends the botanists.

For example, "Pará rubber" no longer comes from Pará alone, or even from the Amazon valley alone; it comes also from Colombo and Singapore and Penang and Port Swettenham. It arrives already from the Dutch East Indies and no doubt will be derived later from Mexico and the Congo. "Pará," therefore, ceases to serve as the natural or the best designation of rubber of this type. What is more reasonable or proper than the name "Hevea" rubber for the product of the genus *Hevea*, as these trees are listed by the botanists?

Similarly there may be mentioned "Castilloa" rubber, which appears in the market to an important extent, "Manihot" rubber, also to an important extent, and so on. The world is using to-day large quantities of "Landolphia," "Funtumia" and "Ficus" rubbers. It is true that a recent important rubber product of Mexico has become known commercially as "Guayule"—a local common name—but this may be taken as an exception. Why not, then, introduce a new important rubber as the "Dyera," a name based upon a botanical designation of long recognized standing?

THE GOOD THAT RUBBER SHOES DO.

THE overshoe is doing an enormous amount of good, especially among children, in protecting the body against the chilling that results in colds, sore throats, chronic catarrhs and the like.

It is not the mere getting the feet wet that is harmful, it is the prolonged evaporation of water from shoes and stockings that does the mischief. The evaporation reduces the temperature about the soles of the feet many degrees below the temperature of the surrounding air, just as a wet bulb thermometer registers lower than a dry one.

In fact, the warmer and drier the air by which the body is surrounded the more rapid the evaporation and the lower the temperature. Also, the thicker the soles of the shoes the more water is taken up and the longer the evaporation goes on, so that thick soles do not take the place of a covering of gum which keeps the water away completely.

This evaporation and consequent continued lower temperature goes on, especially in the house, when the rest of the body is in comparative comfort and the nervous system relaxed. Wet shoes indoors are worse than wet shoes out of doors. Some people can stand this prolonged unbalancing of environment, but it takes a pretty vigorous make-up to do so.

It might be added that the wearing of overshoes that cover a large portion of the foot when one is indoors is not a good thing.—*Dietic and Hygienic Gazette.*

THE high prices of crude rubber have not been without their disadvantage to some interests in Ceylon. Dealers in tires in Colombo have received cable advices from Europe to advance the price of their goods 25 per cent. on account of the increased cost of raw material.

It is stated by Mr. A. F. Firestone, of the Firestone Tire and Rubber Co., (Akron, Ohio), that since May 8, 1847—the date of the American patent for Thomson's "aerial wheel"—there have been issued in the United States alone 1,641 patents in the pneumatic tire field.

The New "Dyera" Rubber.

A COMPANY formed some time ago on a large scale for the production of rubber of a new grade, after extensive experimentation and the development of plant, have begun commercial operations, the first shipments of the rubber to Europe and New York having arrived at their destination during the past month. The rubber with which the new company is concerned is that which has been known to the trade for some years past as "Pontianak"—the name of the town in Borneo whence the supplies have been derived mainly—and also as "Gutta-Jelutong," which the United States government has adopted, for its classification in the customs service, from the various spellings of one of the native names in Borneo.

The consumption of this rubber has been very large, the imports into the United States alone during five years past having averaged 23,312,457 pounds. The form in which this material has reached the market has commanded a very low price, the highest quotation during the past year at New York not having exceeded 6½ cents per pound. The fact of its continued and growing use, however, has shown the rubber content to be of real value and of wide application in the industry, and many experiments have been made in the direction of improving the rubber before putting it to use in the factory, by deresinization, or otherwise. The new company is the result of some experiments, and the high grade of rubber attained has led to the inauguration of work on an extensive scale.

The location of the initial plant of this company is near the mouth of Sarawak river, in the British protectorate of the same name, in the western part of Borneo, and considerably north of Pontianak. The company are closing some large concessions for collecting gum from the tree known botanically as *Dyera costulata*, in the region of which their location is the center.

Under the system they have adopted it is planned to have the natives continue to tap the trees and to sell the coagulated product, as before, to the Chinese dealers, who will deliver it to the company. The object of the company in gaining the concessions is to conserve the trees, which, as tapped in the past, without intelligent supervision, have been killed over large areas. The government, under the terms of the concession referred to, has undertaken to enforce regulations for the protection of the trees.

It is the belief of the management of the new company that the quality of *Dyera* gum (or Pontianak), as known hitherto, has been largely deteriorated by the method of coagulation, and their first work was to introduce a better coagulant, of which they have a monopoly. The latex once being coagulated in the districts of its origin is transferred to their factory to be deresinated and otherwise treated, with the result that it becomes serviceable in the industry in competition with the higher grades of rubber. THE INDIA RUBBER WORLD has seen a letter from an official of one of the largest rubber manufacturing companies, reporting samples of the new rubber which he examined to be very dry and clean. He wrote: "If the rubber is of the high tensile group, its washed and dried value would be somewhere between that of Cameté and Pará."

The organization of this company so far has been in American hands. The extent of the enterprise is indicated by the fact that the company chartered a ship to carry the steel structural material for the plant and the machinery installed in it direct from New York to the property. There were in the neighborhood of 1,000 tons of machinery in this shipment. A considerable village has sprung up around their plant, in a location which until recently was jungle land.

The company is the Malaysian Rubber Co., incorporated June

18, 1909, under the laws of New Jersey, with \$3,000,000 capital authorized. The president is Mr. John L. Elliot, of No. 71 Broadway, New York, which is the present head office. The board of directors includes Messrs. Cornelius Vanderbilt and Robert Goelet, also of New York. The name of the new town established by the company in Borneo is "Goebilt," derived from the names of these two directors.

It is proposed by the company to offer the new grade of



GUTTA-JELUTONG TREE.

[Botanic Gardens, Singapore.]

rubber under a name which shall distinguish it from the Pontianak or Jelutong now in the market. While such name has not yet been adopted definitely, it has been suggested that "Dyera" may prove suitable, being that of the tree yielding the rubber. For a time, and until the use of the new coagulant becomes more general, the company will offer different grades, with the idea ultimately of establishing a single standard in rubber of this class.

A NEW CURSE OF LABOR.

THE recent gift of Mr. John D. Rockefeller of \$1,000,000 for the study of ankylostomiasis (the "hookworm" disease), its causes, and means for combating it in the southern United States, is likely to prove of interest over a very much larger part of the world. Under the heading "The Curse of Our Labor Force," *The Times of Ceylon*, in a leading editorial, deals with the danger which confronts the rubber planting regions of Ceylon and the Federated Malay States, through the introduction of this disease by laborers imported from India. It is pointed out that this is not only a fatal disease itself, but that before it attracts attention sufferers from it are particularly liable to fall victims to other and swifter forms of sickness, such as malaria, dysentery, and pneumonia, for which it paves the way. The medical department of Natal (South Africa) has made the use of improved sanitary regulations and appliances compulsory on estates in that colony employing Indian coolies.

“Castilloa” Rubber in Chiapas (Mexico)—I.

By J. L. Hermessen, A. M. I. E. E.

CHIAPAS is the last Mexican state on the Pacific coast before the Central American border is reached. Entering Chiapas from the southwest by the Pan American railway, which connects with the Tehuantepec National railway at Gambo (or San Geronimo), the country traversed is at first flat and uninteresting, the sameness of the vista being varied only by oasis like groups of a fan leaved palm or patches of corn and sugar cane; nearing Tonalá, it improves considerably with the frequent appearance of ranches and llanos stocked with fat cattle, although still dominated by the stunted arboreal forms and scrubby, ligneous undergrowth peculiar to very hot, dry climates; but some 40 or 50 kilometers beyond, towards Mapastepec, a complete change supervenes, the vegetation assuming a strictly tropical aspect, with stretches of dense jungle alternating with lofty forest, along the edges of which wild *Castilloa* rubber trees are conspicuously numerous. Thence, past Tapachula, on to the Guatemalan frontier—save for the occurrence, on the low lying coastal plains, of brackish lagoons and alligator haunted mangrove swamps—the region preserves the same general character, but with much diminished forest areas.

It is a matter of history that the first planting of *Castilloa* rubber in Mexico* was done in the state of Chiapas, near the Suchiate river, which for some distance from its mouth constitutes the natural boundary between Mexico and Guatemala. Chiapas holds also the position of supremacy in rubber planting, having a greater acreage under cultivation than the aggregate of all other rubber sections in the republic. There are two principal planting districts in the state, located in the departments of Soconusco and Palenque; while there are others of less extent in the departments of Tonalá and Pichucalco. These planting districts are indicated by the shaded portions in the accompanying map.

DEPARTMENT OF SOCONUSCO.

Some investigators have professed to recognize in the *Castilloa* of Soconusco a species differing from that commonly known in Mexico—namely, *C. lactiflora*, which, it is claimed, is superior to *C. elastica* as a latex producer. There is absence, however, of definite proof.

In Soconusco is situated the well-known plantation of “La Zacualpa,” which, with its allied properties, forms the largest cultivated rubber estate in the world. Other smaller plantations are those of “Doña Maria,” of the Tapachula Rubber Co.,

of San Francisco, California; “La Amistad,” of Mr. V. Smith; “El Dorado,” belonging to The Land Co. of Chiapas (Mexico), Limited, of London; and a number of still smaller properties owned by Mexicans. The several corporations representing the La Zacualpa estates, all having their headquarters in San Francisco, are the following: La Zacualpa Rubber Plantation Co., organized in 1899, owning “La Zacualpa”; Hidalgo Plantation and Commercial Co., organized in 1904, owning “Juilapa”; La Zacualpa Plantation Co., organized in 1905, owning “La Zacualpa II”; Soconusco Development Co., and recently organized, owning “Los Tocayos.”

Mr. O. H. Harrison, who for many years has been identified with agricultural and commercial undertakings in Soconusco, is president of La Zacualpa Plantation Co., vice-president of La Zacualpa Rubber Plantation Co., and a director in the two other companies. Mr. C. A. Lesher, as general manager, has been responsible for the scheme of development and all administrative detail relating to these properties since 1902, having been ably aided during the last five years by Mr. W. S. Fisher, as superintendent at “La Zacualpa.” Mr. Lesher, in his present capacity of assistant to the president, resides in Tapachula, where



MAP OF THE STATE OF CHIAPAS, MEXICO.

*This statement is supported by the statements of the late Matias Romero, in his book, “Coffee and India-Rubber Culture in Mexico” (New York: 1898), and by various statements which have appeared in THE INDIA RUBBER WORLD in connection with the same, including an article by Charles G. Cano, C.E., in the issue of this journal for August 1, 1901—page 319.—THE EDITOR.

he has charge of all the interests referred to, including the coffee estates of the Hidalgo Plantation and Commercial Co.

The area planted on "La Zacualpa" is somewhat over 10,000 acres; on "La Zacualpa II," 4,800 acres, and on "Juilapa," 3,500 acres—making a total area under rubber of 18,300 acres. On "Los Tocayos" preliminary work is as yet only being done; 5,000 acres are to be planted to rubber, and it is intended to make a start on the same early this year.

The oldest planting of the company on "La Zacualpa," consisting of a few thousand trees, was made in shade, which, at the time, was generally supposed to be the natural requirement of *Castilloa*. This shade is now being gradually removed. There are also several thousand trees 20 years old, which were set out by the original owner of the land, Señor José María Pelaez. These latter form a fine forest of umbrageous growth, with a perfectly clean "floor," over which are scattered countless volunteer seedlings. As much as 2 pounds 11 ounces of dry rubber have been taken from a single one of these trees at one tapping, the average yield of one tapping being about 1 pound.

The entire plantation is laid out in rectangular blocks, 350 meters on each side (or $39\frac{1}{4}$ acres in area), destined ultimately to contain 300 trees to the acre, in accordance with the company's share obligations. The dividing avenues are 7 meters in width, and afford easy access to every part of the estate. The ground is not specially staked for planting, as is customary on the isthmus of Tehuantepec, but, as soon as practicable after the burning, small hills are made, 6 feet apart, for the reception of the seed, small lines being spaced at 12 feet. These hills are prepared a week or two before the planting is commenced, to allow the process of soil assimilation to take place. The making of these hills is rendered necessary by the presence, all over the district, of a layer of volcanic ash (from the eruption of Santa María in Guatemala in the year 1902), from two to four inches deep, which, assuming, when wet, a semi-impermeable consistency, would hinder, or even entirely prevent, germination of the seed, if left undisturbed. Some record plantings have been made at "La Zacualpa," as much as 3,600 acres having been cleared and planted in one season.

The question of seed selection has been carefully studied, and the result of observations made goes to show that the seed from trees between three and four years old produce the best—that is to say, the quickest—growth; and, since rapid development of tree

trunk implies increased thickness of bark, so this, in turn, tends to augment to a corresponding degree the formation of lactiferous cells—which is the ultimate desideratum.

With so vast an area planted as at "La Zacualpa," there are many thousands of trees always ready for tapping, so that this operation continues all the year round, except during a few weeks in the height of the dry season, when the latex does not run freely. The rubber is collected at night, the cooler temperature aiding its flow. The men go out at 2 A. M., and generally get through their task by sunrise. An expert tapper will get 5 gallons of latex, or about 8 pounds of dry rubber. The older trees are being tapped three times a year, although regard is had more to size than age in the selection of trees to be tapped. The yield per tree per tapping for the year 1908, averaged 2.5 ounces—this figure including trees ranging in age from four to eight years.

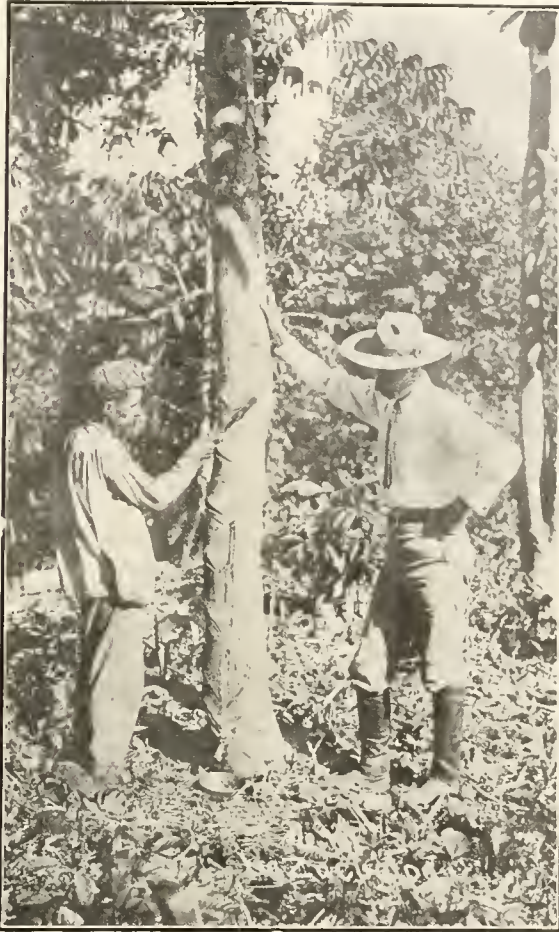
The tapping tool used was designed at "La Zacualpa," embodying a simple device for regulating the depth of the incision and an additional blade for cutting the *cambium*. Experiments were made with numerous forms of tapping tools employed in Ceylon and Malaya for *Hevea* trees, but none was found suitable for *Castilloa*. The greatest possible care is exercised in keeping the knives sharp, so that the cuts made may be clean and free from any tearing effect. The edge is given to the blade on an oilstone, and no files are permitted to be used. A light telescopic ladder is used for tapping the trees at heights beyond a man's reach when standing on the ground.

"La Zacualpa" has a very complete installation for handling its rubber, comprising the following plant: 20 H.P. boiler and engine, driving saw and planer in lumber mill and line shafting; 24 wood and 16 cement coagulating tanks, and two cement waste tanks; 3-roller crêping machine; hydraulic press, making four 25-pound blocks of rubber at one time, and capable of exerting a pressure of 2 tons per square inch and a total maximum pressure of 128 tons; two wooden presses, each of a capacity of 300 pounds of rubber, and one of a capacity of 100 pounds; centrifugal machine, running at 6,000 revolutions per minute, driven by a 3 H.P. gasoline engine, capable of turning out 4,000 pounds of rubber per hour; complete water supply system, and hydraulic ram for raising water to two large cylindrical storage towers. The mill building also includes a drying room holding 40,000 pounds of rubber.

The latex, which is brought in from the field in big specially made zinc cans, is first passed through a double sieve of different sized meshes, to free it from mechanical impurities and all foreign substances; then mixed with clean water in the proportion of 1 to 3. After being allowed to stand for four hours, this water, containing the mother liquor from the latex, is run off into a waste tank, for subsequent treatment in the centrifugal, and fresh water let in. The next day the latex is washed again, and the juice of the "jamole" vine (*Ipomœa bona nox*) added, undergoing a final washing when coagulation occurs. The mass is then removed from the tanks and cut up into pieces of suitable size for running through the crêping machine; rinsed in clean water and sent to the drying room. All of the rubber is prepared in crêpe form and pressed into blocks of 100 pounds each for shipment, the packing boxes being made on the plate of native lumber.



RUBBER MILL AT "LA ZACUALPA" PLANTATION.



ON "LA ZACUALPA" PLANTATION.
[Tapping a six year old rubber tree.]

It is worthy of mention that the rubber turned out by the centrifugal process from the waste water of the washed latex has proved the best in quality, a recent consignment realizing in London 5s. 6d. [= \$1.33.8 gold] per pound—the highest price thus far obtained for *Castilloa* rubber. As stated in a note in the October, 1909, number of THE INDIA RUBBER WORLD (page 9), this rubber closely resembles fine Pará in appearance, is very clean and very tough, perfectly homogeneous in texture and exhibits, when cut through, sectional gradations of color, such as are produced in Pará rubber by the smoking process. It is anticipated that this mechanical method of preparation will eventually supersede the ordinary coagulating system, and the plant is being extended accordingly.

The average annual rainfall at "La Zacualpa" is between 80 and 90 inches. At "Juilapa," which is located on rolling ground approaching the foothills of the Sierra Madre, attaining an elevation of 300 feet above sea level, the precipitation is about 30 per cent. greater; in the center of the neighboring coffee lands, at altitudes between 2,000 and 4,000 feet above sea level, it reaches 165 inches; while in Tapachula it amounts to 120 inches. The dry season lasts for five months or more. That the rubber on "La Zacualpa" does not visibly suffer from lack of rain during this protracted period may be ascribed to the depth and richness of the soil of the alluvial bottom lands on which the plantation is situated, combined with the moisture retaining property of the volcanic ash incorporated with it.

Portions of the estate were originally so swampy as to be wholly unsuitable for cultural purposes, while freshets often inundated and damaged low-lying plantings. These water-logged areas have now been reclaimed and further danger from floods

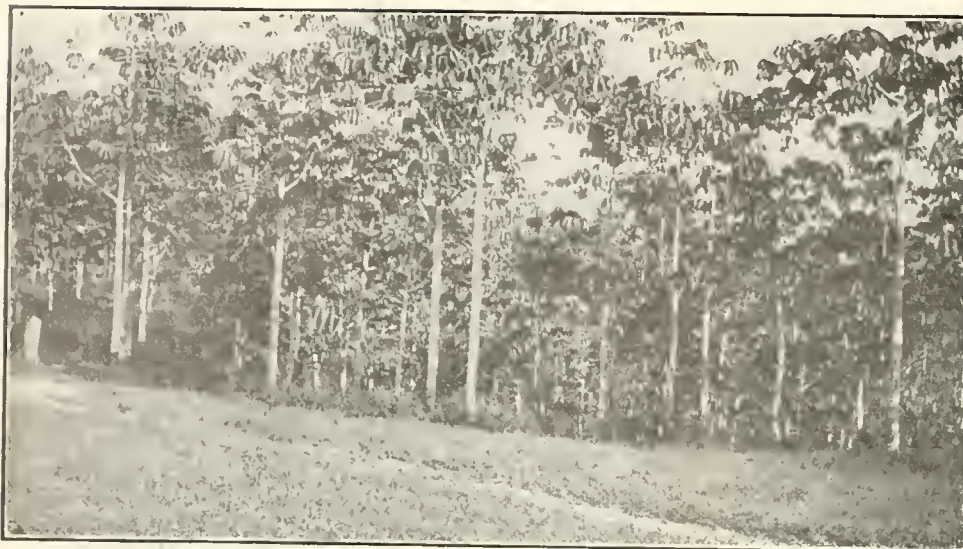


ON "LUMIJA" PLANTATION.
[Four year old rubber trees.]

averted by the construction of an extensive drainage system, totalling over 100 miles in length. The efficiency of the scheme was forcibly demonstrated upon the occasion of the writer's visit to "La Zacualpa" in August, 1909, when there occurred a succession of extraordinarily heavy rains, which washed out a number of bridges and much track of the Pan American railway, but left no water standing upon any part of the plantation. These drains have lately been connected with the main water supply canal, with the object of irrigating the whole of the plantings by means of the same during the dry season. Such treatment, it is believed, cannot but result in materially improving the health, and thereby increasing the productiveness of the rubber trees.

With regard to labor, it is said that "La Zacualpa" has never suffered any serious difficulty on this score. The rate of wages is practically the same as prevails in other planting districts of the country. That the force is a contented one is best evidenced by the fact that pay day comes only once a month, a system which appears to give general satisfaction. A large assortment of goods adapted to local needs is carried by the store, upon which every man may draw within the limit of his credit on the company's books. No intoxicating liquor is sold, and its importation is prohibited.

A considerable amount of money has been expended by the company upon the erection of roomy and substantial buildings for the accommodation of the men and their families, while ample washing and sanitary arrangements have been provided. The general health on the estate is very good, so that there is no need for a resident medical man; but a complete supply of drugs is kept on hand, and cases of malaria and other common tropical



"PHILADELPHIA" PLANTATION—EIGHT YEAR OLD RUBBER.

ailments are attended to by a native expert. The administration staff occupies a handsome and comfortable two-storied bungalow, situated at some distance from the labor quarters and surrounded by a well-kept garden.

The estate is connected with the town of Escuintla by a private telephone line, over which telegrams are transmitted direct from the local federal telegraph office. Wires also run to several outlying camps on the plantation and to the railway station, which latter is reached by a wide, level, and well-drained carriage road.

Rubber has been shipped from "La Zacualpa" since 1901, the first lots having been obtained from the old trees planted by Señor Pelaez and from wild trees on the property. The output from the cultivated trees has steadily increased year by year. Thus, in 1907, 40,000 pounds were shipped; in 1908, 60,000 pounds; while the 1909 crop was expected to reach 80,000 pounds.

The estate of "Doña Maria," situated 12 kilometers from Escuintla, has about 1,700 acres planted to rubber, the age of the oldest being eight years. The first planting was made, as at "La Zacualpa," in shade. Under the management of Mr. F. A. Quinby, the property has been successfully brought to a producing stage, some 5 tons of rubber, of excellent quality, having been shipped in 1908. The output for 1909 probably was 10 tons.

The adjoining plantation of "La Amistad," of Mr. V. Smith, has about 150 acres under rubber, a good proportion of which is also of tappable age.

The "El Dorado" plantation is located some 40 kilometers to the southeast of Tapachula, close to the Guatemalan border, and was opened up only two years ago. At the present time there are under cultivation 500 acres, to contain eventually, after allowing for successive thinnings, 300 trees per acre. The extremely fertile alluvial soil of the district, combined with an ample rainfall, has produced trees of very fine growth. Much havoc

was wrought during the first year by "tusas," or gophers (*Geomys bursarius*), notwithstanding the perpetual warfare waged against this destructive rodent by means of traps and poison; but with a liberal surplus of plants to draw upon at each stake, losses thus incurred were promptly made good, so that the stand maintained is considerably in excess of that called for.

The layout and methods of cultivation adopted on this property are generally similar to those in vogue at "La Zacualpa." Under the terms of the development contract, the plantation is to be turned over to the owners in 1912 as a going concern. The enterprise is somewhat in the nature of an experiment on the part of the Land company of Chiapas, and the extension of operations in this direction will be dependent upon the results of the present venture.

DEPARTMENT OF TONALA.

In the department of Tonalá, near Mapastepec, three plantations are undergoing development: "El Roblito," of the Roblito Rubber Plantation Co., of Oakland, California, with 5,500 acres of land and 325 acres planted; "El Rosario," owned by the St. Paul Tropical Development Co., of St. Paul, Minnesota, with 7,500 acres of land and 600 acres planted; and "La Aurora," of the Chiapas Land and Stock Co., of Los Angeles, California, with 5,000 acres of land and some 200 or 300 acres planted. All of these plantings were made in 1908 and are in good condition.

On "El Roblito" the stakes were set at 5 feet apart, leaving 10 feet between the lines, the permanent stand to be 10 x 10 feet, making approximately 445 trees to the acre. On "El Rosario" the distance adopted was 7 by 14 feet.

[TO BE CONTINUED.]



"CHIVAL" ESTATE, ORIZABA RUBBER PLANTATION CO.
[Four year old *Castilloa* rubber, at El Salto.]

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

IN some quarters more importance is attached to physical tests of rubber than to chemical analysis, and this both because the physical tests are considered more reliable and at the same time cost much less. It may be of interest in this connection to give the cable specification issued by the London consulting engineers for the Indian State Railways:

CABLE TESTS.

(1) The cable to be of the best quality on drums of specified sizes.

(2) Samples of the vulcanized rubber taken from the cable will be stretched to four times their original length, a 12 inch length being taken between clamps, the temperature being 60 degs. Fahr. When released they are to return to within 25 per cent. of their original length.

(3) Fresh samples are to be submitted, one to a moist heat of 320 degs. Fahr. for four hours, and another to a dry heat of 270 degs. Fahr. for two hours. These samples are to be stretched to 3½ times their original length (12 inches between clamps) for 24 hours at 60 degs. Fahr., and are to return within 25 per cent. of their original length in six hours.

(4) Each length to be tested in water by 1,000 volts, attenuating for 30 minutes.

With regard to these tests it will be noted that while the old Admiralty moist and dry heat tests are retained, they are supplemented by a stretching test which certainly tends to give them some value. In the old Admiralty test the rubber was merely examined after the heating and there was plenty of room for different operators to form different opinions with regard to the result of the tests.

Presumably the stretching tests are intended to indicate whether the best rubber has really been used. How far they do this is a matter in which I do not propose here to enlarge. I think, however, that where the absence of even a few per cent. of certain well known foreign bodies is really desired I should prefer to employ chemical analysis in order to definitely clear up the point.

THE fact that Messrs. R. & J. Dick, Limited, of Glasgow, are building a balata belting works at Passaic, New Jersey, was chronicled in the December issue of THE INDIA RUBBER WORLD. I may add that Mr. Parker Smith's statement at the annual meeting of the company to the effect that the new American tariff of 35 per cent. necessitated this has been challenged in letters to the press. It has been pointed out that as there are no American manufacturers of this belting there is no internal competition to meet. It is further stated that the present unsatisfactory sales of the company's belting in America are due to close European competition, there being now several large manufacturers in Europe, more especially in England. Of course the new move will tend to put the Glasgow firm in a much better position to meet British competition in America, now that the latter will have freight and duty on imports. It will be seen, then, that the case is not exactly one to expound on Protectionist platforms at present. If American firms had risen up in competition with Messrs. Dick it would, of course, have been different. At the moment (I am writing before the General election) Unionist politicians in general are hastily getting up facts and statistics about industries of which they know nothing, in order to preach the doctrine of protection on the platform, and it is not altogether surprising that they sometimes come badly to grief when questioning time arrives. But to keep more particularly to my subject, I rather imagine the fact that all balata belting is not made from pure balata has a good deal to do with the competition which exists. Firms which continue to make and sell only the very best quality must necessarily find it hard to compete with others who sell a second quality either honestly de-

scribed as such or which is sold merely as balata belting. The properties and uses of the belting have recently been well described by "An Importer" in THE INDIA RUBBER WORLD, and there is no need for me to say more on these points. With regard to the editorial reference to its use in mines for conveying purposes, I have not seen it thus used in England but for elevator belts, which are continuously passed through water. It has become very popular at metal mines in dressing floors.

THE death of this commercial magnate will be felt more particularly in Liverpool, which had been his business headquarters

for so many years. As chairman of the Chamber of Commerce, and of the great Elder Dempster Shipping Co., and numerous subsidiary undertakings, including collieries and seed crushing mills, he had an almost unique position in the commercial life of the maritime city, and it is noted with satisfaction that his executors are empowered in his will to carry on these various undertakings for at least ten years. The fortune of about £750,000, which he has left is by no means so large as had commonly obtained currency, and no doubt it has been affected by the state of the shipping trade in recent years. It was with the commercial development of West Africa that he was more particularly concerned, though his connection with the new banana industry of the West Indies had led to his sobriquet of the "Banana King." With regard to rubber, though he had a holding in some African plantations, and in conversation with me expressed great interest in the improvement of the processes of collection and preparation of West African brands, his chief connection with the trade was in the matter of shipping African rubbers to Liverpool. The institution for the study of tropical diseases at Liverpool University was due to his initiative and support, and will doubtless come in for a share of his wealth. Another institute he founded was that of commercial research in the tropics also located at Liverpool University. This, however, ceased to exist in 1908, owing to the withdrawal of his support. During its life this institute, with which Dr. D. Spence was associated, was concerned with many problems relating to African rubbers. No one who came into personal contact with the deceased could have failed to be impressed by his energy and capacity for work, and it is commonly said that he wore himself out by his strenuous life. Early and late he was always at it, and usually traveled in a reserved compartment with a secretary and mechanical typewriter. He was the American "hustler" personified in the Welshman, which is somewhat of a novelty. Space only permits me to briefly mention one more of his foundations—the Bank of West Africa, which for the first time introduced the natives to coinage, and has done away to a great extent with the irregularities of the barter system.

No doubt the prospectus of this important company, which was issued in London on December 15, will find mention else-

THE PREMIER REFORMING CO., LIMITED.

where in this journal, and I need not go into particulars. One or two points, however, may be referred to. The patent to be worked is that of Lumisch, with some improvements, and what are referred to as secrets. The main difference from the somewhat similar patents of Gare and of Hutchison is in the employment of a small quantity of a volatile oil during the compression of the powdered scrap in order to completely drive out the air. It was understood that the name "Premier" could be used, but at the last moment, when the prospectuses had been printed, an objection was taken to it by the Premier Waterproof-

ing Co., and an alteration in title has since been made. After the prospectus had been published a letter appeared in several papers from Sir Charles Laws-Witterwrange, Bart., saying that he was already working a similar process at the works of the Millwall Rubber Co., London, and saying further that Mr. Berry, one of the experts named in the prospectus, was wrongly described as late manager of the Millwall Rubber Co. This letter was replied to in the press by Mr. Berry, who gave evidence of his having held the particular position mentioned. There the matter remains at present, but I believe I am right in saying that the letter from the Millwall works had a very adverse effect upon the application for shares. I understand that the particular patent which is now being worked at Millwall is Gare's. With regard to the press notices of the new company, it is particularly noticeable that journals which printed two columns of the prospectus very generally referred to it in their notes as being a speculative or risky investment. Thus the *Financial Times*: "The £9,000 secured by the promoters seems quite enough in the circumstances." The prospects of the patent are obviously very speculative, and depend on commercial success and on the public demand for the goods which it might be more economical to obtain manufactured out of new rubber." Of course this is a fair surmise, but as far as I can judge by the present demand for reformed rubber goods it would seem that the plantation rubber people have some reason to look with disfavor upon the new company, as it must have the effect of reducing the demand for new rubber, if the expectations of the prospectus are realized.

HAVING bought a pair of goloshes for the first time in my life I am taking a closer interest in the article than I have formerly done. They bear the inscription "— — —

GOLOSHES.

Boston." At the time of writing, the end of December, there have been two

or three heavy falls of snow in the north of England, though none in the south. A correspondent to a leading north of England paper says that when he asked in a shop for a pair of British goloshes he was told that there were none now made in England, and that only American ones were kept in stock. The correspondent then suggests that this is case where Protection might be adopted with advantage, and the unemployed get some work to do. Of course it is not correct to say that goloshes are not made in England, though the great bulk of what are sold are of American origin. The editor of the paper in question suggests that they are not made by British rubber manufacturers because the latter find it more profitable to make something else. Without going deeply into tariff reform amenities, I might say that politicians seem to think that everything which is imported into England could easily be made by our unemployed. They overlook the fact that certain firms are preëminent in certain lines of manufacture, because the details of the manufacture are not common knowledge, or at any rate are the outcome of many years of careful application and research. A patent for an improved golosh has recently been taken out by W. Hibbert, the main object being to raise the sole above the ground and thus give further security against water. For this purpose the sole is molded with two or three projections or legs from $\frac{1}{2}$ to $\frac{3}{4}$ inches high, and about $\frac{1}{2}$ inch broad. It is claimed that the weight of the golosh is not thereby appreciably added to. To the general reader the name of W. Hibbert will probably not recall any association with the rubber trade, and I may say that the gentleman in question whose acquaintance I made more than 20 years ago was the head assistant in the private laboratory of the late Dr. J. H. Gladstone, F.R.S. The joint publication of Messrs. Gladstone and Hibbert on the chemistry of india-rubber, published in the *Proceedings* of the London Chemical Society in 1888, may be cited as the beginning of scientific work on the subject. Mr. Walter Hibbert has done no further rubber research since Dr. Gladstone's death.

EDITORIAL COMMENT.

OUR correspondent's reference to his first purchase of goloshes

is particularly interesting in view of his connection with THE INDIA RUBBER WORLD for a dozen years past. It is also interesting in connection with his first purchase having been of an American make. The brand which he names is suppressed here on account of its being what is known in the United States as a "second grade" article. It may not be amiss here to mention that the leading makers of rubber footwear in America produce two grades, which are intended to be sold at prices measurably apart. The manufacturers of the article bought by our correspondent are not excelled by any in the world, in quality or volume of product, but in common with all their competitors they make goods to meet varying price demands. A question which is suggested indirectly by our correspondent's letter is whether, after all, the division of their work into two grades is worth while. The manufacturer may be willing to—and may profit by—accepting two prices for different grades. But do the ultimate consumers benefit from the distinction? Another way to put it is that the purchaser of an American rubber shoe abroad probably pays as much for a "second grade" product as for a "first grade." It is possible that the same thing happens in shops of a good character at home. Then is it worth while to make two grades?

SOME RECENT BRITISH PATENTS.

IN connection with the vulcanizing of leather treads to pneumatic tire covers, British patent No. 18,538—1908, issued to Drury and Grimson, is of interest. According to the specification, an element which may or may not be vulcanizable is attached to a fully cured element by applying solution, and then steam-curing the whole at a low temperature for a long period. Over-curing of the fully cured element is thus avoided. In making leather treaded tires, a strip of leather and the tread, which in this case is nearly cured, are both coated with solution, and when the solution is dry the leather strip is laid on the tread, and the whole is rolled. The tread is then studded and attached by solution to the body of the tire, and the whole is taped on to a core and placed on a perforated tray in a receptacle into which steam is admitted slowly. In one process, steam at a pressure of about 10 pounds per square inch above atmospheric pressure is admitted, and, when the receptacle has warmed up, the pressure is allowed to fall to about $2\frac{1}{2}$ pounds above atmospheric, the cure being completed in about 4 hours. By this process the curing of the partly vulcanized element is completed without over-curing. The process is also applicable to the retreading of worn tires.

A compound waterproof fabric patented by Z. S. Blackadar, of Whitman, Massachusetts (British No. 17,694—1908) comprises a layer of finished leather, to the flesh side of which is glued a layer of thin flexible fabric, containing finely drawn metallic wires, intermixed with the fine textile threads of its warp and weft. The textile material of the fabric affords a suitable surface for the adhesive. The textile threads may be omitted, in which case the wires are more closely interwoven, and the spaces between them are filled with vulcanized india-rubber or other composition. The connection between the leather and the fabrics may be strengthened by stitching.

A recent British patent (No. 18,007—1908), issued to Charles Macintosh & Co., Limited, and two other applicants, relates to a compound material for making floor coverings, floor tiles, boot and shoe soles, and the like. It consists of a surface layer of rubber attached to a backing of felt, etc., which has been proofed, stiffened, and hardened by treatment with glue, etc. The backing may consist of several layers of felt with intervening layers of cork composition or other material, and the rubber may be partly vulcanized before attachment to the backing and completely vulcanized afterwards. Other British patents are mentioned on another page.

The Improved Outlet for Bolivian Rubber.

IF any region can be described as "the heart of South America" it doubtless will be admitted to be included in the republic of Bolivia. This without doubt is the most landlocked country of importance in the world. Larger than most of the kingdoms of Europe, Bolivia has no direct natural outlet to the sea. Having no longer a port on the Pacific it has no access at all to that ocean except through the territory of other and not always friendly nations, besides which land travel to the Pacific must be over the Andes mountains, which rise to a height almost prohibitive of travel and commerce.



AROUND THE RAPIDS OF THE MADEIRA RIVER—OLD REGIME.

It is true that Bolivia is plentifully supplied with waterways which converge gradually until the great Amazon is reached, and through it the Atlantic. But the Amazon flows entirely through foreign countries, and even the mouths of the tributaries through which Bolivian traffic must reach that great river are open only by consent of neighbors. Added to these handicaps is the series of cataracts and rapids which for 200 miles interrupt the navigation of the Madeira, toward which most of the Bolivian rivers flow. The cost of transportation up and down the Madeira seems almost incredible in other countries having navigable rivers, and limits commerce to the more valuable exports—having relation to weight and price—and in the matter of imports to absolute necessities.

Bolivia is of interest to the trade represented by this journal through its unparalleled richness in rubber. Not only do vast areas abound in rubber trees but they yield generously the highest grade of rubber known in the world's market. Bolivia claimed until recently the rich Acre district, important for its production of rubber, and the loss of this territory to Brazil was due largely no doubt to the weakness of the nation caused by its isolated situation. The Acre, without access to the Amazon for export purposes, would have been of little value to Bolivia, however rich in

rubber, and it was within the power of Brazil to prevent such access. With the Acre gone the principal rubber fields of Bolivia must depend for an outlet upon the obstructed Madeira.

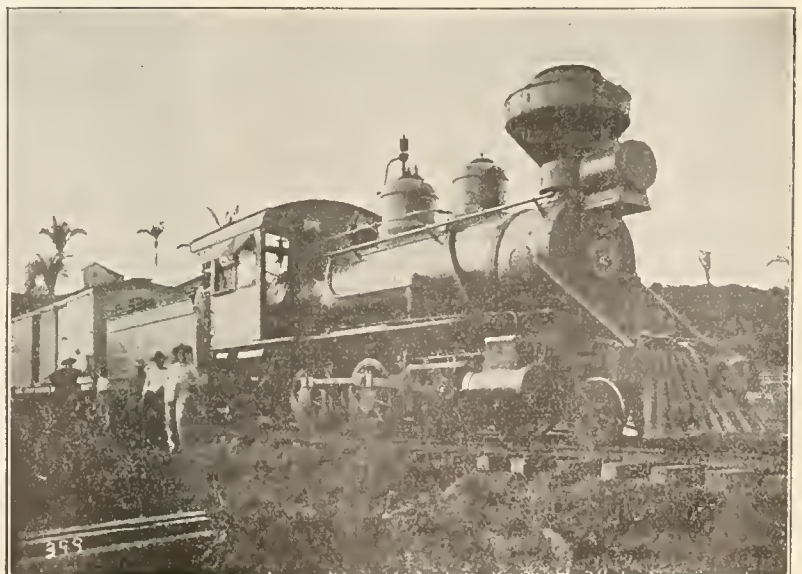
It has been the dream of Bolivia for a half century to overcome the interruptions to shipping on this great river by means of improved roads around the falls, and latterly to build a railway paralleling the river. But the financial development of the republic long made it impracticable for the government to undertake such a gigantic enterprise, and conditions of trade had not developed to a point where the proposition was inviting to foreign capitalists.

It is true that, through the great foresight and the inimitable energy of the late Colonel George Earl Church, a company was organized at one time to build a railway along the Madeira, and it is possible that if the project had been carried out the same success would have resulted that later attended the construction of the Congo railway around the falls in the river of that name, which a few years later opened to the world the rubber realm of King Leopold.

The undertaking, however, by American contractors and engineers, based upon the recommendation of Colonel Church, was handicapped not only by the underestimated obstacle of insalubrious conditions, but by unforeseen political, financial and legal complications, so that after much material had been placed on the ground, and a section of the road was in operation, the whole scheme collapsed. Thereafter for years it was almost impossible to interest the outside world again in another undertaking of the kind.

Meanwhile the world's demand for rubber was growing more pressing, and the extent of Bolivia's supplies was better understood. Not only this, but there are other forms of forest wealth. Bolivia is one of the richest countries in the world for minerals, and soil and climate are favorable to agriculture and grazing.

By the latest treaty between Bolivia and Brazil the latter



AN AMERICAN LOCOMOTIVE IN THE HEART OF SOUTH AMERICA.



THE TRACK OF THE MADEIRA-MAMORÉ RAILWAY.

has guaranteed the construction of a railway along the Madeira to compensate to some extent for the taking away of the Acre from Bolivia, and the construction of such a road is in progress under conditions which give every promise of its completion in the near future. Starting from the head of navigation on the lower Madeira, this road has been surveyed to reach a point some 200 miles distant from the Mamoré, the largest of the many rivers which converge to form the Madeira.

THE LATE LIEUTENANT GIBBON.

THE Madeira-Mamoré railway, according to Mr. Craig, the chief historian of this enterprise, originated in recommendations made by Lieutenant Lardner Gibbon, U.S.N., in 1852.

The exploration of the valley of the Amazon, under the direction of the United States navy department, in the early fifties, as already mentioned, was conducted by Lieutenant William Lewis Herndon, assisted by Lieutenant Gibbon. Being commissioned to explore the sources of the Amazon, they decided to conduct separate expeditions, parting at Tarma, in the department of Junin, in the interior of Peru—their start having been made, it will be kept in mind, at Lima, on the Pacific coast. Herndon found his way as speedily as possible to the waters of the Amazon itself, while Gibbon explored wholly or in part the Madre de Dios, Beni, Mamoré, and other streams, and finally, the Madeira, from the uppermost cataract to the confluence of this river with the Amazon, going thence to Pará.

Gardner, at his death, was the oldest ex-officer of the United States navy. He passed away at his home at Holmesburg, near Philadelphia, on January 10. Born in Philadelphia August 13, 1829, he was appointed midshipman when about 15 years of age. After having made a worldwide reputation as an explorer, and having won the title of lieutenant, he resigned from the navy before the civil war, during which conflict he served in the navy of the Confederate States, being bound by ties of blood to the Southern cause. He married Miss Alice Shepard, of Newbern, North Carolina, who died seven years ago. He was the son of Dr. John H. and Catherine (Lardner) Gibbon. His remains lie at All Saints' Church, Torresdale, Philadelphia.

THE LATE COLONEL CHURCH.

GEORGE EARL CHURCH was born December 7, 1835, at New Bedford, Massachusetts, of English ancestors who were among the earliest in the new world and who contributed notably to American history. Left early without a father, and with the help only of a public school education gained at Providence, Rhode Island, at the age of 17 he decided upon civil engineering for a career, in which he had attained some distinction by the time he was 21.

At that time a financial crisis occurred in the United States, and Mr. Church found himself in South America, where the Argentine government appointed him on a commission to explore the frontiers, and here he again distinguished himself. The American civil war breaking out now, Mr. Church returned home and entered the forces of the Union as a captain of infantry from Rhode Island. His career as a soldier was most creditable, and marked by many promotions. After the war Colonel Church for a while was engaged in railway engineering.

While General Grant was president, after a consultation with the late Matias Romero, the minister from Mexico at Washington, Colonel Church was entrusted with a delicate and important mission to the latter republic, which resulted successfully. Church next occupied a responsible editorial position on the New York *Herald*.

Indirectly Colonel Church's experience in Mexico led to his being invited by the government of Bolivia to undertake the opening of that country to commerce by way of the Amazon. The history of his life from that time, for a number of years, was the story of promoting what today is known as the Madeira-Mamoré enterprise. As diplomat, engineer, and explorer, he labored until national jealousies had been overcome, concessions acquired, charters granted, and capital guaranteed.

There is not space here for a record of the discouraging developments in connection with the railway enterprise on the Madeira which ultimately compelled the retirement from the field of men so resourceful and courageous as George Earl Church and his associates and supporters. His foresight has now been vindicated, but the world's demand for



MOSQUITO NETTING HEADGEAR AS USED FOR THE TROPICS.
[Worn by Engineers on the Madeira-Mamoré Railway.]

rubber had not then become so pressing as to make the Madeira road appear to outsiders a necessity, and the fate of the enterprise was left to those who could appreciate the whole thing only as a football for speculative rivals in finance or for politicians concerned only with private gain.

Following his experience in connection with the Madeira railway Colonel Church was entrusted with important government missions, and visited various South American countries in relation to financial and engineering affairs of importance. He was a member of various learned societies, particularly in Europe, and the author of a number of books and scientific papers. He was a companion of the first class of the Loyal Legion of the United States, and despite his long residence abroad there was no better or more loyal American.

The Royal Geographical Society, of London, will suffer a great loss in the death of its former vice-president, for he was considered unquestionably the greatest authority on the geography of South America. Canada owes much to this far-sighted engineer, for the new trans-Canada railroad was originally promoted and surveyed by him. Colonel Church last visited the United States in the fall of 1908, at which time among the many functions in his honor was a special reunion and banquet in Philadelphia of the Madeira and Mamoré Association, composed of the survivors of the "Ill-Fated Expedition."

Colonel Church died on January 5, in London, at his home on Cromwell road, Kensington, of an internal malady from which he had been confined to his bed for some weeks. He married twice. His first wife was Miss Alice Church of New Jersey, who died. Three years ago he married Mrs. Chapman, daughter of Sir Robert Harding and widow of the head of the firm of Chapman & Ball, publishers. Colonel Church was buried in Brompton cemetery.

THE LATE ENGINEER D'INVILLIERS.

CAMILLE S. D'INVILLIERS, who died on January 2, was only 26 years of age when he joined the Madeira-Mamoré expedition. After graduation from the Polytechnic College at Philadelphia he was employed (1870-74) as assistant engineer on the Allegheny Valley railroad, and later, until his departure for South America, he was employed on the Pennsylvania railroad. "In addition to technical training and experience," writes Neville B. Craig, "he possessed the equally important qualification of vigorous health, which rendered him capable of more than ordinary physical endurance, and his popularity among the members of the engineer corps secured for him at all times the loyal support of his subordinates.

The early failure in health of C. M. Bird, the first chief engineer of the Madeira and Mamoré railway, caused the promotion to that position, within a few months, of Mr. d'Invilliers, who, although himself early attacked by severe fevers, retained the position thereafter until the end. He, finally, was obliged to obtain a leave of absence—he left San Antonio for Pará, February 17, 1870—and that marked, in the words of Mr. Craig, "the complete collapse of the undertaking."

Following his experience in South America, Mr. d'Invilliers

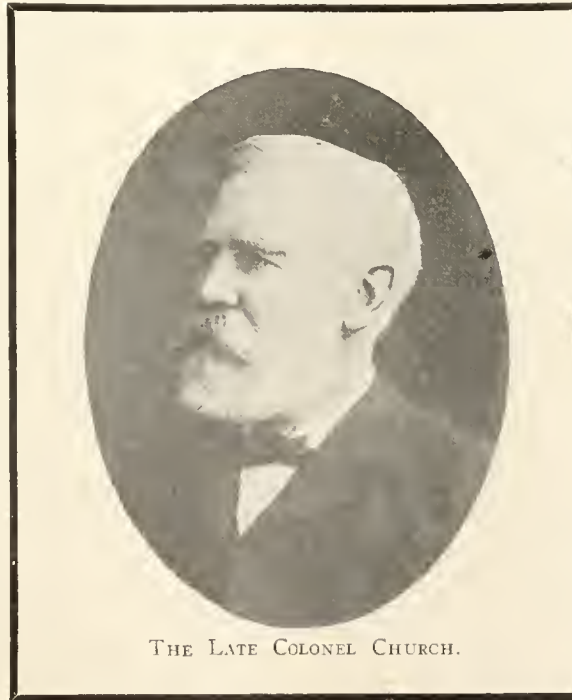
resumed his connection with the Pennsylvania Railroad Co., for which he was, until the time of his death, engineer of construction at Cresson, Pa.

TWO NEW SUBSTITUTES FOR RUBBER.

THE Protal Co., of Bridgeport, Connecticut, will shortly offer to the trade two new products, to which they have given the names of "Protal" and "Protal-Bakelite." Both of these materials consist of a base derived from vegetable substances to which are added substances which render them adaptable for all uses heretofore supplied by rubber and rubber compounds. In physical characteristics these materials resemble rubber, and they may be manipulated by machinery such as is used in the production of rubber or rubber compounds.

In the form of "Protal," the material is suitable for use where the articles produced therefrom are not permanently subjected to the action of moisture, and in the form of "Protal-Bakelite," in any situation where rubber in some one of its forms may be used. "Protal-Bakelite," however, is referred to as having an advantage over rubber in that it is non-oxdizable and therefore does not deteriorate; it is not soluble in oils, in acids or other similar disintegrating agents; it is infusible, and an excellent electrical insulator. Both of these bodies may be loaded with any of the materials used in the manufacture of rubber, and so far as the tests which have been made show, are excellent substitutes for rubber in any of its forms, whether soft, semi-hard or hard—*i. e.*, vulcanite.

The Protal Co. control the manufacture of the materials specified, by reason of patents which have been obtained by Dr. F. G. Weichmann, the inventor, and also licenses for one of the ingredients (a new chemical substance) obtained by Dr. L. H. Baekeland. It is stated that the cost of this material in any form in which it may be manufactured compares favorably with that of corresponding rubber products.



THE LATE COLONEL CHURCH.

COMMUNICATION ON THE AMAZON.

THE plan of the Amazon Telegraph Co., Limited, to extend their cable facilities in the Amazon River, has been mentioned already in THE INDIA RUBBER WORLD. The manufacture of cable for the extension is already in progress in England, and a recent issue of *The Brazilian Review* states that by December next the line from Pará to Manáos will have been duplicated throughout. This, it is felt, will prevent any such interruption of communication between these two rubber centers as has occurred so often within the past two years, such interruptions being mentioned, whether correctly or not, as the cause of many disturbances in the rubber market, the effect of which is felt as far around the world as Colombo and Singapore.

THE trade generally has been notified that owing to the higher cost of cotton and rubber than prevailed when present prices were established, manufacturers of fire hose will be obliged to make an advance of at least 10 cents per foot.

THE HODGMAN BALLOON FABRICS.

WHILE the conquest of the air by man cannot be said to have been accomplished as yet, the progress made in aeronautics during the past year or so has been so marked that this must be admitted to have become a practical field for human endeavor. Not only this, but the new science, or sport, or whatever it may be termed, has attracted already a wider place in human interest than has ever been the case in the same length of time with a new invention or discovery in the history of the world. The interest to the rubber trade of the development of aeronautics, as has been pointed out in these pages, is due to the fact that rubberized fabrics figure already to so large an extent in the construction both of aeroplanes and balloons, and the results obtained from the use of rubber in this connection have been so satisfactory that the employment of other fabrics is likely to decrease rather than become larger.

It is gratifying to Americans that their countrymen have won so large a share of success in the new field. On account of Americans having been winners in two of the important international contests in aeronautics last year, the prizes won, under the rule, must be contested for this year in the United States, a fact alone which will tend largely to develop American interest in such matters.

The names of some important European rubber manufacturers have been mentioned in THE INDIA RUBBER WORLD as producers on a large scale of fabrics for balloons and flying machines. The American rubber industry has not been backward in making fabrics for the same purpose. It will be remembered that the last formal dinner of the Rubber Club of America, in Boston, in December, was termed an "aeronautic symposium," which was an indication of widespread interest in the rubber trade in aerial flight. The handsome menu card was embellished with views of notable machines for air flight, the fabric for which was manufactured by members of the rubber trade present at the dinner, though no public reference was made to this fact. The fact can be stated here, however, that the balloons which Captain Thomas S. Baldwin has sold to the United States government—a large dirigible and several sphericals—as well as the other balloons made for him have been constructed with the use of fabrics waterproofed by the Hodgman Rubber Co., at their factory in Tuckahoe, N. Y., being made at that place under Captain Baldwin's supervision. The Hodgman company and Captain Baldwin are associated in the further development of the use of rubber coated fabrics in the manufacture of balloons in the United States.

One of the best known products of this association is the balloon "New York" sold to Mr. Clifford B. Harmon, which won the American record for duration in a balloon flight, starting from St. Louis at the time of the centennial celebration in that city, in October last. Harmon remained in the air 48 hours and 26 minutes—the second longest official flight ever made.

In this same balloon Mr. Harmon, with Mr. Augustus Post, secretary of the Aero Club, reached the great height of 24,200 feet in the fall of last year, which is a testimony to the gas retaining qualities of a rubber coated fabric.

The Hodgman company also are manufacturers of the fabric used in the Curtiss biplanes, including the machine with which Glenn H. Curtiss won the Gordon Bennett international aviation cup at Rheims, last August.

The balloon "New York," guided by Mr. Harmon, made a good record at the International Aviation Meet at Los Angeles, California, during the month just past, making an ascension of 10,000 feet. The same is true of the Curtiss machines at Los Angeles, which won the prizes for speed, quick starts, perfect landings, and those events where a light swift machine showed best.

The Hodgman company have pursued a different course from some other members of the rubber trade, in that their fabrics

for balloons are not offered to the trade generally, but are supplied only for use where the construction is under their own supervision, it being deemed best at present not to risk failure in the use of their fabrics through careless or inexperienced construction work outside of their control.

At the factories of the Hodgman Rubber Co. have been carried out an exhaustive series of experiments with regard to the fabrics to be used for certain strains or pressures, and the proper quality of waterproofing in each case. So careful have these experiments been that even the best color for balloon fabrics, for instance, has been studied. Not all the aeroplanes in use are made with waterproof fabrics, but it is coming to be recognized that a plane waterproofed with rubber is superior to one of unproofed cotton, which is liable in rain to shrink; besides it has been suggested that a properly surfaced rubber coated fabric is smoother than any other and thereby minimizes resistance to the air.

CANKER IN PARA RUBBER.

THE original "canker" of *Hevea* has not been much in evidence during the last three or four years, but several cases were notified during the prolonged rainy season of this year (1909), and the subject is being investigated. It has been determined that probably in the majority of cases the death of the bark in patches after the tree has been scraped before tapping is due to "canker," sometimes assisted by deeper scraping than should be allowed. But the most general symptoms exhibited during the current year differ completely from those previously recorded. The disease attacked the renewing bark on the surface which was being tapped. The bark showed numerous vertical black lines, and on cutting it out these lines were found to extend into the wood. These black lines may be found on the cambium before they are evident externally. The bark round these lines decays, leaving a narrow vertical wound.

Sometimes adjacent patches coalesce, and the whole of the renewing bark decays. In most cases the disease does not extend downwards as rapidly as the bark is exercised during tapping, and it is therefore possible to continue tapping although the tree is diseased. With the advent of drier weather the disease stops and the bark renews over the wounds, but as it has to grow in from the edges of the vertical wounds, the renewed bark is rough. Except for this rough bark, there is no permanent injury to the tree.

The cause of *Hevea* canker cannot be said to have been determined. Four organisms have been found fairly regularly in the diseased tissue. Two of these are in all probability only saprophytic and are not being considered at present; the other two are a bacterium and a Nectria. The evidence of the diseased tissue seems to point to the bacterium as the cause, since it is always found in advance of the hyphæ of the Nectria, and the discoloration of the wood is identical with that in the bacterial cultures. But inoculations with both these organisms have so far been unsuccessful.

The bacterium has been isolated and grown in pure cultures, but an attempt to produce "canker" by inoculating tapped surfaces with bacteria from these cultures has proved a failure up to the present in the case of the Nectria, the ripe spores were caught as they were ejected from the fructification, and these were proved capable of germination by sowing them in culture solutions; but no success has yet followed the inoculation with these spores.—T. PETCH, B.Sc., B.A., in *Tropical Agriculturist*.

BETWEEN Pará and Manaus it is stated that more than 100 large steamers are engaged in carrying rubber and other cargo and passengers on the Amazon, the waters of which are furrowed by the keels of innumerable smaller steam vessels and sailing craft, not to mention canoes between points only a small distance apart.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED DECEMBER 7, 1909.

- N**O. 942,149. Tire. [Outer tube of rubber and fabric, with resilient metallic tubular sections inside.] J. C. Taylor, New York city.
 942,364. Vehicle wheel tire. J. A. Boyajean, New York city.
 942,418. Tire. [With hollow annular metallic casing.] W. R. Stewart and T. S. Stewart, Saltsburg, assignors of one-third to A. S. Braverman, Avonmore, Pa.
 942,500. Metallic protector for pneumatic tires. E. A. Hultberg, Chicago.
 942,567. Automobile tire. Iva B. Kempshall, Boston.
 942,654. Tire. [With tread supported by springs.] J. G. Maxwell, Washington, Pa.
 942,682. Tire protector. F. Vacher, New York city.
 942,734. Pneumatic tire. P. G. Muenchinger, Newport, R. I., assignor to E. F. Shiek, Brookline, Mass.
 942,787. Flexible conduit. C. H. Miller, West Pittsburgh, Pa., assignor to Safety-Armorite Co., Pittsburgh, Pa.
 942,788. Conduit for electric wires. *Same*.
 942,789. Flexible electric conduit. *Same*.
 942,790. Flexible conduit for electric wires. *Same*.
 942,842. Cushion tire for vehicle wheels. J. H. Poole, assignor of three-eighths each to F. L. Price and J. G. Wilde, all of Brockton, Mass.

Trade Mark.

- 44,248. Key City Roofing Co., Dubuque, Iowa. The word *Dreadnaught*. For prepared rubber roofings.

ISSUED DECEMBER 14, 1909.

- 942,881. Elastic tire. A. Bonnaz, Lyon, France.
 943,002. Armor for tires. S. S. Childs, Bernardsville, N. J.
 943,019. Packing for piston rods and the like. G. Huhn, Berlin, Germany.
 943,023. Pneumatic packing. E. S. Johnson, assignor of one-half to W. J. Knight, both of Oakland, Cal.
 93,054. Apparatus for manufacturing wheel tires. J. K. Williams, assignor of one-half to The Williams Poundry and Machine Co., both of Akron, Ohio.
 943,055. Vulcanizing mold. *Same*.
 943,146. Horseshoe. H. J. Fillicz, assignor of one-third to A. Vignos and one-third to M. L. Keagy, all of Canton, Ohio.
 943,172. Lawn sprinkler. C. Ballreich, Pueblo, Cal.
 943,173. Vehicle tire. [Pneumatic, with thick tread.] T. H. Banks, San Antonio, Texas.
 943,341. Tire supporter. S. T. Coate and J. T. Saris, Springfield, Ill.
 943,416. Hose coupling. C. E. Judkins, Coeur d'Alene, Idaho.
 943,430. Vehicle tire. T. W. Lucke, Chicago.
 943,446. Wheel tire. H. L. McDuffee, Gilroy, Cal.
 943,463. Tire protector. J. Richardson, Buffalo, N. Y.
 943,505. Automobile tire. C. E. W. Woodward, assignor to The Fisk Rubber Co., both of Chicopee Falls, Mass.
 943,640. Pneumatic tire. A. Latimer, London, England.

Trade Mark.

- 44,578. Hood Rubber Co., Boston. A band of which the narrow upper edge is in red. For rubber boots and shoes.

ISSUED DECEMBER 21, 1910.

- 943,658. Manufacture of products containing india-rubber and cellulose. [Consists in mixing cellulose or cellulose solution with the latex of rubber.] P. Defaucamberge, assignor to Société Française de la Viscose, both of Paris, France.
 943,692. Packing and method of making the same. C. I. E. Mastin, Midland Park, and E. L. Perry, Paterson, N. J.
 943,780. Sprinkler nozzle. W. G. Hughes, Norwalk, Cal., assignor to S. K. Elliott and H. G. Miller, Los Angeles, Cal.
 943,851. Golf ball marking device. W. T. West, Camden, N. J.
 943,946. Telephone mouthpiece. E. H. Long, Los Angeles, Cal.
 943,998. Flexible and elastic band for pneumatic tires. P. Roussillon, Argenteuil, France.
 944,177. Pen feeder. F. M. Connolly, New Haven, Conn.
 944,190. Penholder. H. E. Hoke, assignor of one-half to E. G. Eckert, Hannover, Pa.
 944,213. Tire pump attachment. H. H. Rung, assignor of one-half to R. F. Whitmer, both of Philadelphia, Pa.
 944,233. Waterproofing composition. [May consist of rubber cement 1 1/2 parts; spirits of turpentine, 6 1/4 parts; and gasoline, 8 1/4 parts.] L. A. Coleman, assignor of one-third each to J. E. Sebrill and H. Abrames, all of Norfolk, Va.

Trade Mark.

- 44,998. New York Belting and Packing Co., Limited, New York city. The word *Magic*. For rubber hose.
 45,456. The Beckley Ralston Co., Chicago. The words *New Century*. For pneumatic tires.

ISSUED DECEMBER 28, 1909.

- 944,278. Apparatus for filling rubber tires with viscous liquids. A. D. Ray, Cleveland, Ohio, assignor of one-half each to C. J. Callahan and T. Chester, Sunbury, Pa.
 944,287. Interchangeable rubber heel. Frank G. Sherman, Chicago.
 944,308. Automobile tire. W. J. Bauer, assignor to Bauer Non-Collapsible Wheel Co., both of New York city.

- 944,339. Vulcanizing mold. F. W. Litchfield, assignor to the Goodyear Tire and Rubber Co., both of Akron, Ohio.
 944,357. Vehicle wheel rim. J. M. Alderfer, Sharon Center, Ohio.
 944,421. Circular loom. R. E. Evenden, Manchester, England.
 944,514. Rim for motor car wheels. D. C. Smith and W. F. Gorton, Muncie, Ind.
 944,558. Elastic beel for boots or shoes. C. M. Jagers, McAlester, Okla.
 944,722. Process for making inner liners for tires. B. S. Eshelman, assignor to G. V. Krichbaum, both of Ashland, Ohio.
 944,772. Anti-skid attachment for vehicle wheels. T. T. Chaloner, New York city.
 944,782. Buoyant bathing suit. P. J. Griffin, Boston.
 944,877. Coupling [for hose]. E. A. Koschinski, Scranton, Pa.
 944,906. Wheel rim for pneumatic tires. J. Haynes, Manchester, England, assignor to C. A. Bradshaw and W. E. Cutbberston, Manchester, England, and T. S. Sheldrake, Ilford, England.

Trade Marks.

- 45,544. The Hanover Vulcanite Co., New York city. The word *Aero*. For hard rubber combs.
 45,545. H. W. Buckner, New Orleans. The word "*Robold*" supported by a figure. For machinery packing, hose, and belting.
 45,904. The Vulcanized Rubber Co., New York city. The word *Ajar*. For rubber combs.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the application, which in the case of these listed below was in 1908.

* Denotes Patents for American Inventions.

- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 1, 1909.]
 16,582 (1908). Pneumatic tire with separately inflated air chambers. E. H. E. Fletcher, London.
 16,639 (1908). Inside cushion for boot heels. W. J. C. Schwarz, Liverpool.
 16,688 (1908). Rubber cushion tire with triangular cross sections. T. Hill, Walsall, Staffordshire.
 16,698 (1908). Pneumatic tire with butt ended inner tube. A. W. Sparkes and S. I. Michaelson, Bristol.
 16,738 (1908). Hoof pad. W. E. Lake, London. (Maison Talbot, Milan, Italy).
 16,741 (1908). Casing for motor wheels to prevent dust from rising. T. Hunt, Atherstone, Warwickshire.
 16,760 (1908). Machine for measuring fabrics. L. V. E. Richards, Long Eaton, Derbyshire.
 16,779 (1908). Hoof pad. B. P. Gray, Birmingham.
 16,925 (1908). Golf ball consisting of an inner shell of rubber, lined with gelatine and water, wound with linen or cotton, and covered with gutta-percha or india-rubber. W. Thomson, Manchester.
 16,988 (1908). Pneumatic tire with puncture and wear preventing band. R. D. Edwards and R. W. H. Rodney, Bristol.
 16,971 (1908). Process in which naphthalene is employed for rendering rubber or rubber mixtures plastic. Rütgerswerke-Aktiengesellschaft, Berlin.
 [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 8, 1909.]
 17,134 (1908). Vacuum apparatus for promoting the growth of hair. C. H. Fryer, Surbiton.
 17,208 (1908). Machine for cutting and marking fabrics. P. Kauty, Nuremberg, Germany.
 17,212 (1908). Vehicle wheel with elastic core. A. Roster, Florence, Italy.
 [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 15, 1909.]
 *17,694 (1908). Method of waterproofing fabrics. Z. S. Blackadar, Whitman, Massachusetts.
 17,703 (1908). Sectional pneumatic tire with air chambers in series. L. Brown, Eccles, and C. Macintosh & Co., Ltd., Manchester.
 17,845 (1908). Composition for charging tires and balls. Equatorial Trading and Mfg. Co., E. A. Muskett, and J. B. Scammell, London.
 17,846 (1908). Molding elastic balls. *Same*.
 18,007 (1908). Compound material for floor coverings—including a surface layer of rubber. C. A. McKerrrow, Mitchells, Ashworth, Stansfield & Co.; and C. Macintosh & Co., Ltd., Manchester.
 18,015 (1908). Means for securing detachable tire carrying rim. S. S. Rogers, Brentford.
 18,010 (1908). Swimming appliances. W. Harz, Grossenhain, Saxony.
 18,048 (1908). Solvent for vulcanized rubber waste, scrap or raw materials containing rubber; terpene hydrocarbon is used. G. Austerwell, Neuilly, France.
 [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 22, 1909.]
 18,126 (1908). Cover for pneumatic tires. F. Veith, Höchst, Germany.
 18,164 (1908). Puncture preventing shield for pneumatic tires. H. Pfeiffer, London.
 18,174 (1908). Protective cover for pneumatic tires. J. Muff-Minder, Zurich, Switzerland.
 18,298 (1908). Golf ball. A. Macdonald, Troon, Ayrshire.
 18,301 (1908). Device for setting wire cored rubber tires. A. E. Dan-caster, London.
 *18,307 (1908). Elastic tire with tread of staggered blocks. A. M. MacFarland, Philadelphia, Pa.

- *18,746 (1908). Pneumatic tire with special thickened tread. J. L. G. Dykes, Milford, Illinois.
 - 18,445 (1908). Detachable outer rim for pneumatic tire. Société Francaise des Jantes Amovibles Bonhivers, Levallois-Perret, France.
 - 18,455 (1908). Pneumatic tire in which a heavy rubber tread is supported upon a pneumatic tube inclosed between side plates. E. Degener Böning, Frankfort o/M., Germany.
 - 18,462 (1908). Vehicle wheel having inner and outer rims with an intermediate thick rubber band. T. R. Bayliss, Northfield, Worcestershire.
 - 18,538 (1908). Vulcanizing of pneumatic tires. W. Drury, London, and Viscount Grimson, St. Alban's.
 - 18,545 (1908). Non-slipping attachment for motor wheels. F. M. Waller, Weymouth.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 30, 1909.]
- 18,594 (1908). Pneumatic tire cover. Viscount Grimson, St. Alban, and W. Drury, London.
 - 18,608 (1908). Detachable rim for pneumatic tires. H. Jones and W. E. Evans, Morristown.
 - 18,671 (1908). Spring wheel with inner and outer rim, separated by an elastic cushion. P. J. Marmonnier, Lyons, France.
 - 18,810 (1908). Non-elastic rubber tire retained by means of nuts which engage with the spokes. W. Cunningham, Galston, Ayrshire.

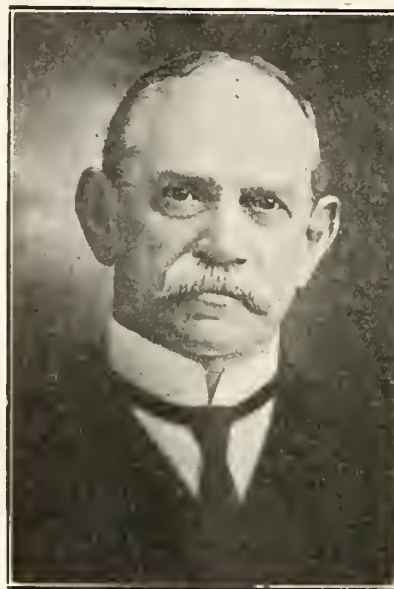
THE FRENCH REPUBLIC.

PATENTS ISSUED (with Dates of Application).

- 403,120 (May 18). E. A. Garvey and C. A. Garvey.
- 403,138 (April 16). Pfeiffer and Whitworth.
- 403,207 (May 18). J. G. Tomkins and V. Tomkins. Elastic heel.
- 403,393 (Sept. 22, 1908). L. L. Chabrua. Elastic tire.
- 403,438 (May 28, 1909). de Bavay. Pneumatic tire.
- 403,531 (May 26). Gabriel et Cie. Protector for pneumatic tire.
- 403,631 (June 3). Société anonyme des Pneumatiques aix Samson. Pneumatic tire.
- 403,446 (May 28). M. C. Clark. Apparatus and method of devulcanizing rubber.
- 403,673 (June 4). V. Daussy. Vehicle tire.
- 403,677 (June 4). A. Constantin. Protective tread for tires.
- 402,596 (April 30, 1909). Phil. Penin Gummiwaarenfabrik, A. G. Process and apparatus for producing circular striations on the outer surface of seamless rubber pipe.
- 402,881 (May 10). H. R. Krastel and G. Ulrich. Auxilliary tire for automobile wheels and their equipment.
- 402,996 (May 13). F. Laarman. Process for producing a frothy or spongy elastic structure by the use of a solution of elastic material such as rubber, cellulose, or their equivalent.
- 403,120 (May 8). E. A. Garvey and C. A. Garvey. Pneumatic deadener for vehicles.
- 403,138 (May 16). Pfeiffer and Whitworth. Improvements in devices for preventing the bursting of air tubes in pneumatic tires.
- 403,218 (May 22). T. Sloper. Improvements relating to anti-skidding surfaces for tires or other rubber articles.
- 403,416 (May 27). Société Industrielle des Telephones. Applications of special dielectrics for the insulation of cables or electric conductors.
- 403,700 (June 5). H. B. Parham. Shoes for detachable pneumatic tires
- 403,723 (June 5). E. Brodin. Pneumatic bicycle tire.
- 403,820 (June 8). L. D. Baggs. Automobile tire.
- 403,826 (June 8). L. G. Queval. Pneumatic tire with leather tire and multiple air chambers.
- 403,849 (June 9). C. J. Viviez. Elastic tire.
- 403,888 (June 11). L. Perroncel. Process of pneumatic tire manufacture.
- 403,942 (June 11). P. Blaubach. Process for the manufacture of linoleum.
- 404,023 (June 14). J. A. Florencie. Envelope for aerial vehicles.
- 403,917 (Oct. 6, 1908). C. Francois. Elastic tire.
- 403,976 (June 12, 1909). Flexible Tire Co., Inc. Tire.
- 404,002 (June 14). Cassan. Pneumatic tire.
- 404,038 (June 14). G. A. Lyon and Wilson. Protective tread for tires.
- 404,049 (June 15). G. C. Taylor. Pneumatic tire casing.
- 404,163 (June 18). J. F. Spong. Elastic tire.
- 404,021 (June 14). A. Nunes. Leather and rubber tire.
- 404,051 (June 15). D. MacArthur and Macintosh. Pneumatic tire.
- 404,218 (June 19). H. Long. Removable pneumatic tire for bicycles.
- 404,232 (June 19). Continental-Caoutchouc und Gutta-Percha Compagnie. Solid rubber tire.
- 404,451 (June 25). G. Bonguillon. Leather envelope for pneumatic tires.
- 404,397 (June 22). Generale Caoutchouc Co., Ltd. Process for the separation of resins from caoutchouc.
- 404,334 (June 23). P. G. Penn. Process for the regeneration of waste vulcanized rubber.
- 404,357 (Oct. 16, 1908). L. Turcat and G. Nuth. Process for the preparation of elastic objects from gum lac.

[NOTE.—Printed copies of specifications of French patents can be obtained from R. Robet, Ingenieur-Conseil, 16 avenue de Villier, Paris, at 50 cents each, postpaid.]

HIGH ENEMAS.—Soper, in the *Journal* of the American Medical Association, concludes from skiagrams taken, that only in rare cases does the so-called high rectal tube pass up into the sigmoid. In abnormalities of the sigmoid it may pass further than seven inches into the rectum before bending on itself, but not in the common case.

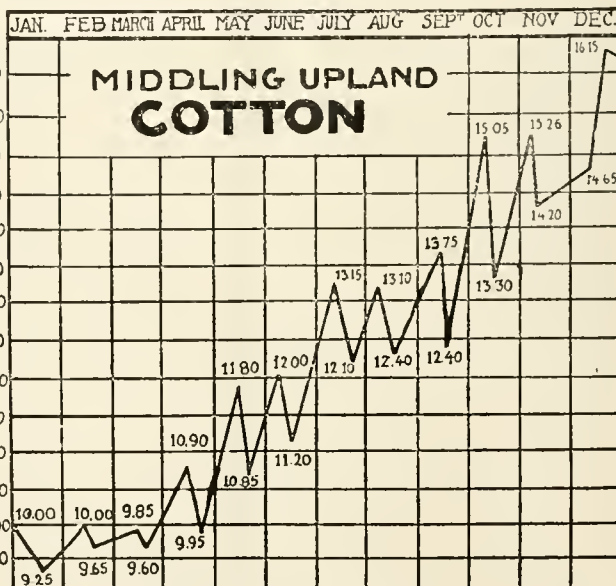


THE LATE JOSEPH DAVOL.

[The photograph from which the above portrait has been made was preferred by Mr. Davol to that used in connection with his obituary in THE INDIA RUBBER WORLD, August 1, 1909 (page 386).]

THE PRICE OF GUAYULE SHRUB.

In a report on guayule in northern Mexico, the United States consular agent at Torreon says that the value of the shrub has increased steadily from \$2.50 gold per ton in the field during the year 1903, to the present price of \$25 to \$35. At \$35 per ton of shrub in the field, calculating a distance of 30 to 40 miles to the railroad, the shrub costs the factories laid down at their doors about \$75 per ton. The amount of rubber extracted varies from 8 to 16 per cent., depending on the class of shrub. The high price is caused by the scarcity of shrub on the market; it is estimated that there are not over 8,000 tons of shrub that are not contracted for, and most of this is on two or three properties. Very nearly 200 metric tons are worked up daily in the factories in Torreon and Gomez-Palacio.



RANGE OF COTTON PRICES, 1909.

[Middling Upland Cotton, New York Cotton Exchange. From the New York Times.]

The Rubber Trade at Akron, Ohio.

By a Resident Correspondent.

COMPANY MEETINGS.

AT the annual meeting of shareholders of The B. F. Goodrich Co., on January 19, the report made on the business of the year was satisfactory, but in accordance with the policy of the company no statement was given out. The regular quarterly dividend of 2½ per cent. was announced. The directors were reelected: George T. Perkins, George W. Crouse, B. G. Work, F. H. Mason, H. E. Raymond, E. C. Shaw and C. C. Goodrich. The board reorganized and elected officers as follows:

President—BERTRAM G. WORK.
First Vice-President—FRANK H. MASON.
Second Vice-President—H. E. RAYMOND.
Secretary and Assistant Treasurer—CHARLES B. RAYMOND.
Treasurer and Assistant Secretary—WILLIAM A. MEANS (succeeding Walter A. Folger).
General Manager of Works—E. C. SHAW.

The shareholders of the Swinehart Tire and Rubber Co. met on January 17. The directors chosen were Frank B. Theiss, William Byrider, R. A. May, Joseph Dangel, J. A. Swinehart, W. W. Wuchter, and Frank R. Talbot, the latter succeeding J. O. Surbey. The last quarterly dividend is 2 per cent. The officers elected are:

President and General Manager—W. W. WUCHTER (formerly vice-president, to succeed J. A. Swinehart, who has retired from active participation in the managing end of the business).
Vice-President—JAMES A. SWINEHART.
Secretary—C. O. BAUGHMAN.
Treasurer—R. A. MAY.

The directors decided to call a meeting of the shareholders for February 16, to vote on a question of increasing the capital, which is now \$200,000.

The shareholders of the Colonial Tire and Rubber Co., who control the Firestone "Sidewire" tire patents in Europe, held their annual meeting on January 14, and elected as directors James A. Swinehart, P. D. Hall, William Byrider, John Byrider, and Frank E. Whittemore, of Akron, Ohio, and F. S. Lahm, of Paris, France. A 10 per cent. annual dividend was declared. The officers elected are:

President—FRANK S. LAHM.
Vice President—JAMES A. SWINEHART.
Secretary and Treasurer—P. D. HALL.

The annual meeting of the Whitman & Barnes Manufacturing Co., who formerly maintained a rubber manufacturing department, but do not now, held their annual meeting at the general offices in Akron on January 11. The directors are: George T. Perkins, C. B. Raymond, A. B. Rinehart, William H. Eager, A. D. Armitage, George A. Barnes, C. E. Sheldon, and C. I. Bruner, of Akron, and William H. Gifford, of Syracuse, New York. Officers elected:

President—C. E. SHELDON.
Vice-President—A. B. RINEHART.
Treasurer—WILLIAM H. EAGER.
Secretary—GEORGE A. BARNES.
General Manager—A. D. ARMITAGE.
Sales Manager—F. C. BLANCHARD.

Colonel George T. Perkins, in the board of this company, is also a director of The B. F. Goodrich Co., and C. B. Raymond, who succeeds William Stone, of Chicago, as a director, is secretary of the Goodrich company.

At the annual meeting of the Mansfield Rubber Co., at Mansfield, Ohio, on January 11, the directors elected were: C. H. Walters, F. H. Walters, and F. M. Bushnell, of Mansfield; C. R. Grant and F. A. Wilcox, of Akron; Dr. James E. Waite, of Lodi; and Dr. R. C. Kinnaman, of Ashland, Ohio. Officers elected.

President—FRANK A. WILCOX.
Vice-President—CHARLES H. WALTERS.
Treasurer—F. M. BUSHNELL.
Vice-President—CHARLES H. WALTERS.

GOODRICH BUILDING DETAILS.

THE overflow from all their crowded departments will be housed in the two factory buildings just completed by The B. F. Goodrich Co. The work of installing machinery has been going on all through the month. The greatest part of the space will be devoted to the making of tires. The buildings are six stories high, 80 feet wide and the longer one, flanking Goodrich street, is 400 feet long.

It is understood that the directors of The B. F. Goodrich Co. have decided to proceed in the early spring with the construction of six-story factory buildings on the land acquired during the last year on Falor street and along the Ohio canal, a sum approaching \$1,000,000 having been appropriated already for this purpose.

GROWTH OF THE DIAMOND PLANT.

EXCAVATIONS have been started for the third of the large six story factory buildings planned by The Diamond Rubber Co. on Jackson street. The first of these was built two years ago and now houses the insulated wire department. The second has just been completed, and is being occupied by tire making apparatus chiefly. The old tire building, completed in 1903, is being converted into a warehouse. The third building was decided upon at the meeting of directors after the annual shareholders' meeting in October. It will be built in the form of an L, connecting the other two buildings, with one arm along Jackson street and the other arm extending north from Jackson street parallel with the other two structures. It will be approximately 250 feet long on Jackson street and 140 feet long in the other direction. The new Diamond office building has been completed and is being occupied by the various departments which have been overcrowded in the present offices. Laboratories are being equipped on the lower floor. This building, located on Falor street, is three stories high and provides 12,000 square feet of floor space. The old offices are being lengthened by the inclusion of 3,000 square feet taken from the factory.

THE GROWTH OF AKRON.

TENTATIVE foot frontage valuations placed on Akron property by the quadrennial board of real estate appraisers, now in session, show that land has increased in value from 100 to 500 per cent. during the ten years since the last appraisal was made. The highest valuation in the city is on the downtown property and is fixed at \$1,150 a foot front, exclusive of buildings.

Contracts have been let by the Second National Bank of Akron for the construction of a six-story office building, 111 x 140 feet in ground dimensions. It will be built at once. Several rubber manufacturers are directors and stockholders in the institution, Mr. F. H. Adams, treasurer of the Goodyear Tire and Rubber Co., having been elected to the board on January 12.

AIR VERSUS GAS FOR TIRES.

EXPERIMENTS were made recently at the plant of The Diamond Rubber Co. to determine whether or not gas is superior to air for inflating tires. Gas is often used in garages to pump into tires because it is quicker. The Diamond experimenters came to the conclusion that air is better. Three tires were inflated with air to a pressure of 100 pounds, and three other tires filled with carbonic gas at the same time and to the same pressure. Exactly seven days later the air filled tires registered 92 pounds each and the three gas inflated tires showed only 41, 50 and 51 pounds pressure. Because gas escapes from a tire more rapidly than air, tire experts of the Diamond company condemn its use as an inflation medium.

OTHER NEW FACTORY CONSTRUCTION.

LEAVE has been granted by the secretary of state to the Stein Double Cushion Tire Co. to increase their capital stock from \$100,000 to \$200,000. The expansion is intended to accommodate the addition of automobile tires to the company's products. New machinery has been purchased and installed to provide for the manufacture of 100 tires of the "lap-lock" type per day. The company, it is reported, intend to put up an additional building next summer. The officers of the company are C. K. Sunshine, president, and M. M. Neuman, secretary and treasurer.

In spite of heavy snow and frozen ground a steam shovel was put to work early in January on the excavations for the additional buildings planned by the Goodyear Tire and Rubber Co. The digging was started as soon as the final arrangements for the vacation of Prune street were completed with the city. All possible haste will be made in rushing the buildings to completion.

Protests by property owners against the vacation of city streets in the site of the new Firestone factory have delayed the preparations for construction. Negotiations are under way, however, for the settlement of the disputes and Mr. H. S. Firestone says he will be able to make a definite announcement as to the factory plans by the middle of February.

AEROPLANE TIRES.

THE B. F. Goodrich Co. are about to place on the market as a regular product an aeroplane tire. Several hundred have already been manufactured in the Akron factory for the Herring-Curtiss Co., of Hammondsport, New York, manufacturers of the Glenn H. Curtiss flying machine. The company is expecting the field to develop a business well worth getting. The construction of the tire is a modification of the Palmer bicycle tire, which has been manufactured by the Goodrich company for a number of years. Buoyancy and strength are the qualities which have been sought. The tires are smaller than bicycle tires, being 20 inches in diameter, while the tubes are thicker, being 2 and $\frac{1}{4}$ inches in tube diameter, while the average bicycle tire is $1\frac{1}{2}$ inches through. Orders are also being taken from other aeroplane manufacturers.

RETIREMENT OF MR. FOLGER.

MR. WALTER A. FOLGER, who retired as treasurer of The B. F. Goodrich Co. at the recent meeting, intends to leave active participation in business altogether and will go with his family for the Pacific coast, where they will spend several months. Mr. Folger is 52 years old and has been treasurer of the Goodrich company since 1894, leaving the position of cashier of the Second National Bank of Akron to accept that office. Reared in a nearby country town he worked his way up from a clerk's position and in his years of efficient service for the Goodrich company has well earned the right to retire. Mr. Folger is succeeded by William A. Means, who has been assistant treasurer.

The Rubber Trade at Trenton, New Jersey.

By a Resident Correspondent.

THE Ajax-Grieb Rubber Co., following their rapid extension, have just completed another addition to their factory, and have also purchased a large plot of land for further growth. The real estate purchased is a tract 600 x 200 feet, on Breunig avenue, opposite the present main buildings.

The building just completed measures 100 x 60 feet, and is three stories high. It is a substantial structure with concrete main floor, corresponding with the other main buildings. The company have also installed a lot of new machinery, including a battery of improved vertical hydraulic vulcanizers and a series of the latest tire wrapping machines.

FIRE AT MANSFIELD.

FIRE of unknown origin destroyed one of the buildings of the Mansfield Rubber Co., at Mansfield, Ohio, on January 12. The structure, built of brick, 44 x 84 feet in ground dimensions, was used as a machine shop and storehouse. Crude rubber estimated to be worth \$10,000 was lost, and the entire loss is placed at \$16,000. President F. A. Wilcox, of Akron, says that the building will be restored at once and that the fire will not interrupt the manufacture.

PERSONAL MENTION.

MR. B. G. WORK was elected to succeed Mr. A. H. Marks as president of the Portage Country Club at the annual meeting early in January. Mr. Marks was made secretary and chairman of the house committee. Mr. C. B. Raymond, Mr. A. H. Noah, Mr. W. B. Miller, and Mr. H. S. Firestone were elected to the board of directors. During the spring extensive improvements are to be made on the golf greens. The names mentioned are those of prominent members of the Akron rubber trade.

Mr. H. S. Firestone, president of the Firestone Tire and Rubber Co., and Mr. F. A. Seiberling, president of the Goodyear Tire and Rubber Co., were elected to the board of directors of the National City Bank of Akron on January 11.

A number of rubber manufacturers heard Dr. W. H. Tolman, director of the New York Museum of Safety and Sanitation, lecture on questions of safeguards for the workmen in factories, in this city, under the auspices of the Akron Chamber of Commerce, January 13.

BRIEF NOTES.

WHILE details of The Diamond Rubber Co.'s new footwear department are being steadily worked out under the direction of Mr. Charles P. Hart, the company are not yet ready to make any definite announcement as to the personnel of the selling department or the list of goods to be manufactured. They assure, however, that the new department will turn out a very complete line of footwear, ranging from tennis shoes to hip boots.

The Akron Rubber Mold and Machine Co., the incorporation of which was reported in the last INDIA RUBBER WORLD (page 149), have made some important contracts for supplying molds to rubber factories.

S. G. Carkhuff, secretary of the Firestone Tire and Rubber Co., spent January in a tour through the west, visiting the company's various branches and agencies in western and Pacific coast cities.

The Akron tire industry was well represented at the two automobile shows in New York in January. From the Goodrich company went H. E. Raymond and A. J. Wills; from the Diamond company, James A. Braden, Theodore Weigele and O. J. Woodard; from the Goodyear, G. M. Stadelman, W. D. Shiltz, F. A. Seiberling, C. W. Seiberling and P. W. Litchfield; and from the Firestone, H. S. Firestone, R. J. Firestone, A. G. Partridge and J. F. Singleton.

The concern now have about 115,000 square feet of floor space, including about 75,000 square feet in the new plant, and 40,000 square feet in the old Grieb plant and in the storehouses. In connection with the splendid power plant the company have installed their own electric lighting outfit. The buildings erected since the consolidation with the Grieb company are model structures and the equipment is the best that can be obtained.

The company are very busy, the factories running night and day. The outlook is that the rush will continue for at least six months. Automobile tires form the main line of the company, and in this department the trade is exceptionally brisk. The

concern is having a big run on the "Ajax" non skid checkered tread automobile tire, which has been out about a year. In their druggists' sundries and other lines the company are also doing well, with the trade outlook good.

* * *

THE Luzerne Rubber Co., manufacturers of hard rubber goods, have plans drawn for an addition to their plant, measuring 200 x 40 feet and two stories high. The building will be of concrete construction. A section of it 70 feet long will be erected as soon as the weather opens enough for building, and the remainder will be constructed later. The company report business good and the trade outlook bright. In the electric line trade is good, and the indications are that in the automobile line there will be an increase in business. A representative of the company stated that one result of the recent automobile exhibitions in New York was to greatly increase the demand for magnetos in the equipment of cars, and this will mean a boom in the manufacture of the hard rubber parts. The Luzerne company have already had several of their orders doubled since shows opened.

* * *

JOHN E. CLANCY has tendered his resignation as secretary of the Mercer Rubber Co., of Hamilton square, and has retired from active duties in connection with the company. He is still a director, however. He has been succeeded by F. R. Sayen, who has been made secretary and assistant treasurer. W. H. Sayen, Sr., is president, and W. H. Sayen, Jr., treasurer. The company report business very good, with prospects looking bright. The factory is running overtime in the hose department. An additional story 100 x 50 feet has been erected on one wing of the

plant, to take care of a largely increased trade in fruit jar rings and similar goods.

* * *

CLIFFORD H. OAKLEY, president and general manager of the Essex Rubber Co., joins in the general statement in Trenton that 1910 will be a good year for the rubber manufacturer. His factory is busy and the outlook is for increased business. The concern makes rubber specialties, and though it is one of the newer companies in the Trenton market, Mr. Oakley says a nice business is being built up.

* * *

OWING to increased business the Vulcanized Rubber Co. have had to increase the boiler capacity of their plant in Morrisville, Pennsylvania. An addition has been erected to the boiler house and a new boiler installed. The factory is busy and officers of the company state that the business outlook is very promising.

* * *

THE Atlas Rubber Co., which manufactured a patented armored hose, have gone out of business after an existence of only about two years. Their retirement from manufacturing followed litigation over the patent. The concern was capitalized at \$125,000 and made its hose first at the plant of William R. Thropp, manufacturer of rubber making machinery, and later at the factory of the United and Globe Manufacturing Co.'s.

* * *

WILLIAM R. THROPP, builder of rubber manufacturing machinery, is making a special 60-inch vulcanizer, a jacketed vulcanizer, and several heating tables 18 x 7 feet for the New Jersey Rubber Co., of Lambertville.

The Rubber Trade at San Francisco.

By a Resident Correspondent.

UNINTERESTING but engrossing is the work of stock taking and inventory, which holds the men of the rubber establishments of this city, and as to trade conditions they seem to have little voice, other than that there seems to be more money for the payment of bills, which is making collections better, and that the outlook is good for a prosperous new year. There is improvement in the tone of business everywhere, as evidenced by a lively holiday trade which the general run of retail stores enjoyed. Confidence is greatly restored and on all sides there is evidence that business has come back to a normal state and that commerce is entering upon an era of prosperity. One of the best things noticeable in and about San Francisco is the civic pride which is being aroused, and the way in which business men are taking hold of whatever tends to advertise and make more desirable their naturally favored city.

* * *

PROPRIETORS of rubber houses in this city are heard to say that San Francisco is overrun with agents and small dealers who carry lines of rubber goods. "I know of no city in the Union," said one dealer, "that is so overrun with men who make it their business to supply mechanical goods in small quantities." Another merchant stated that many of these sprung up as a result of the 1906 fire, at a time when it appeared that the older houses were done for and that there was room for a new set. All of the older houses are in business the same as ever and these new men are doing the best they can, some of them no doubt making good, some possibly not, but their presence of course tending to cut prices and split up the business. There is and can be no complaint against the men who are out for themselves, individually or collectively, as any dealer in considering the oversupply willingly admits that each man has a right to compete for his own welfare. It is but a passing comment on a condition which seems to exist. "The local rubber business might be said to be congested," said another dealer. "I believe,"

he continued, "that if this city were suddenly isolated so that the supply of mechanical rubber goods were cut off entirely, there would be enough stock on hand to last for more than two years."

* * *

THE Young Sanitary Manufacturing Co. are now located on First street, with an initial plant to start the making of the sanitary toilet seats. Shortly a big factory will be established.

The Bulger Patent Hose Coupling Co. has been incorporated in San Francisco, with a capital of \$100,000. J. D. Spreckels, a capitalist of this city, is at its head, and the production of this invention will be commenced. Messrs. Bulger and Grant, owners of the patent, have successfully launched the company and expect great things of their threadless hose coupling.

The report from the Plant Rubber and Supply Co. is that trade is picking up a little, and that the indications for the new year are very good. Mr. B. T. Alexander, formerly the treasurer, is no longer connected with the firm, having disposed of his interest to Mr. Plant and Mr. Crandler.

* * *

MR. ALEXANDER, formerly of the Plant Rubber and Supply Co., has become more heavily interested in the Mill and Mine Supply Co., having purchased the interest formerly owned by William Patterson, who is no longer connected with that firm.

Mr. Bennett, representing the New Jersey Rubber Co., has been up from Los Angeles, visiting his friends in the local trade.

Since Mr. U. R. Grant has gone into the specialty manufacturing business, his former place with the Eccles & Smith Co. is being filled by Mr. Shaw, who quit his position with the Revere Rubber Co. to take Mr. Grant's place.

The Bowers Rubber Works suffered several thousand dollars loss by a fire which recently consumed a portion of the upper floor of their reclaiming plant at Black Diamond, California. The loss was not so heavy as at first reported, and is fully covered by insurance. The factory is in operation as usual. Mr.

Chase, manager of the firm, says of trade conditions that from their point of view conditions are very favorable.

* * *

C. E. MATHEWSON, Pacific coast manager for the Diamond Rubber Co., left recently for New York to attend the automobile shows, and before returning will spend a little time at Akron. For the year of 1909 this firm has fared well on the coast, according to returns shown by Mr. Mathewson, by D. E. Hughes, the agent at Seattle, and by the Los Angeles agent.

As a result of contributions given from the various rubber houses of this city, "Bebby" Brightsman is now in the sunny, hardy climate of Arizona, with plenty of money to stay as long as he likes and recuperate his health. Mr. Brightsman was formerly with the Goodyear Rubber Co.

* * *

MR. L. L. TORREY reports an active business for the Pennsylvania Rubber Co. Mr. J. H. Reed has been appointed to act as manager for the branch just established at Los Angeles. Mr.

Reed was one of the partners of Coombs & Reed, formerly selling agents of the company at Los Angeles. The new establishment is located at No. 930 South Main street.

Mr. A. Leonard, manager of the W. D. Newerf Rubber Co., local distributor of the Goodyear tires, reports an exceptional record for the past year in automobile tires. He believes that the coming year will be better still.

Reports from Honolulu indicate that the rubber business there is in a very flourishing condition, as shown by the reports at the annual meeting of the Hawaiian Rubber Growers' Association, held in December.

Captain F. H. Gerry, who has been appointed mining representative of the Revere Rubber Co., with offices at their new store, No. 543 Market street, has charge of their trade in the mining country in the western parts of the United States, Mexico, and Canada, and also in Alaska. He was some time branch manager at Baltimore, Maryland, for the Boston Woven Hose and Rubber Co.

The New Rubber Chemical Section.

AT the recent meeting of the American Chemical Society, held in Boston, during the closing meeting of last year, an action was taken which will undoubtedly prove of great interest to the rubber industry. In the first place, a Rubber Section was organized. The organization of this section brought out the fact that there was ample room and a great desire for such an organization, as the discussions which took place during the two sessions of the section were extremely lively.

At the organization of this section Mr. Charles C. Goodrich, of New York and Akron, was elected president, and Dr. Frederick J. Maywald was elected secretary. The section also appointed a committee, consisting of Dr. Charles Knight, of Buchtel College, Akron, Ohio; Edward A. Barrier, of the Factory Mutual Laboratories, Boston, Mass.; Frederick J. Maywald, of New York; Milton E. McDonald, of the chemical staff of the Pennsylvania railroad; William G. Hill, of the American Rubber Co., East Cambridge, Mass.; Sheldon P. Thatcher, of the Peer-

less Rubber Manufacturing Co., New Durham, N. J.; W. C. Geer, of The B. F. Goodrich Rubber Co., Akron, Ohio; Mr. Oelschlaeger, of The Diamond Rubber Co., Akron, Ohio; and Harvey M. Eddy, of the Boston Woven Hose and Rubber Co., to take up the question of working out a standard method for the examination, both chemical and physical, of manufactured and crude rubber.

This committee will first take up the question of the examination of compounded rubber, and then, in due time, the methods of examination of other rubbers. The first step the committee will take along the line of the examination of compounded rubber will be to ask the various rubber manufacturers to send to the committee—confidentially, or anonymously if they wish—the methods of analysis and examination which are in use at their laboratories. These various methods will then be discussed by the committee, and from the information so obtained, the methods of analysis and examination which appear to be most generally used will be laid out by the committee, and these proposed methods will then be tested out practically on standard samples by the committee itself. When the committee is reasonably satisfied that the proper methods have been obtained, samples will be sent to other



DR. CHARLES KNIGHT.

[Chairman of Committee to Organize Standard Methods of Rubber Analysis.]



FREDERICK J. MAYWALD, F. C. S.

[Secretary of the Rubber Section of the American Chemical Society.]

rubber chemists who wish to co-operate with the committee in obtaining standard methods.

There is no question that there is the greatest need, at the present time, for such work as this committee proposes to undertake. The members of the committee need no introduction to the rubber manufacturers, and consequently there need be no hesitation on the part of the rubber men to give the committee the fullest possible information. No public use will be made of any such information obtained, without the express permission of the sender. Thus it will not be possible to trace the source of information, unless the sender so desires.

Communications for the committee may be sent to Mr. Charles C. Goodrich, No. 2 Rector street, New York; Dr. Charles Knight, Buchtel College, Akron, Ohio; Frederick J. Maywald, No. 89 Pine street, New York; or to any member of the committee.

THE AMERICAN CHEMICAL SOCIETY.

IN connection with the recognition of the rubber industry by the formation of rubber section by the American Chemical Society at the annual meeting of the latter, held in Boston during the closing week of last year, some account of the purposes and history of the American Chemical Society doubtless will be of interest to the readers of THE INDIA RUBBER WORLD.

The history of the society has been one of steady growth and advancement. It had its inception in 1874, when a representative group of chemists met at Northumberland, Pennsylvania, to celebrate the centennial of the discovery of oxygen by Dr. Joseph Priestly, and the other remarkable discoveries and achievements which occurred in the year 1774.

Out of this meeting grew the American Chemical Society, which was started in New York City in 1876. Professor C. F. Chandler, of Columbia University, took a leading part in the organization of the society, and the late W. M. Habirshaw, well known throughout the rubber trade, was a member of the committee on preliminary organization. The first membership list contained the names of 53 resident and 80 non-resident members, a total of 133. The present membership is about 4,800, making it one of the largest scientific bodies in the world, and indicating a remarkable growth. From its organization the leading chemists of this country have been identified with the society, and it bears on its roll of honorary members the names of those whose achievements have made them famous throughout the world.

The constitution of the society declares its object to be "the advancement of chemistry and the promotion of chemical research." Membership is not confined to professional chemists, but is open to any person interested in the promotion of chemistry. There are also corporation members, which corporations (or firms or association, as the case may be) have the privilege of being represented by a delegate at meetings of the society, and of receiving the publications of the society.

For a number of years after the organization of the society, all its meetings were held in New York City; but it was found that this led to a falling off of interest in the non-resident members, and the policy was adopted of forming local sections. The society now works under this plan. There are 32 local sections scattered throughout the country, four new sections having been organized within the last year.

The society has grown so large and covers so much ground that it has now been organized into professional divisions and sections, such as the Division of Agricultural and Food Chemistry, Division of Fertilizer Chemistry, Division of Industrial Chemists and Chemical Engineers, etc. The Rubber Section is the latest one of these sections to be organized, and expects before long to graduate into the division class, which is larger than the section.

The society holds two general meetings a year, each time in a different place from that of the last meeting, and the local sec-

tions hold frequent meetings, usually once a month. The next general meeting will be held at San Francisco in the coming summer.

Three journals of great value are published by the society—the *Journal* of the American Chemical Society, containing papers of general interest contributed by members; *Chemical Abstracts*, a compilation of abstracts from chemical publications, both American and foreign; and the *Journal* of Industrial and Engineering Chemistry, devoted to applied chemistry. These are sent to all members of the Society in good standing. The last named publication was started only a year ago, but has already proved of great value to the members; likewise the Abstracts, started in 1908. The *Journal* has been published from the first.

The various local sections maintain reference libraries of chemical literature, for the use of the members.

The most rapid growth of the society has occurred in the last few years, and is an indication of the remarkable increase of interest in chemistry. The coöperation of such a large body of members greatly broadens the field of usefulness of the society, and enhances its value to the individual member. The benefits of association with members of the same profession and of the excellent journals provided by the society are of course manifest. The stimulation given by research and the interchange of ideas redounds to the benefit of the manufacturer, and it is a creditable fact that manufacturers are realizing this more and more.

The general officers of the society for the present year are: Professor Wilder D. Bancroft, of Cornell University, president; Professor Charles L. Parsons, New Hampshire College, Durham, New Hampshire, secretary; Dr. Albert P. Hallock, of New York, treasurer.

RUBBER PREPARATION IN TOBAGO.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Well may the little island of Tobago rejoice in the success of one of her rubber planters, who has recently discovered and patented a method of preparing rubber from fresh latex in sheets of any given size by means of a few minutes' spin in a centrifugal specially adapted for the purpose. The sheets come away from the machine perfectly coagulated, and only need the usual time in the drying house. In the machine used, four sheets 10 x 6 inches are made at one spin, the thickness being regulated by the amount of caoutchouc contained in the rubber fluids or latex. The rubber is of excellent quality and both *Castilloa* and *Hevea* can be treated. Fuller particulars with specifications will shortly be available. The makers are the celebrated firm of Messrs. John Gordon & Co., Fenchurch street, London, and the inventor is Harry S. Smith, of Caledonia, Tobago, who is in a position to cry "Eureka" (I have found it). As is the case with nearly all useful inventions the principle is remarkably simple and the wonder of those who have inspected it is that it was not discovered long ago. The machines will shortly be put upon the market in sizes to suit large and small proprietors.

J. H. HART, F. L. S.

Trinidad, December 20, 1909.

THE tenth annual edition of "The India-Rubber, Gutta-Percha and Electrical Trades Diary and Year Book," dated 1910, brought out by *The India-Rubber Journal*, is based upon the same plan as the preceding numbers of the series. The volume is larger, however, on account of the various departments of information suited for ready reference by rubber men having been enlarged. The book includes the usual blank pages for daily memoranda throughout the year.

THE gross product of The Meriden Rubber Planting Corporation at Tula de los Tuxtlas, Vera Cruz, Mexico—well dried *Castilloa*—was sold about December 1, on the plantation, at \$1.50 per pound.

The British Rubber Craze.

TO the list of 76 new plantation companies having to do wholly or in part with rubber, registered, in Great Britain since July 1, 1909, which appeared in the last INDIA RUBBER WORLD, may now be added 46 other companies, completing the record for the last six months of the year. The total number of such companies is 122 and the total amount of capital stated £8,641,427 [= \$42,053,504.50]. As mentioned last month, this list has no relation to the companies formed meanwhile in other European countries, and those brought out in Ceylon and elsewhere in the Far East. Without doubt the totals for the six months represented the capitalization of \$50,000,000. The companies not mentioned in the first list are:

CEYLON.	
Molesworth Brothers' Rubber Estates, Limited; December 3	£70,000
Walaboda Tea and Rubber Co., Limited; December 7..	10,000
FEDERATED MALAY STATES.	
Bujong Rubber Estate, Limited; Selangor; December 3..	£40,000
Dennistown (Krian, F. M. S.) Rubber Estates, Limited; Perak; November 20.....	150,000
Straits Rubber Co., Limited; Perak; December 18.....	350,000
Glasgow Malayan Syndicate, Limited; December 6.....	10,000
Bradwall (F. M. S.) Rubber Estate, Limited; December 11	90,000
Cheviot Rubber, Limited; December 13.....	90,000
Hillside Rubber Estate, Limited; November.....	39,000
Chota Rubber Estates, Limited; Selangor; December 15..	50,000
Malay and Mid-East Rubbers, Limited; December 10....	6,000
Bagan Serai Co., Limited; Perak; December 17.....	40,000
Rubber Estates of Krian, Limited; November 19.....	100
Teluk Anson Rubber Estates, Limited; November 13....	60,000
Selaba Rubber Estates, Limited; Perak; November 10..	125,000
Bikam Rubber Estates, Limited; Perak; November 8..	60,000
STRAITS SETTLEMENTS.	
Sempah Rubber Estates, Limited; Province Wellesley; December 7	£30,000
Sungei Bahru Rubber Estates, Limited; Malacca; December 13	75,000
Sedenak Rubber Estates, Limited; Johore; December 2..	100,000
Arundel Rubber Estates, Limited; November 25.....	8,000
Kelantan Rubber Estates, Limited; Kelantan; November	60,000
INDIA.	
Orkaden River (Travancore) Rubber Co., Limited; November 11	£25,000
Kedamakal Rubber Syndicate, Limited; December.....	30,000
Majagram Tea Co., Limited; Assam; December 10.....	55,000
Indian Peninsula Rubber and Estates, Limited; November 15	150,000
DUTCH EAST INDIES.	
London Sumatra Rubber and Produce Estate, Limited; Sumatra; December 3.....	£80,000
Javorneo Syndicate, Limited; October 22.....	375
Aengsono (Java) Rubber Plantations, Limited; November 19	30,000
English Nederlandsche Rubber Exploitable Syndicate, Limited; November 4.....	2,000
EAST AFRICA.	
British East Africa Rubber and Cotton Estates, Limited; December 22.....	£50,000
Suahili Rubber and Fiber Co., Limited; East Africa Protectorate; November 18.....	5,000
CENTRAL AFRICA.	
Cie. des Plantations de Mayumba; French Congo; November 10.....	£42,000
Chipande Coffee and Rubber Company, Limited; November 9.....	10,000
WEST AFRICA.	
French Ivory Coast Syndicate, Limited; December 13....	£3,050
African Lumber and Rubber Syndicate, Limited; November 8	3,000
Mincing Lane Rubber and Produce Co., Limited; November 8	2,000
Boinsu Estates Syndicates, Limited; Gold Coast; November 16	8,000
Avrehoo Rubber Estates, Limited; Gold Coast; November 17	65,000

BRAZIL.	
Rubber and Coffee Estates of Brazil, Limited; November 19	£24,000

GENERAL.	
[Including companies for which no region is named.]	
Kerala Rubber Co., Limited; December 1.....	£40,000
Elphil Rubber Co., Limited; November 30.....	20,000
Margarini Rubber Syndicate, Limited; December 17....	4,000
Menabe Syndicate, Limited; December 11.....	2,537
Tanah-Abang Syndicate, Limited November 19.....	5,000
H. N. Syndicate, Limited; November 20.....	1,000
B. N. B. Plantations, Limited; October 9.....	3,005
Tropical Development Association, Limited; November 15	3,015
Rubber Options, Limited; November 13.....	5,000
Parie Buntar Syndicate, Limited; November 5.....	6,000
Scottish Tea and Rubber Trust Co., Limited; November 4	150,000

THE PROSPECTUSES ANALYZED.

THE customary form of prospectus, by means of which British-ers are invited to invest in rubber, starts out by stating that the company has been formed "to acquire, maintain, and further develop" certain estates, comprising so many acres, "planted with rubber and"—coccoanuts or something else—all of which has been reported on by "the late manager" of the Vallambrosa or some other widely known successful rubber estate. It is not recalled that during the period covered by this review any rubber plantation company has been floated in London on the basis of known or assured production of a matured rubber estate. It is altogether a question of estimates, on the idea that if some one estate has proved profitable, all neighboring properties must prove equally so. It may be recalled here that when the Vallambrosa company, for example, was formed, the shares were taken by the proprietors of the estates involved, and the public was not invited to come in! Which may serve to explain the 80 per cent. dividends of the Vallambrosa company.

The meat of all the rubber plantation prospectuses which occupy so much space in the advertising columns of journals from *The Times* down is to be read in the provisions which the law requires to be printed by way of contracts to which the newly formed company is liable. For example, in the prospectus of a single company, advertised on November 9 last, no fewer than nine such contracts are enumerated, beginning with the original options for purchase, transfers, and so on, all winding up with some such stipulation as—

The said K— and the said W— will be entitled to the difference between the sum of £75,000 payable by the vendors under contract 7 and the sum of about £60,000, which has been or will be paid [the difference amounting to about \$30,000], in respect of the properties or the agreements relating thereto above referred to. The vendors are a syndicate incorporated as a private company in England and has [sic] a nominal capital of £6,000, divided into shares of £1 each—[and so on, *ad infinitum*].

No wonder that many readers of column after column of such details fail to suspect that the whole transaction is a series of private sale after sale among the same promoters of the same properties, and the final unloading of the whole upon the public. And after that the public may look out for itself. The promoters can hardly be blamed, however, in view of the anxiety of the public to buy anything under the name of "rubber." Items like this are not unusual in the financial columns of London newspapers:

The 30,000 shares in the S— Rubber Estates, Limited, having been over-subscribed, the list was closed yesterday, Wednesday, at 4 o'clock. [The list was advertised to remain open until Thursday.]

These are the exact words of a notice published in respect of an estate in Malaya, capitalized at £100,000 [= \$486,650], and so manipulated that only £30,000 was offered to the public. But there is no promise of rubber for three years to come.

What follows relates to an entirely different company, and is quoted from *The Financial News*:

At the "statutory" meeting of the new Jangen (Java) Rubber Estates Co., Limited, the chairman said: "The prospectus was issued on December 6, asking for applications for £30,000 debentures, for which we received application for the sum of £120,000, but as the old shareholders had a claim to preferential treatment, and applied for a large sum, the directors were able to allot only a small number of debentures to the public. - - - Your directors anticipate that tapping will probably commence during the latter part of 1910 over a small acreage."

The appended extracts from recent rubber prospectuses may prove of interest:

THIRTY POUNDS PER TREE PER YEAR.

FROM the prospectus of Dennistown (Kriass F. M. S.) Rubber Estates, Limited, registered in London in November, 1909, with £150,000 [= \$729,975] capital stated, to acquire four existing rubber plantations in Perak. (The directorate embraces some of the most reputable names connected with practical rubber culture today):

[The expert on whose report this company was floated said]: "Owing to the richness of the soil and its proximity to water, the yields will greatly exceed that on most estates in the Federated Malay States, and in this connection it may be interesting to mention that in the hospital grounds at Pavit Buntav [which

at one time formed part of the estate lately conveyed] there are seven 16-year old Pará rubber trees which are being tapped on behalf of the government under my supervision. These trees gave an average of nearly 30 pounds dry rubber each last year, and for the first six months of this year [1909] an average of 19 pounds 6 ounces dry rubber each."

PROMOTERS CANNOT WAIT FOR REPORTS BY MAIL.

FROM more than one prospectus.

"The statements in this prospectus relating to the estate are based mainly upon the cable report by Mr. D—, above referred to."

"Mr. C— in the above report gives no estimates as to yield; he was accordingly asked to do this, and a cable has been received from him giving the following, etc.:"

THE CHINESE KNOW WHEN TO GET OUT.

THE Chinese, who have settled in large numbers in the United States, where they are excelled by no class as peaceable inhabitants (they cannot become citizens), have gained the impression there of never conducting a business proposition at a loss.

A review of a recent "batch" of nine new rubber plantation prospectuses indicates that in the case of five of the enterprises, Chinese vendors stand to profit, more or less, by the transfer of ownership of property.

Congo Rubber and the Antwerp Market.

IN their annual review of the Antwerp rubber market for 1909 Messrs. Grisar & Co., the official brokers, again confine their remarks mainly to the decline of the natural supplies in the Belgian Congo (formerly the Congo Free State), and the outlook for rubber cultivation there. First, however, may be introduced a table of the arrivals of rubber at Antwerp during the last ten calendar years:

YEARS.	Congo State.	Other Sources.	Total.
1900	4,902,003	796,032	5,698,035
1901	5,417,456	431,742	5,849,202
1902	4,992,954	411,031	5,403,985
1903	5,180,401	546,082	5,726,483
1904	4,723,618	1,040,238	5,763,856
1905	4,442,607	1,271,121	5,713,728
1906	4,593,759	1,178,303	5,772,062
1907	4,346,141	708,332	5,054,473
1908	4,262,531	772,813	5,035,344
1909	3,492,332	1,193,626	4,685,958

Messrs. Grisar & Co. say:

"If, in consequence of the changes introduced in the economical régime of the Congo, and in addition, the remission of the tax on certain centers of population (which heretofore devoted themselves to gathering rubber), there is a rather serious diminution in importations [at Antwerp], we are able to confirm, on the other hand, an increase in the importation of other kinds, which continue to find an easy and remunerative sale in our market, at approximately, in general, the figures obtained elsewhere for these same varieties.

"One fact of prime importance for our market has been brought out in the course of the past year. We mean the annexation of the Congo to Belgium. Viewing the matter solely from the viewpoint of the importance which this event cannot fail to have for the Antwerp market, we believe it interesting to examine briefly the great reform measures which will be regularly introduced in our new colony.

"The government, in fact, has just decided to abandon to private enterprise the exploitation of rubber in the Belgian Congo. This measure will become effective in three successive periods—i. e., at intervals of one year, beginning with the first of next July.

"Another change, the importance of which will not escape the attention of well informed persons, has just been made in the

economic organization of the colony: The Belgian government, convinced of the great importance for the future of coördinating the system of plantations, the latest and most authoritative data concerning this industry (comparatively a very new one) in order to have everything run smoothly in the future, has decided to take this question under its patronage.

"The obligations imposed on every one who gathered rubber in the lands or forests of the State to plant a number of rubber trees has been replaced with a tax of 40 or 20 centimes, according to the method of rubber extraction from trees, *lianes* (vines), or *rhizomes* (root rubber). This tax is levied on the amount of rubber in kilograms exported.

"This measure has been forced upon the government because the application of the legal provisions has not produced the results anticipated—the coördination of the plantations having been found impracticable, as much on account of the imperfect technical training of the persons employed for this purpose as by reason of the difficulties daily to modify essentially the systems themselves that are put into practice.

"The amount of this tax will be applied to a special fund for replanting, in view of the regular establishment of state plantings; these will comprehend about 2,000 hectares [= 4,942 acres] annually, so that in 10 years the colony would come to have a considerable fund, the revenues from which will largely increase the budget and rapidly diminish the expense of operation.

"We might add that the government is prepared to encourage private enterprise in the direction indicated, and to this end will put at the disposition of private enterprise all the data and information that it possesses, as well as vacant land suited to the culture, at very attractive figures.

"In conclusion, we would also point out that the greatest development of the Belgian Congo henceforward will be due to the cultivation of the *Hevea*. That of the *Funtumia* will be of secondary importance, the same as the planting of other rubber trees and *lianes*.

"There is no doubt that the Belgian parliament will grant the necessary approbation for the carrying out of this fine programme, and we have this to thank for being able to face the future with great confidence.

"There is nothing special to be said this year about the quality of the Congo rubber, which, in general, has been some-

what improved. The occasional small lots from the [Congo] plantations have been very much appreciated by the purchasers and brought very high prices.

"The hopes that were entertained by the proprietors of the important plantations in the Far East were fully borne out during the year just past. The growth of the trees leaves nothing to be desired, and the returns of rubber exceed the most optimistic forecasts, increasing in due proportion with the development of the trees. The quantities exported (in pounds) have been:

YEARS.	Ceylon.	Straits.	Total.
1900.....	8,233	....	8,233
1901.....	9,072	....	9,072
1902.....	15,592	....	15,592
1903.....	41,798	1,000	42,798
1904.....	77,212	13,000	90,212
1905.....	168,547	207,500	376,047
1906.....	327,024	1,028,792	1,355,816
1907.....	556,080	2,278,870	2,834,950
1908.....	912,124	3,539,922	4,452,047

"In view of these results, and although it may be premature to regard the cultivation of the *Hevea* in all the Belgian Congo territory as an assured success, it is nevertheless interesting to be able to state that the attempts made in our colony (and especially in the equatorial region), in extraction from the first *Hevea* introduced there, have given very encouraging results, and for the most part, as favorable as those obtained in the Malay archipelago, both as regards the amount of rubber gathered and the quality of the product obtained.

"Prices.—Before reviewing the violent fluctuations to which rubber has been subject during the year in question, it seems to us interesting to recall the fact that in February, 1908, during the course of the panic in America, the Pará sorts touched the lowest point—i. e., 2s. 9d. [=67 cents]. Toward the end of the year, however, with a constant improvement in the situation, the Pará recovered the price of 5s. 1d. Reviewing the year 1909, we find that from the early months in the year there was

a constant shipment of the article for the American account at increasingly high prices, until October, when the Pará touched the exceptional figure of 9s. 1d.—the highest price known in the history of the trade.

"This enormous rise seems to have been due to the aftermath of the financial crisis, which had left in America in 1908 a large shortage in the manufactured article. On the other hand, the enormous development of the automobile industry in America must not be ignored in accounting for this tremendous consumption.

"In the closing months of the year, however, calmness again reigned and the prices of the Pará declined slowly but steadily, closing at 7s. 6d. This continuous decline, coincident with the abundant harvest now being in the Pará, seems attributable to the general lack of purchases by the consumers and importers, who are expecting to be able to lay in a stock in this way under favorable conditions. In fact, the decline had little effect on the Congo varieties, which closed in great demand.

"The different Congo varieties did not always follow proportionately the ascending prices of the Pará during the long period of high prices, and to these circumstances are due the steady prices constantly maintained by the Congo varieties at the close of the year, at the time that the Pará steadily declined to 7s. 6d."

COMPARATIVE ANTWERP PRICES (FRANCS PER KILO).

	Dec. 31, '08.	Dec. 31, '09.	Increase.
Kasai, red, l.....	12.35-12.85	14.00-14.37	11.86%
Loanda 11 kind.....	8.75- 9.25	11.00-11.50	24.32%
Kasai, black.....	12.35-12.85	14.00-14.37	11.86%
Equateur, Ikelemba, Lopori, etc.....	12.35-12.85	14.25-15.00	16.73%
Upper Congo, ordinary....	11.00-11.50	13.25-13.50	17.39%
Uruwimi-Uelé.....	11.00-11.50	13.25-13.50	17.39%
Mongala strips.....	11.00-11.50	13.25-13.50	17.39%
Red thimbles (root rubber)	4.25- 4.75	9.00- 9.70	10.22%
a. Pará fine.....	5s.-5s. 2d.	7s. 2d.-7s. 6d.	14.16%

[a In English money, per pound.]

[Ten francs per kilogram=87½ cents per pound.]

Rubber Interests in Continental Europe.

HOW GERMANS SEEK TO PLEASE TRADE.

THE remarks by a writer in the January INDIA RUBBER WORLD on the success of the German rubber manufacturers in the department of export trade is fittingly supplemented by the following correspondence of Mr. Watson R. Sperry, of Harburg a/d Elbe, in the important American newspaper, the *Hartford Courant*:

"The other day one of the rubber factories here in Harburg received an order for a thousand pounds from Japan. This establishment makes nothing but erasers—in all sorts of shapes and colors, and for rubbing out pencil and other kinds of marks. These pieces of rubber are small, and as a matter of fact some styles run 40 pieces to the pound, and some as high as 80 to the pound. The condition of the order was that each piece should be stamped with a little pagoda. I was consulted as to exactly what a pagoda is, and it was in this way that I came to know about the matter.

"As a result of this consultation a satisfactory drawing was prepared, a stamp was made after the drawing, the 50,000 or 60,000 separate pieces were stamped by hand, and the shipment of a thousand pounds was finally made from Hamburg direct to Kobe and other Japanese ports, and in precisely the form that the local trade in Japan desired.

"I mention the incident as an illustration of the care which German manufacturers take to meet the precise wishes of their foreign customers. To such a house as this the order in itself was not of great importance; but the business had been built up by making the goods to suit the tastes of buyers, not merely

in Germany, but in all parts of the world, and this rule is still followed, although the yearly output now runs into the millions.

"The plant was prepared with special marks for the China trade—a dragon's head, a fan, and one other which I cannot recall—all made under suggestions from those who sell these articles in China, and who now sell them steadily there largely because these emblems suit the local taste; but the order from Japan opened new territory, and the miniature pagoda had to be made.

"The story goes that in the early years of the world's market, when England made most of the goods and the rest of the world bought them, English manufacturers reckoned it for a barbarity if any people did not like English taste, English measures and English weights. Our consuls even now sometimes write home that American goods would sell better if they were more often made to suit the tastes and usages of those who are expected to buy them.

"The Germans need no instruction on this point. They have taken for their rule that sensible old mercantile motto, 'We strive to please'; and indeed in some cases go so far as to cram up on the measures and weights of the land to which their wares are sent, so that the local dealer can verify what he is getting exactly as if it were made in his own country."

RUBBER FOOTWEAR IN HOLLAND.

A REPORT on the possibility of extending the trade in American overshoes in Holland, by the vice consul general at Rotterdam, in *Daily Consular and Trade Reports* of January 3, is as follows:

"In the matter of overshoes the population of Holland may be divided into three general classes—lower, middle, and upper. The lower class, using mainly sabots, would under no circumstances be users of overshoes, using their wooden shoes exclusively; with the middle class objections hard to overcome would also be met, as they prefer to wade through mud and water in their ordinary shoes and look down upon the use of any sort of protection as effeminate. It is, hence, to the upper classes that the dealer must look for his trade. These people will not only gladly use any article the value of which is demonstrated to them, but are ready and willing to pay for anything practical.

"The climate of the country is damp and rainy the year round, so that a sale of rubbers once started would not be confined to any particular season. American shapes would answer the purposes perfectly, because the purchasers would to a large extent be users of American shoes. To create a permanent market the goods offered should be of good quality, as the entire population is economical and will soon stop buying an article which does not last. There are some German rubbers on sale here now, but they are little known and little used, so that advertising would be necessary before any large permanent demand would be created for American rubbers."

NEW BALATA FACTORY IN NORWAY.

TOWARD the end of the past year a new manufacturing company was formed at Christiania, Norway, under the style Viking Rem-og Paknings-Fabrik, Aktienselskabet ("Viking" Belting and Packing Factory Co., Limited), with a capital fully paid of 275,000 kroner [= \$73,700]. The intention was to begin operations during the past month. The board of directors elected consisted of Messrs. Worm Hirsh, civil engineer; Nicolay Leth, solicitor; and Emile Backe, mill owner. The managing directors appointed were Messrs. B. Chr. Jenssen, civil engineer, and Anthon Berg, former managing director of Aktienselskabet den Norske Rem-Fabrik, of Christiania. The latter for some time past have made a specialty of balata belting. The new company will make both balata and leather belting, and various packings. Their address is 16 Svingens gade, Christiania.

AUSTRIAN RUBBER MANUFACTURER HONORED.

Two Austrian gentlemen, well known to the German as well as the Austrian india-rubber industry, have received a high mark of distinction. Mr. Camillo Castiglioni, business manager of the Oesterreichisch-Amerikanischen Gummiwaren-Fabrik Actiengesellschaft (Vienna) and Mr. Wilhelm Reithoffer, one of the principal members of the firm of Josef Reithoffer's Söhne (Vienna) have received the title of Counselor of the Board of Trade. We congratulate both gentlemen on this honor, and we ourselves feel that the entire trade in Austria shares in the well-deserved distinction accorded them.—*Gummi-Zeitung*.

RUSSIA.

MR. B. WITTENBERG, general director of "Prowodnik" Company, of Riga, has received from the Czar of Russia the order of St. Anne, third class.

GERMANY.

EMIL ARNTZ is no longer proprietor of the business known formerly as Höxtersche Gummifabrik Emil Arntz, at Hoxter. The style is now Höxtersche Gummifaden-Fabrik Emil Arntz, and Richard Arntz, who formerly held power of attorney, is the proprietor.

NEW BRITISH TIRE COMPANY.

THE "K. T." New Pneumatic Tyre and Rubber Co., Limited, have been registered in London, with £160,000 [= \$778,640] capital, to acquire and work the numerous patents which have been granted throughout the world in connection with the "K. T." pneumatic tire—an article now having an established position in the trade. The new company succeeds to the undertaking of the "K. T." Syndicate, Limited, registered April 20,

1905, and agreement with Edward Brice Ketten and others. There are agreements also for the sale of the German and Austrian-Hungarian rights, an option for the sale of the American rights, and a provisional sale of the rights for France.

THE EDITOR'S BOOK TABLE.

KOLONIAL-HANDELS-ADRESSBUCH 1910 (14. JAHRGANG). MIT Karten der Kolonien. Berlin: Kolonial-Wirtschaftlichen Komitee. [1910.] [Paper. 8vo. Pp. 371. Price 2.50 marks.]

THIS valuable yearly epitome of progress in German colonial development becomes more complete with each issue, both through the inclusion of new interests and the growth of each of the departments which have gone to make up the book from the beginning. It is practically a complete directory of the business firms in the colonial trade, and of the plantations in the colonies, not the least important of which are those devoted to india-rubber. For German East Africa alone no less than twenty-seven plantation companies are listed, devoted wholly or in part to rubber, and seventy-one individual planters. Rubber is being cultivated in many cases in connection with coffee, cacao, sisal, cotton, coconuts, palm nuts, kapok, pepper, and so on. There are similar lists, but fewer names of rubber planters, for Togo, Kamerun and other colonies, including even New Guinea. Transportation facilities are fully treated, and the maps are a useful feature of the book.

MALAISIE CAOUTCHOUC PLANTATIONS, SOCIETES FINANCIERES. Antwerp. Imprimerie J. E. Buschmann. 1909. [Paper. 8vo. Pp. 114.]

The readers of THE INDIA RUBBER WORLD are familiar with various directories and handbooks of rubber plantation companies operated in the Far East which have been brought out, particularly in England. Interest in such plantations, however, has by no means been confined to Great Britain. Investments in planting in the region referred to have been very large in Belgium and the Netherlands, not to mention other countries, and the brochure, the title of which is here quoted, printed in French, has been issued as a guide to continental investors in rubber plantations. While many of the companies here listed are registered in London, a considerable proportion of them have to do with plantations in other than British colonies. The general style of the book is the same as the English plantation directories which have been reviewed in THE INDIA RUBBER WORLD.

LE CAOUTCHOUC. HISTORIQUE-LATEX PROPRIETES-TRAITEMENTS-Technologie. Fabrication-Confection Vulcanisation-Gomes. Analogues Essais. Par Amédée Fayol, Ingenieur civil, Ancien élève de l'Ecole centrale Lyonnaise. Paris and Liège: Librairie Polytechnique Ch. Beranger. 1909. [Paper. 8vo. Pp. 111 + 138.]

As its title indicates, this is a summary of the rubber interest in general, intended apparently for purposes of general information rather than as a technical handbook, though it appears to be carefully drawn up and to be scientifically accurate. The author of the book has been mentioned several times in these pages as the translator of books on rubber of importance from other languages than French.

THE QUARTER CENTURY NUMBER OF THE INDIA-RUBBER JOURNAL. 1884-1909. A souvenir. London: Maclaren & Sons, Limited. [1909.] [Folio. Pp. 102. Price, 2s. 6d.]

OUR congratulations have been extended already to the *India-Rubber Journal* on the age and high standing which it has acquired, and they are repeated in respect of the handsome book which the managers have brought out in celebration of their quarter centenary. It is no less interesting than handsome, in its summary of progress of the rubber industry, particularly in Britain, since its first commencement. It is in fact a valuable handbook.

MISSOURI BOTANICAL GARDEN. TWENTIETH ANNUAL REPORT. [With Index to Volumes XI-XX.] St. Louis: The Board of trustees, 1909. [Cloth. 8vo. Pp. 223.]

ORGANIZATION GENERALE D'UNE PLANTATION D'HEVEA. By G. Vernet, Agricultural engineer chemist at the Pasteur Institute at Nhatrang [French Indo-China]. [Reprinted from *Journal d'Agriculture Tropicale*, June-September, 1909.] [Paper. 8vo. Pp. 11.]

Rubber Plantation Yields

SPACE cannot be afforded for all the statistics of production of the rubber producing plantations in the Far East, the returns from which are cabled to the outside world, in detail comparable with that noticeable in reporting railway earnings, for example, in the United States. It may be of interest, however, now and then, to glance at returns taken at random from the latest despatches, as has been done in the table which follows. The point to be made is that a steady increase in production is shown, and that at a rate which insures the permanent importance of Ceylon and the Federated Malay States in the production of rubber. The figures indicate weights in pounds. The word "Limited" is omitted from the legal title of each company named:

<i>Monerakelle Rubber Estates:</i>	1908.	1909.
Year ended June 30.....	1,088	2,295
<i>Federated (Selangor) Rubber Co.:</i>		
December		10,521
Nine months, including December.....	41,480	71,638
<i>Selangor Rubber Co.:</i>		
December		38,525
Year ended December 31.....	187,992	323,919
<i>Lanadron Rubber Estates:</i>		
December	16,100	24,420
Year ended December 31.....	181,156	249,247
<i>Ledbury Rubber Estates:</i>		
December	5,139	8,270
Year ended December 31.....	28,956	65,979
<i>Perak Rubber Plantations:</i>		
December	10,460	10,150
Nine months, including December.....		86,565
<i>Malacca Rubber Plantations:</i>		
December	8,500	29,000
Year ended December 31.....	46,890	240,000
<i>Sumatra Para Rubber Plantations:</i>		
December	5,940	6,830
Six months, including December.....	23,720	53,880
<i>Labu (F. M. S.) Rubber Co.:</i>		
December		13,960
Year ending December 31.....	24,127	86,500
<i>Mobira Forest (Uganda) Rubber Co.:</i>		
November	5,753	9,200
Eleven months, including November.....	28,996	88,345
<i>Sungei Salak Rubber Co.:</i>		
Year ending December 31.....	nil	5,081
<i>United Sumatra Rubber Estates:</i>		
November		2,011
Five months including November.....	1,877	9,459
<i>Straits Settlements (Bertram) Rubber Co.:</i>		
December	6,200	13,500
Nine months ended December 31.....	34,200	68,063
<i>Sumatra-Deli Rubber Estates:</i>		
November		2,160
<i>United Serdaung (Sumatra) Rubber Plantations:</i>		
Year ended August 31.....	3,076	17,373
<i>Federated Malay States Rubber Co.:</i>		
December		26,550
Seven months ended December 31.....		156,700
<i>Vallambrosa Rubber Co.:</i>		
Nine months ended December 31.....	201,973	280,902
<i>Bukit Rajale Rubber Co.:</i>		
December		32,373
Nine months ending December 31.....	136,128	104,525
<i>Sungei Kapar Rubber Co.:</i>		
December		18,500
Year ending December 31.....		114,600
<i>Damansara (Selangor) Rubber Co.:</i>		
December		23,500
Year ending December 31.....	124,846	203,007
<i>Edinburgh Rubber Estate, Selangor:</i>		
December		3,450
Year ending December 31.....		29,234
<i>Eastern Produce and Estates Co.:</i>		
Year ending December 31.....	53,369	79,000
<i>Singapore Para Rubber Estates:</i>		
December		5,000
Year ending December 31.....		34,650
<i>Kuala Lumpur Rubber Co.:</i>		
December		46,200
Six months ending December 31.....		221,500
<i>Batu Caves Rubber Co.:</i>		
December	2,276	6,585
Year ending December 31.....	16,585	43,527
<i>Seafield Rubber Co.:</i>		
December		7,081
Year ending December 31.....		43,490
<i>Anglo-Malay Rubber Co.:</i>		
December	34,865	53,480
Year ending December 31.....	350,688	516,232

<i>General Ceylon Rubber and Tea Estates:</i>		
Year ended December 31.....	26,283	38,370
<i>Golconda Malay Rubber Co.:</i>		
Year ended December 31.....	35,102	95,443
<i>Glendon Rubber Co.:</i>		
Three months ended December 31.....	6,220	9,401
<i>Shelford Rubber Estate:</i>		
December		3,600
Year ended December 31.....		28,963
<i>Ceylon Tea Plantations Co.:</i>		
Year ended December 31.....	25,700	54,000
<i>Pataling Rubber Estates Syndicate:</i>		
December	12,174	21,950
Year ending December 31.....	80,922	151,994
<i>Linggi Plantations:</i>		
December		59,000
Year ending December 31.....	284,873	527,000
<i>Sungei Choh Rubber Estate Co.:</i>		
Year ended December 31.....	2,258	10,200
<i>Golden Hope Rubber Estate:</i>		
December	1,636	5,462
Year ended December 31.....	15,660	51,400
<i>Consolidated Malay Rubber Estates:</i>		
December		29,418
Year ended December 31.....	111,585	215,893
<i>Cicely Rubber Estates Co.:</i>		
December	4,213	8,928
Nine months ended December 31.....	33,020	60,235
<i>Highlands and Lowlands Para Rubber Co.:</i>		
December	23,000	46,078
Year ended December 31.....	222,287	341,966
<i>London Asiatic Rubber and Produce:</i>		
December	4,376	10,076
Year ended December 31.....	34,549	76,202

FAR EASTERN PLANTATION NOTES.

THE directors of The Rubber Estates of Johore, Limited, announce the sale of 1,488 acres of their rubber plantation in the Malay peninsula, and 3,444 acres of adjoining forest, for £62,500 cash, to parties who intend increasing the planted area largely.

The directors of Sumatra-Deli Rubber Estates, Limited, for the year ended June 30, 1909, report a debit of profit and loss for two years of £16,541. The fact that about 28,000 pounds of rubber trade were obtained during the first eleven months of 1909, however, lend encouragement to the company, and through borrowing £6,000 at 5 per cent, the financial difficulties are believed to have tided over. The estates are largely planted up with "Rambong" (*Ficus elastica*), at distances now believed to be much too close, and it is proposed to thin out the trees.

The United Serding (Sumatra) Rubber Plantations, Limited, attribute a lower production for the year ended August 31, 1909, than was anticipated to the exceptionally dry weather which prevailed from March to August. The revenue from coffee and rubber, however, permitted the declaration of a 5 per cent. dividend.

An interesting "Manual of British North Borneo Companies" is compiled by Zorn and Leigh-Hunt, of London. The development of British North Borneo of late has been most marked, but in no respect more notably than in relation to rubber. Land has been granted already to ten subsidiary companies by the British North Borneo Co., and details are given in regard to these in addition to general information on the history and progress of Borneo.

The Stock Exchange Year Book, a long established directory of British financial concerns, for 1910, devotes no less than 28 pages to statistical information on rubber plantation companies, which the publishers refer to as "a fact which will show the up-to-date character and the absolute completeness of the book." The volume contains 2,408 pages and is sold at 31s. 6d. [= \$7.66.]

TAPPING ON PLANTATION "RUBIO."

THE subscribers of The Tehnantepec Rubber Culture Co. (New York), received a circular letter some weeks ago with reference to a change in the method of inspection of plantation

"Rubio," the responses to which were largely in favor of the change. Under date of January 11 another circular was issued in which it was stated: "In accordance with the terms of our circular, we have, upon authority of our board of directors, employed Mr. [James C.] Harvey to proceed immediately to plantation 'Rubio' and carry out the tapping experiments contemplated. This work will continue during the months of January and February, and possibly the first two weeks in March, report of which will be made at the proper time."

RUBBER PLANTING DIVIDENDS.

AN interim dividend of 15 per cent. on the capital of *Bukit Rajah Rubber Co., Limited*, for the business year 1909, was payable on January 8. No dividend was paid the first year. The figures since have been:

For 1905	6%	For 1907	30%
For 1906	30%	For 1908	55%

Dividends paid for four full years by *Linggi Plantations, Limited*, have been: (1) 7 per cent. on the preference shares in each year; (2) dividends on the ordinary shares as follows:

For 1905	4%	For 1907	20%
For 1906	15%	For 1908	60%

Two interim dividends have been paid on account of the business year, aggregating 65 per cent.

The *Federated Selangor Rubber Co., Limited*, have paid interim dividends amounting to 30 per cent. on account of the year which ends on March 31, 1910. Previous dividends have been:

For 1907	8%	For 1909	35%
For 1908	nil		

Vallambrosa Rubber Co., Limited, announce an interim dividend of 66 $\frac{2}{3}$ per cent. (less income tax) for the year ending March 31, 1910. Former dividends:

For 1906	55%	For 1908	80%
For 1907	55%		

The directors of *Pataling Rubber Estates Syndicate, Limited*, announce interim dividends amounting to 50 per cent. on their shares for the year ending December 31, 1909. Former dividends:

For 1905	20%	For 1907	35%
For 1906	40%	For 1908	45%

The interim dividend of *Cicely Rubber Estates Co., Limited*—the year ends March 31—is 25 per cent., but our report does not state for what class of shares. The capital is in £10,000 ordinary shares and £6,000 preference. The latter are entitled to a preferential dividend of 5 per cent. in each year and one-half the remaining divisible profits. Former dividends:

	Preferred.	Ordinary.
For 1905	5 %	10 %
For 1906	15 %	20 %
For 1907	37 $\frac{1}{2}$ %	42 $\frac{1}{2}$ %
For 1908	50 %	55 %

The directors of *Malacca Rubber Plantations, Limited*, sanctioned the payment of an interim dividend, for the year 1909, of 10 per cent. on preference and ordinary shares, which required £30,000 [= \$145,995]. For the preceding year the disbursement was 7 $\frac{1}{2}$ per cent. on the preference shares, of which the issue amounted to £115,000.

SOAP AND RUBBER.

THE important plantation enterprise, the Lanadron Rubber Estates, Limited, as is generally known, is an outgrowth of the cocoanut plantation in the Malay peninsula of the English corporation, A. & F. Pears, Limited, makers of Pears' soap, in which cocoanut oil is used. Their neighbors in Johore were successful in rubber planting, and the Messrs. Pears took up rubber, with the result that they have become important factors in the planting interest. At the recent annual meeting of A. & F. Pears, Limited, in London, the death was referred to of Mr.

Andrew Pears, J. P., managing director. Mr. Francis Pears has given his personal attention to the rubber undertaking, and is the resident estates manager of the Lanadron company. Andrew Pears was a great-grandson of the founder of the soap firm. The capital of the latter, by the way, is £340,000 [= \$1,654,610]. For the last sixteen years the £20,000 in preferred shares have earned 6 per cent. and the £320,000 in ordinary shares 10 per cent. dividends.

COTTON IN RUBBER GOODS.

IN a letter on the cotton situation by Dick Brothers & Co. (New York) published in the *Memphis Commercial-Appeal* the constantly increasing consumption of cotton for many purposes is treated in detail. The warning is given that the South must prepare to take care of even greater demands for consumption. An important point in the letter occurs in the closing paragraph: "Until the last twenty years cotton for centuries has sold at a higher average price than wool. We are not indulging in prophecy, but when one considers the countless uses to which cotton is put, and figures on what might happen owing to an accident curtailment of production, it is quite within the bounds of possibility for history to repeat itself."

It is estimated in the letter that the sale of cotton duck for use in rubber belting and all kinds of rubber hose amounts to 50,000,000 yards annually. They estimate the demand for cotton for use in automobiles at 325,000 bales annually, of which about 290,000 bales are required for the cotton duck basis for tires, the rest going largely for the manufacture of artificial leather cushions and seats. The use of cotton yarns or tape for insulation work is also referred to. A member of the trade tells the firm that the sales in the New York market alone amount to 400,000 pounds of cotton yarn weekly to the electrical industry.

AMERICAN PRODUCT ON OF SULPHUR.

SOME figures which follow, which may prove of interest in some branches of the india-rubber industry, are derived from a statement of the mineral products of the United States for 10 years, prepared by the United States Geological Survey. The figures relate to tons of 2,000 pounds, and are for calendar years:

YEAR.	Sulphur.	Barytes (Crude).	Asbestos.
1899	4,840	41,894	681
1900	3,525	67,680	1,054
1901	a	49,070	747
1902	a	61,668	1,005
1903	a	50,397	887
1904	a	65,727	1,480
1905	181,677	48,235	3,109
1906	294,153	50,231	1,695
1907	293,106	89,621	653
1908	369,444	38,527	936

a—Not reported separately.

It will be noted that while the production of sulphur has increased steadily, there has been a falling off with respect to barytes, and no increase in the output of asbestos. Further statistics regarding sulphur will be found in THE INDIA RUBBER WORLD, September 1, 1909 (page 418).

OFFICIAL reports regarding the Congresso Commercial Industrial e Agricola to be held at Manãos, Brazil, in February next [see THE INDIA RUBBER WORLD, October 1, 1909—page 7], indicate that the proposal has met with encouraging responses from the various commercial associations whose co-operation has been invited, and that much interest has been expressed in other quarters.

EDWARD OLSEN, a director in A. H. Alden & Co., Limited, india-rubber merchants, London, died in that city on January 6.

News of the American Rubber Trade.

HODGMAN RUBBER CO.'S ANNUAL.

AT the annual meeting of shareholders of the Hodgman Rubber Co., held at their offices in New York on January 20, the following directors were elected for the year: G. B. Hodgman, F. A. Hodgman, S. Theodore Hodgman, Newton E. Stout, and Theodore M. Purdy. The board then elected officers as follows:

President—G. B. HODGMAN.
Vice President—F. A. HODGMAN.
Treasurer—S. THEODORE HODGMAN.
Secretary—A. W. WARREN.

MORGAN & WRIGHT—INCREASE OF CAPITAL.

MORGAN & WRIGHT, proprietors of the Detroit Rubber Works (Detroit, Michigan), and a subsidiary company of the Rubber Goods Manufacturing Co., have filed with the secretary of state of Michigan a certificate of increase of capital stock from \$1,800,000 to \$2,500,000. This increase has been called for on account of the large growth of the company's automobile tire business. The additional capital was subscribed for at par, and paid in cash by the old shareholders. It is understood that large additional buildings will be erected this year and the business otherwise extended.

CHANGE IN THE TRADE AT NEWARK.

THE plant of the Ennis Rubber Manufacturing Co., a corporation located at Newark, New Jersey, and engaged in making automobile tires and inner tubes, was sold at public auction by the receiver on January 17. The purchaser was Grant Lambright, superintendent of the works, with the support of some of the creditors of the company. The business will be continued under the style of the Newark Rubber Manufacturing Co., whose plans are not yet ready for the public, though it is understood that the orders on file alone assure an important volume of business.

A NEW MICHELIN MANAGER.

J. HAUVETTE-MICHELIN has been elected vice president and general manager of the Michelin Tire Co. (Milltown, New Jersey), following the retirement of James C. Matlock, reported recently in this journal. Mr. Hauvette-Michelin, whose headquarters will be at Milltown, is a nephew of Edouard Michelin, president of the company domiciled at Milltown, as well as the Michelin companies in France, England and Italy. The American company was incorporated March 12, 1907, under the laws of New Jersey.

AN AMERICAN CHEMIST HONORED.

THE Perkin medal, a gold decoration awarded annually "to the American chemist who has accomplished the most valuable work in applied chemistry during his career," was awarded in December to Dr. Edward G. Acheson, of Niagara Falls, New York, by unanimous vote of the Society of Chemical Industry, American Chemical Society, and the American Electro-Chemical Society. The presentation was made at the Chemical Club in New York, on the evening of January 21. Dr. Acheson is president of the International Graphite Co. and other important companies. Among his many scientific discoveries and inventions the most prominent, perhaps, is a deflocculated graphite, which may be suspended either in oil or water and used as a lubricant.

SALESMEN GUESTS OF PRESIDENT APSLEY.

THIRTY or more salesmen and employes of the Rubber Manufacturing and Distributing Co. (Chicago) were entertained at dinner at the Congress Hotel on the evening of January 3, by the president, the Hon. L. D. Apsley. At the beginning of the year preceding prizes were offered to the three salesmen with the largest record of business, of \$200, \$100, and \$50 respectively. These prizes were awarded during the evening, besides which

at the plate of each guest was an envelope containing a check in appreciation of the good work all had done during the year and for the interest they had taken in promoting the welfare of the company. During the evening Mr. Apsley congratulated the salesmen on their work and spoke at some length on the points which go to make up a good salesman. He suggested that they do not take all the glory, but concede some to the quality of the goods offered and the prompt manner in which orders are filled. Other speakers were W. E. Carver, treasurer of the company, and Mr. L. L. Murphy, sales manager, besides which each salesman was given an opportunity to express himself. Mr. Apsley had as a special guest Mr. Charles H. Crump, of Boston.

BORGFELDT & CO.'S NEW STORES.

THE formal opening of the new stores of George Borgfeldt & Co. (New York), the first occupancy of which was mentioned in the last INDIA RUBBER WORLD (page 147), took place on Monday, January 3. The new building, of steel and brick construction, fills eleven stories and basement, and has been designed to accommodate all the departments of the great Borgfeldt business, not the least of which is that of imported india-rubber goods. A booklet issued by the house to celebrate their change of location contains views of the five different premises occupied by them hitherto, beginning with the small building in Leonard street, back in 1881. The longest front of the new building as shown in the accompanying cut is in Sixteenth street; to the right is shown the front on Irving place.

TRADE NEWS NOTES.

THE Beebe-Elliott Co., manufacturers of the "Horseshoe" auto tire, at Racine Junction, Wisconsin, were damaged by fire on New Year's day, to the extent of \$4,000, causing an interruption to business of only a few days.

Mr. Calvert B. Archer, president of the Archer Rubber Co. (Milford, Massachusetts) since their incorporation, early in 1907, has severed his connection with that concern, and, it is understood, will again become interested in the proofing trade somewhere else in the state.

An exhibition of aerial craft of all types is to be held in Boston during the week beginning February 23, under the sanction of the Aéro Club of New England and the Aéro Club of America. The exhibition will be held in the Mechanics' building. Charles J. Glidden is chairman of the advisory board for the exhibition.



THE NEW BORGFELDT STORES.

THE NEWEST RUBBER TIRE FACTORY.

THE McGraw Tire and Rubber Co. have removed their principal offices from Pittsburgh, Pennsylvania, to East Palestine, Ohio, where their factory is located. The incorporation of this company was reported in THE INDIA RUBBER WORLD May 1, 1909 (page 299). Since then the original name has undergone some change, accompanied by a reorganization of its personnel. Meanwhile there has been no interruption of the building up of a factory and a business in automobile tires. The line of tires made by this company is styled the "Imperial," the distinctive feature being in the tread, for which a special fabric is used. The officers of the company are E. C. McGraw, president; R. W. McGraw, vice-president; John S. Wilson, treasurer; and H. G. Morgan, secretary.

CONFERENCE OF BOSTON BELTING CO.'S AGENTS.

At the invitation of the Boston Belting Co., their Western agents held a meeting in Boston on December 16-17, to discuss the introduction of some new lines of goods to be made in addition to their well-known manufactures and staples, and to arrange to further increase the large and constantly growing demand for their goods. The time throughout the two days was fully occupied in the inspection of an exhibition of the company's products and by a visit to the factories in Roxbury, including an inspection of the large new building recently completed for the manufacture of cotton fabric hose, braided hose, and other goods. Two banquets were tendered to the visitors by the Boston Belting Co., and there was a free and general discussion of present conditions regarding the mechanical rubber goods industry. The Boston Belting Co. have reason to feel gratified at the results of the meeting, and all of the company's guests expressed themselves as being highly pleased with what they saw and heard.

GOOD BUSINESS AT BRISTOL.

MR. LE BARON C. COLT, of the National India Rubber Co. (Bristol, Rhode Island), is quoted as saying that this has been the best winter for orders for the products of that company for three years. Lately 2,000 employes have been at work in the factory.

The shipments of rubber footwear from Bristol on January 3, over the New Haven railroad, amounted to 5,000 cases—reported to be the largest shipment ever made from there in one day.

CHANGES IN THE COTTON DUCK TRADE.

AMONG the various changes in the cotton goods district of New York one of special interest has been the withdrawal of the duck department of Catlin & Co., formerly under the charge of Mr. R. P. M. Eagles, who has associated himself with the Boston Yarn Co. The product of the Lowell Weaving Co. and the Passaic Cotton Mills will be sold by the new concern, as well as yarns and sheetings heretofore supplied the trade. Mr. J. A. Kurvy, also formerly with Catlin & Co., has allied himself with the new company.

FIRE HOSE PRICES.

THE Eureka Hose Manufacturing Co. (New York) recently sold 2,000 feet "Red Cross" fire hose to the city of Newburgh, New York, at the price of 90 cents per foot, coupled. An item in a local paper stating that the city had bought "Paragon" hose at 90 cents has been copied in newspapers throughout the country. The Eureka Hose Manufacturing Co. wish to say that "Paragon" hose is never sold at less than the standard price of \$1 per foot.

CHANGE OF STYLE.

It is announced that the business heretofore con-

ducted by the Continental Rubber Co.—in Guayule rubber will be conducted hereafter by the Continental Rubber Co. of New York, at the same address—No. 111 Broadway—under the presidency of Edward B. Aldrich. J. A. Whitcomb has been elected vice-president and selling agent of the company last named.

CHICLE COMPANY DIVIDENDS.

THE initial quarterly dividend of the new chicle combine, Sen-Sen Chicle Co. (New York), of 1½ per cent., is payable on February 1.

The regular monthly dividend of 1 per cent. on the common stock of the American Chicle Co. is payable February 19.

"STAR" TIRES IN THE SOUTHERN TRADE.

THE Star Rubber Co. (Akron, Ohio) have established a branch at Nashville, Tennessee, for the sale of their "Star" automobile tires and tubes to the Southern trade. The location is at the corner of Third avenue and Commerce street, and the management is in the hands of Mr. W. F. Anderson. This gentleman has been connected with the automobile trade practically from the beginning, and for some time past has been the manager of the Rock City Auto Co., of Nashville, at the address here given. Mr. Anderson for the present will retain the management of the automobile company. [See THE INDIA RUBBER WORLD, January 1, 1910—page 139.]

TRADE NEWS NOTES.

THE Hood Rubber Co. have increased their preferred capital stock from \$1,000,000 to \$1,500,000, by the issue of 5,000 new shares which were offered to the shareholders at \$125. The company's gross business is stated to exceed \$6,500,000. Their goods are sold mostly in the United States, but the export trade is growing steadily.

THE Dearborn Rubber Shoe Co., incorporated for \$500,000, have become located at Nos. 153-159 Franklin street, Chicago. They will sell "Hood" and "Old Colony" rubber footwear, the business being under the direction of Mr. John G. McGaw.

A company incorporated recently as the American Rubber Co., with factory at Jersey City, New Jersey, and general offices at No. 149 Broadway, New York, without first learning that a company by the same name long had been engaged in the rubber footwear trade, has, in order to avoid confusion, changed its name to the Rubber Co. of America.



WHERE THE "IMPERIAL" TIRES ARE MADE.
[Factory of the McGraw Tire and Rubber Co., at East Palestine, Ohio.]

THE B. F. GOODRICH CO. IN BOSTON.

The new home in Boston of the Goodrich company, on Boylston street, in the heart of the automobile trade in that city, is one of the best appointed to be found in the United States, and vies in its completeness with the New York establishment of the same company. [See THE INDIA RUBBER WORLD, November 1, 1909—page 55.] This building was entirely remodelled for the uses of the company, and although not entirely complete on January 1, Manager H. E. Limerick and his force took possession of it on that date. The building is six stories in height and used exclusively by the Goodrich Rubber Co., under which name the Goodrich trade is managed in New England. The street floor is used as a general salesroom. The second floor is occupied by the executive department. The other four floors are devoted to carrying an extensive line of rubber goods, including, in addition to tires and accessories, the other products of The B. F. Goodrich Co. (Akron, Ohio). The building is strikingly attractive from the outside, while the interior is in keeping with Goodrich quality and ability.

TRADE NEWS NOTES.

RAW PRODUCTS Co. (No. 121 Front street, New York) send out a comprehensive and useful chart of india-rubber stocks and prices for the past year covering all the leading markets.

A scribbling tablet, distributed by Mr. H. Weber, New York representative of J. Schnurmann (London), both looks well on a desk and is a convenient accessory.

Enterprise Rubber Co. (Boston) issued under date of January 1 a net price list of the brands of rubber footwear carried by them, in convenient form for reference by retailers.

Two arrests were made in Akron, Ohio, early in January, in respect of alleged frauds in weighing waste rubber—one of a dealer in such material and the other until recently an employé of a reclaiming company who made purchases from this company.

Mr. H. T. Dunn, president of The Fisk Rubber Co. (Chicopee Falls, Massachusetts), recently returned from a business trip to the west. While in San Francisco he gave a banquet to the distributors of Fisk tires on the Pacific coast.

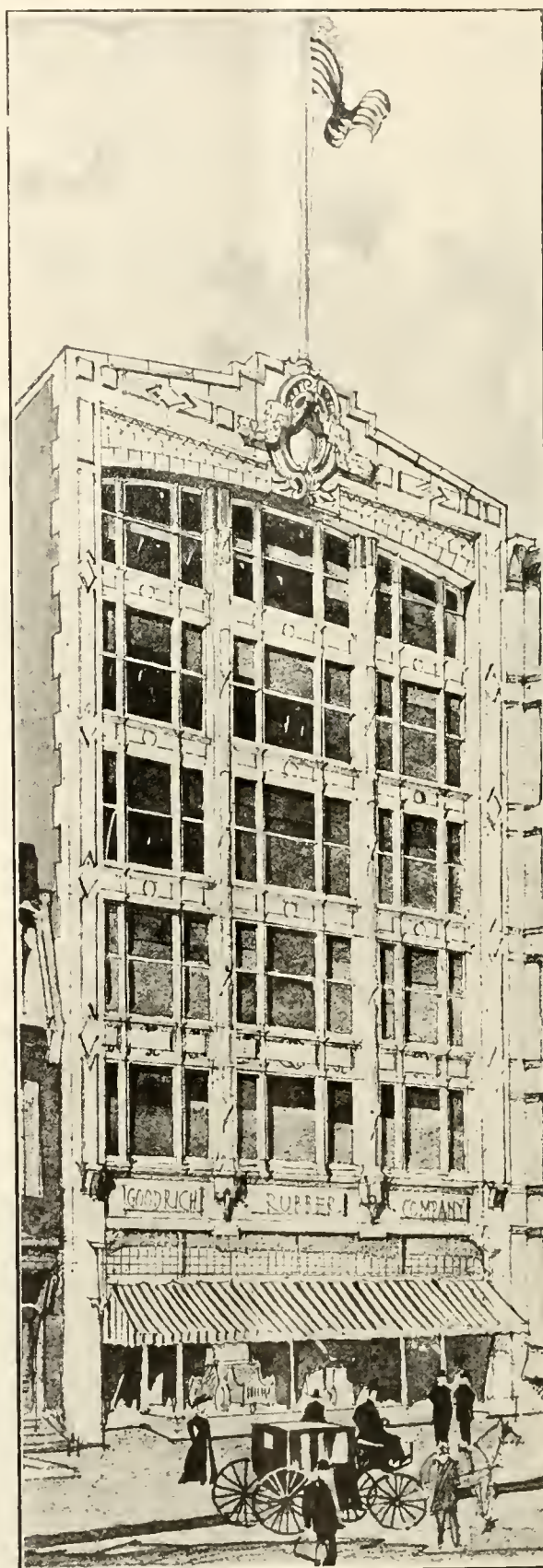
The directors of the Woonsocket Rubber Co. recently donated \$5,000 of the corporation's funds to the building fund of the Young Men's Christian Association at Woonsocket, Rhode Island. The directors of the American Wringer Co. voted \$2,000 for the same purpose. These gifts are credited locally to the influence of Mr. Walter S. Ballou, who is president of both the companies named.

The footwear factory of the Apsley Rubber Co. (Hudson, Massachusetts) was closed for repairs and inventory for a fortnight at the end of January. The factory was closed for but one day at the Christmas holidays, instead of ten days, as usual.

George H. Rupert, doing business as George H. Rupert & Co., dealers in rubber goods and clothes wringers, at Nos. 54-56 Cornhill, Boston, has been declared a bankrupt upon a petition of his creditors.

The first importation of rubber by the Malaysian Rubber Co., with the exception of samples, reached New York on January 17, by the steamer *Prinz Friedrich Wilhelm*, from Bremen, at which port it had been transhipped from a steamer from Singapore. The shipment amounted to 15 cases, and was of the grade described on another page of this issue in the article "The New 'Dyera' Rubber."

The United States Treasury Department has issued an order relative to the classification of suspenders made of cotton or other vegetable fiber and india-rubber, or of which cotton or other vegetable fiber is the component of chief value, not embroidered by hand or machinery. It is advised that such suspenders are not dutiable at the rate of 60 per cent. *ad valorem* by virtue of the first proviso to paragraph 349 of the Tariff act of 1909, but are property dutiable under paragraph 330 of this act, at the rate of 45 per cent. *ad valorem*.



THE GOODRICH BOSTON STORE.
[New Headquarters for Tires in Boylston Street.]

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for four weeks, ending January 22:

COMMON STOCK, \$25,000,000.

[Less \$1,344,000 in treasury of a subsidiary company.]

Last Dividend, April 30, 1900—1%.

Week January 1	Sales 5,400 shares	High 53 ¹ / ₂	Low 52 ³ / ₈
Week January 8	Sales 8,750 shares	High 52 ¹ / ₂	Low 50
Week January 15	Sales 11,000 shares	High 51 ⁵ / ₈	Low 44 ³ / ₄
Week January 22	Sales 10,460 shares	High 47 ¹ / ₂	Low 43 ⁵ / ₈

For the year—High, 52¹/₂, Jan. 3; Low, 43⁵/₈, Jan. 20.
Last Year—High, 57³/₈; Low, 27.

FIRST PREFERRED STOCK, \$36,263,000.

Last Dividend, Jan. 31, 1909—2%.

Week January 1	Sales 2,150 shares	High 117	Low 116 ¹ / ₂
Week January 8	Sales 2,380 shares	High 116 ³ / ₈	Low 115 ⁵ / ₈
Week January 15	Sales 6,050 shares	High 116 ¹ / ₂	Low 110 ¹ / ₂
Week January 22	Sales 11,875 shares	High 113 ¹ / ₂	Low 111 ¹ / ₄

For the year—High, 116¹/₂, Jan. 3; Low, 110¹/₂, Jan. 15.
Last year—High, 123¹/₂; Low, 98.

SECOND PREFERRED STOCK, \$9,965,000.

Last Dividend, Jan. 31, 1909—1¹/₂%.

Week January 1	Sales 500 shares	High 84 ³ / ₄	Low 84
Week January 8	Sales 400 shares	High 84	Low 82 ¹ / ₂
Week January 15	Sales 500 shares	High 82 ⁵ / ₈	Low 82 ¹ / ₂
Week January 22	Sales 400 shares	High 80 ³ / ₄	Low 78 ⁵ / ₈

For the year—High, 84, Jan. 3; Low, 78⁵/₈, Jan. 20.
Last year—High, 89¹/₂; Low, 67¹/₂.

SIX PER CENT. CERTIFICATES, \$20,000,000.

Week January 1	Sales 41 certs	High 104 ¹ / ₂	Low 104 ¹ / ₈
Week January 8	Sales 75 shares	High 104 ¹ / ₂	Low 104
Week January 15	Sales 170 shares	High 104 ¹ / ₂	Low 103 ³ / ₄
Week January 22	Sales 132 shares	High 104	Low 103 ⁵ / ₈

COMMON STOCK.

Shares sold .	1904. 285,819	1905. 723,665	1906. 607,800	1907. 175,277	1908. 191,200	1909. 517,411
Highest price	34 ¹ / ₂	58 ¹ / ₂	50 ¹ / ₂	52 ¹ / ₂	37 ¹ / ₂	57 ⁷ / ₈
Lowest price	10 ¹ / ₂	33 ³ / ₄	38	13 ¹ / ₂	17 ¹ / ₂	27

Highest, 1909, August 19; Lowest, February 24; Closing, 53.

FIRST PREFERRED STOCK.

Shares sold..	1904. 182,443	1905. 200,497	1906. 123,760	1907. 120,108	1908. 94,400	1909. 199,512
Highest price	100	118 ¹ / ₂	115	109 ⁷ / ₈	108	123 ¹ / ₂
Lowest price	41	98 ³ / ₈	104 ³ / ₄	61 ¹ / ₂	76	98

Highest, 1909, August 24; Lowest, January 29; Closing, 116¹/₂.

SECOND PREFERRED STOCK.

Shares sold	1905. 21,550	1906. 59,845	1907. 31,203	1908. 21,131	1909. 61,790
Highest price	83 ³ / ₄	87 ¹ / ₂	78 ¹ / ₈	75 ¹ / ₂	89 ¹ / ₂
Lowest price	75	75	39	42	67 ¹ / ₂

Highest, 1909, August 23; Lowest, February 25; Closing 84⁵/₈.

UNITED STATES RUBBER AND SUBSIDIARY COMPANIES.

THE directors of the United States Rubber Co., on January 6, declared from their net profits the regular quarter dividends of 2 per cent. on the first preferred stock, and 1¹/₂ per cent. on the second preferred stock, payable January 31 to holders of record January 15.

The merger of the Revere Rubber Co. (Boston) with the Rubber Goods Manufacturing Co., the control of which is held by the United States Rubber Co., was referred to in the last INDIA RUBBER WORLD. The plans then outlined have since been consummated. On January 5, Elisha S. Williams, treasurer and general manager of the Revere Rubber Co., and grandnephew of the late Hon. Elisha S. Converse, founder of the Boston Rubber Shoe Co., was elected president of the Rubber Goods Manufacturing Co., in place of John J. Watson, Jr., resigned. Mr. Watson retains the position of treasurer of the United States Rubber Co., and president of the General Rubber Co., a subsidiary company. Following the death of Charles H. Dale, president of the Rubber Goods Manufacturing Co., Mr. Watson was elected to fill the vacancy. Mr. Williams has taken up his residence in New York, with headquarters at No. 42 Broadway, the general offices of the United States Rubber Co. At present he is on a tour of the factories which are to be under his control under the new regime.

At the recent annual meeting of the Revere Co. (Boston), the following new directors were elected, all representing the United States Rubber Co. interests: Colonel Samuel Pomeroy Colt, James Bishop Ford, Lester Leland, Colonel Harry E. Converse, and Homer E. Sawyer. Costello C. Converse was re-elected president and Elisha S. Williams, treasurer.

In connection with the listing on the New York Stock Exchange of its registered issue of securities, the officials of the United States Rubber Co. advised the authorities of the Exchange that during eight months, ending November 30 last, their net sales amounted to \$22,127,969; operating profits, \$3,140,242; other income, including dividends received on stock of Rubber Goods Manufacturing Co., \$923,356; total income, \$4,062,398. The surplus increased during the period, after payment of interest and dividends, \$1,074,499.

Colonel Samuel Pomeroy Colt, president of the United States Rubber Co., was recently in Montreal looking after the affairs of the Canadian Consolidated Rubber Co. Limited, in which the United States Rubber Co. now hold an important interest. He was entertained formally by Mr. D. Lorne McGibbon, president of the Canadian Consolidated company. In 1908 the latter company earned 18 per cent. on its common stock, and it is gossip that the figures for 1909 will show earnings of at least 25 per cent.

NEW INCORPORATIONS.

UTICA Rubber Works, October 28, 1909, under the laws of New York; capital \$75,000. To succeed the business known hitherto as Goodyear Rubber House, No. 133 Genesee street, Utica, New York. The incorporation is a step toward the extension of a business of ten years' standing. Mr. L. H. Wood, the proprietor of the business, is president of the new company, and J. A. Jenkins and M. E. Jenkins, who have been employes of the house, will be respectively vice president and treasurer. These and Bradley Fuller, an attorney, constitute the board of directors. L. E. Wood is secretary. The company carry stocks of mechanical goods, tires, rubber footwear, waterproof clothing and druggists' sundries, maintaining the old claim of the house that "If it's made of rubber. We've got it."

Springfield Rubber Co., January 8, 1910, under the laws of Massachusetts; capital \$25,000. Incorporators: Alec. J. Mayberry, Orvil W. Smith, and William F. Nye; the location of the business is Springfield, Massachusetts. The company will do a jobbing business in rubber footwear, handling the "Boston," "Bay State," "Woonsocket," and "Rhode Island" brands. Springfield has been selected as being the natural center for an important territory for the rubber footwear trade. The company are occupying temporarily a small office and salesroom at No. 180 Dwight street, but are negotiating for larger permanent quarters.

The Duplex Rubber Co., December 14, 1909, under the laws of Colorado; capital, \$250,000. Incorporators: Jacob Kussart, D. P. Fagerstrom and S. A. Shawoer. Location of the principal office, Greeley, Colorado.

Bridge Web Tire Co., was incorporated originally on February 8, 1900, under the laws of Arizona. This corporation will be succeeded by the new one under the laws of Illinois.

TRADE NEWS NOTES.

THE 7 per cent. cumulative preference dividends of the Intercontinental Rubber Co. were allowed to accumulate for awhile, due to the building up of a good cash surplus. The payment of dividends has now been resumed, a dividend of 7 per cent. being paid on January 10 to holders of record, January 8 on the \$4,200,000 of preferred stock outstanding.

Mr. Aubrey Love, who has been connected with the rubber industry in Trenton for some fifteen years, has joined Mr. Wellington G. Sichel, whose connection with the Hewitt rubber interest is mentioned elsewhere in this paper. Mr. Love's position will be that of general office manager at Mr. Sichel's office in New York.

A SUCCESSFUL RUBBER MAN.

THE recent change of business connections by Mr. Welling G. Sickel, of Trenton, New Jersey, was a piece of news of no little interest to the trade that appeared in THE INDIA RUBBER WORLD at the time of its occurrence. The plans made for presenting a portrait of Mr. Sickel at the time "gang alee," but the picture will prove no less interesting at this time.

Welling G. Sickel was born at Trenton on November 15, 1858. He received his education at the Trenton Academy, a school that has turned out many boys who subsequently showed great worth. After leaving the academy, Mr. Sickel took a course at the business college of Rider & Allen, and from there went to the employ of the Mercer Pottery Co., of Trenton. At the end of two years, spent in gaining practical knowledge of the potter's art, Mr. Sickel went on the road for the pottery company as their western representative. He remained about six years with this concern, and in 1885 organized the United Rubber Co. at Trenton, which subsequently built up a very large business in railway supplies.

In 1897 Mr. Sickel was elected mayor of the City of Trenton, receiving the largest majority ever given a candidate for that office, but declined a renomination. During his administration



WELLING G. SICKEL.

many important improvements were effected, and the foundations laid for many lasting monuments to his untiring activity for public improvements and the general welfare of the people. The Trenton Art School (now one of the foremost of its kind in the country) was launched through the efforts of Mr. Sickel. Trenton's Free Public Library was urged by Mr. Sickel in every message to the city council, and he appointed committees that afterward settled down to foundation work.

Mr. Sickel has visited practically every important city on this continent, and has also traveled extensively in Europe. Mr. Sickel has always been a lover of clean sports, and was never so elated as when some favorite horse of his passed under the wire a winner. He closed out his fine stable about a year ago, including "The Jap," one of the fastest horses on the Eastern circuit in 1908. This also included his handsome tally-ho and equipment.

The luxurious quarters formerly occupied by Mr. Sickel's horses and equipment have now been turned into a garage and equipped with a complete line of modern machinery, capable of handling any part of the several automobiles owned by him. Since becoming an automobile enthusiast, Mr. Sickel has built

a 25 HP. runabout in his own shop, that is conceded to be fully equal to any of the well-known makes on the market for style, durability and speed.

In 1898 the United Rubber Co. purchased the plant of the Globe Rubber Co., then owned by the late Samuel K. Wilson, one of the pioneers of the rubber industry of Trenton, and the two companies were amalgamated under the corporate title of United and Globe Rubber Manufacturing Cos.

Mr. Sickel was for some years vice president of the United and Globe. In November last he, along with United States Senator Elkins and Martin Maloney, the gas magnate of Philadelphia, disposed of his holdings in the United and Globe, and all three withdrew from the company. The price paid for this stock is said to have been at least \$400 per share. Within a few days afterward Mr. Sickel became associated with the Hewitt interests, with offices in the Trinity building, New York. These interests comprise the Hewitt Rubber Co., with a factory at Buffalo, New York; Featherstone Foundry and Machine Co., at Chicago; Hewitt Supply Co., at Chicago, with fourteen plants in different States; Magnus Metal Co., and National Brake Shoe Co., with works at Depew and Chicago. Mr. Sickel will have charge of the sales of this important aggregation of companies, with headquarters at No. 111 Broadway, New York.

A DINNER TO LOZIER MOTOR CO. OFFICIALS.

AN interesting incident in the automobile trade was a dinner given by the Thermoid Rubber Co. to the officials of The Lozier Motor Co., on the evening of December 30, at the Royalton, in New York. Among the guests were the vice-president of the Lozier company, Mr. F. C. Chandler; Mr. Arthur F. Way, a brother-in-law of President H. A. Lozier; Mr. A. J. Diefenderfer, head salesman of the New York retail branch, and Mr. C. A. Emise. Advantage was taken of the occasion for the presentation to the Lozier officials of a bronze tablet in *bas relief*, showing the two winning Lozier cars on the home stretch, and a very beautiful souvenir. The tablet was framed in crimson plush and mounted with a silver plate appropriately inscribed. The speech of presentation was made by the editor of THE INDIA RUBBER WORLD. Mr. J. O. Stokes, president of the Thermoid Rubber Co., acted as toastmaster, and proved a courteous, entertaining and graceful host. The menu, as follows, was a credit to The Royalton's proprietor, Mr. Merrill:

	Stuffed celery.	<i>Bronx cocktail.</i>
	Cape Cod cocktail.	
Salted almonds.	Celery.	Queen olives.
		<i>Haut Sauterne.</i>
Lobster.	Newburg a la Thermoid.	
Fresh mushrooms.	Sous Cloche.	
Breast of spring turkey, grilled and larded,		
Potatoes au gratin.	French string beans.	<i>Ruinart Brut.</i>
	Hearts of lettuce, with Roquefort cheese dressing.	
	Ice cream Lozier (International)	
	Gateau Assortiz.	
Cigars.	Café Noir.	Cordials.

TRADE NEWS NOTES.

THE LaCrosse Rubber Mills Co. (LaCrosse, Wisconsin), filed with the Secretary of State for Wisconsin on January 21, a certificate of increase of capital stock from \$200,000 to \$400,000.

At the annual meeting of the Republic Co. (Youngstown, Ohio), early in the past month, an appropriation of \$200,000 was made to build additions to the plant. Warner Arms was re-elected president and J. F. McGuire general manager.

Following the annual meeting of the shareholders of the Perupará Rubber Co., held in Chicago, the directors chosen elected officers as follows: Dr. B. F. Baker, president; William Schoen, secretary; and F. N. Ziegler, treasurer. These gentlemen are all residents of Milwaukee, Wisconsin, to which city the directors at a meeting on January 1 voted to remove the general offices. The company hold, under concession, an important extent of rubber area in Peru.

NEW JERSEY CORPORATIONS SUSPENDED.

The governor of New Jersey in a proclamation dated January 4 announced the suspension from the list of corporations formed under the laws of that State, on account of the non-payment of corporation taxes for 1907, of 1,272 corporations. Included are the following related to the rubber interest, but the most of which had not been operated to an important extent, if at all. Some of the other companies named have been reorganized and now operate under other titles:

Consumers' Tire and Rubber Co.; incorporated February 24, 1906; capital, \$200,000.

DeVoll Tire Co.; incorporated August 6, 1906; capital, \$250,000. Charles H. DeVoll, principal incorporator.

East Burlington Rubber Co., East Burlington; incorporated October 17, 1903; capital, \$100,000. Formed to operate the plant of the New Century Rubber Co., reclaimers, then in liquidation. Financial troubles began in 1905 and the company ceased operations.

Farrier Hoof Pad Co., Trenton; organized in the fall of 1902 to make a hoof pad patented by Albert E. Wheatcroft. A plant was established in the works of a rubber company, but financial troubles brought the business to an end.

Grieb Rubber Co., Trenton; incorporated June 11, 1899; capital, \$100,000. Reorganization of the Grieb Rubber Co., not incorporated, which was formerly the Mundell Rubber Co., of Trenton. Merged September 11, 1906, with the Ajax-Standard Rubber Co., of New York, under the name Ajax-Grieb Rubber Co., incorporated with \$400,000 capital, and still in operation, now with \$1,000,000 capital.

Metropolitan Rubber Co., Trenton; incorporated April 21, 1906; capital, \$2,500.

New York Broadway Rubber Tire Co.; incorporated November 7, 1901; capital, \$10,000. To distribute in the New York district the tires of the Goodyear Tire and Rubber Co. Succeeded in May, 1907, by Martin-Evans Co., a New York corporation, headed by Delmar D. Martin, who was manager of the company first named.

Perfection Rubber Co.; operated at one time a plant for molded goods on Paul avenue, Trenton.

Pneumatic Tire Shield Co.; incorporated February 27, 1906; capital, \$200,000. To make a protective shield of steel for tires.

Riverside Rubber Co. The company was established at Belleville, N. J., by James Hardman, Jr., in 1878, and incorporated in 1890. The business was reorganized and passed into the hands of the Hardman Rubber Co., incorporated at the beginning of 1901.

Standard Rubber Co., Trenton; incorporated September 2, 1905; capital, \$50,000. To manufacture mechanical goods, but engaged mainly in selling. A receiver was appointed early in 1907.

Standard Rubber Manufacturing and Supply Co., Trenton; incorporated in January, 1907; capital, \$100,000. To succeed to the business of the Standard Rubber Co., in the manufacture of specialties.

Victor Auto Tire Repair Co., Passaic; incorporated October 18, 1906; capital, \$50,000. To make an "unpuncturable" felt tread inner tube. Name changed in June, 1907, to Victor Auto Tire and Tube Co.

Watkinson Rubber Shoe Co., Trenton; incorporated June 15, 1904, by George Watkinson; capital, \$50,000. Manufacturing arrangements were made with a mechanical rubber factory, but Mr. Watkinson later entered another branch of the rubber business.

The list includes also a number of companies whose titles indicate that they were designed to operate in the automobile field, but none of them have made an impression in that trade.

CALENDARS FOR 1910.

The Western Rubber Co. (Goshen, Indiana), have favored their patrons with an artistic calendar which carries a reproduction by color photography (11" x 16") from an original painting by Jean Beauduin, "At the Close of Day." It will be a fitting ornament for any office.

The Rubber Products Co. (Barberton, Ohio), have chosen for the ornamentation of their 1910 calendar a reproduction (10½" x 16") of Philip Boileau's painting "At the Play," showing two sisters seated in a theater box.

J. H. Stedman & Co., Inc. (Boston), for the fourth year, orna-

ment their calendar with a picture of the "old mill series," all being different. For this year the picture is the "Old Grist Mill," at Byfield, Massachusetts.

The Stockton Rubber Co. (Stockton, New Jersey), send out a useful calendar with a tear-off leaf for each month, the figures being unusually large.

The S. P. Wetherill Co. (Philadelphia), issue a calendar and memorandum pad, in which there is a leaflet for each week.

Arkay Rubber Co. (New York), distribute a tasteful convenient size desk calendar ornamented with the face of a woman.

The New Jersey Rubber Co. (Lambertville, New Jersey), are again sending out "The Handy" memorandum desk calendar.

John Royle & Sons (Paterson, New Jersey), are distributing their vest pocket diary and memorandum book, with sectional maps of the United States and Canada, Central and South America, and China and Japan, with useful tables for reference.

Eureka Fire Hose Manufacturing Co. (New York), distribute a large and handsome calendar, with illustrations of their products and a tear-off leaf for each month.

Boston Belting Co. (Boston), send a handsome and convenient leather bound desk calendar with one card for each month, of a style with which their friends have been familiar for many years.

The artistic feature of the 1910 calendar of The Adamson Machine Co. (Akron, Ohio), is a reproduction (11" x 15") of Thomas Moran's landscape, "The Edge of the Wood."

Lebanon Mill Co., makers of knitted fabrics and underwear (Pawtucket, Rhode Island), send out a "happiness and prosperity" calendar embellished with a pleasing feminine portrait in water colors.

The Stamford Rubber Supply Co. (Stamford, Connecticut), again remember their friends with a serviceable calendar for the year with a tear-off leaf for every day with unusually large figures.

The Dunlop Rubber Co., of Australia, Limited, send out from Melbourne one of the most attractive calendars of the season. It is on a large scale, embellished with an attractive feminine face, and among other points of distinctiveness may be mentioned the dark brown paper used.

The Indiana Rubber and Insulated Wire Co. (Jonesboro, Indiana,) send out one of the largest calendars yet received. The tear-off leaf for each month is 15 x 20 inches, permitting the use of large figures. The illustration is a fanciful rubber forest scene on the Amazon River.

Elmer E. Bast, dealer in mechanical rubber goods, No. 161 East Lake street, Chicago, distributes a tasteful little calendar in which is a picture entitled "In Old Kentucky," from a painting by Carl Kahler, showing a Kentucky thoroughbred trotting up at the call of his mistress.

One of the handsomest calendars for the new year and one appropriate particularly for an engineering office is a large one issued by Hazard Manufacturing Co. (Wilkes-Barre, Pennsylvania), manufacturers of insulated wire and wire rope.

"The Firestone Trio" is the title of a handsome art panel calendar which is being sent to the trade by the Firestone Tire and Rubber Co. (Akron, Ohio). It is 16½ x 34½ inches in size, lithographed in twelve colors and has a large calendar pad, making it especially suitable for garage, sales room and office use.

TO SELL "DIAMOND" FOOTWEAR.

MR. E. H. CUTLER, who has been appointed selling agent for the footwear production of The Diamond Rubber Co. (Akron, Ohio), is one of the most experienced and most widely known salesman of rubber footwear in the country. The Diamond Rubber Co. will make two grades, the first branded with the name of the company, and the second "Python Rubber Co." The Diamond rubber shoe factory is referred to as having a capacity of 20,000 pairs daily.

THE LATE SAMUEL F. RANDOLPH.

SAMUEL F. RANDOLPH, who died at his home in New York city on January 9, of heart disease, was for many years widely known in the rubber goods trade, particularly in the district of which New York is the center. Mr. Randolph was born in New York and was in his sixty-sixth year. Mr. Randolph was hardly grown before he enlisted in the army in the period of the civil war. At the conclusion of his military service he entered the hardware trade, and was connected for some twenty-five years with the New York firm of Durrie & Rusher.

Later he became associated with the Stokes interests of Trenton in the rubber goods trade, and for a number of years was at



THE LATE SAMUEL F. RANDOLPH.

the head of selling agencies in New York for the disposal of their products. One of these agencies, with wholesale and retail stores, was conducted under the style of the Commonwealth Rubber Co., of which Mr. Randolph was president or treasurer or both from October, 1890, for something more than six years. Mr. Randolph reorganized his connection then, and the business was known for some years as the World Manufacturing Co. This house took on the sale of bicycles as well as rubber goods, and ultimately Mr. Randolph became identified with the automobile trade.

In 1905 he became superintendent, and later general manager, of the Metropolitan Garage, at Broadway and West Seventy-seventh street, New York, and by his tireless energy and genial nature built up a most successful garage business.

Mr. Randolph was of a very cheerful and optimistic disposition, and leaves a host of friends. In his latter years he sustained a great bereavement in the death of his son, Samuel F. Randolph, Jr., which was reported in THE INDIA RUBBER WORLD June 1, 1908 (page 313.) Mr. Randolph was a Royal Arch Mason and a member of the Hardware Club.

OBITUARY NOTES.

JOSEPH MASON MAREAN, who died suddenly of heart failure at Cambridge, Massachusetts, on December 20, was born at Van Buren, Arkansas, September 2, 1849, of New Eng-

land parentage. He was educated at Worcester, Massachusetts. In 1876 he married Emma, daughter of Mr. and Mrs. Henry Endicott, of Cambridge, and removed to Chicago, where he engaged in the woolen trade. Returning to Boston in 1890, he was connected successively with the wholesale shoe firms of Haynes, Sparrell & Co., and the Rufus Warren Boot and Shoe Co., of that city. About two years ago Mr. Marean organized the Pilgrim Rubber Co., at No. 566 Atlantic avenue, Boston, of which he was president at the time of his death, and also president of the Barre Shoe Co., of Burlington, Vermont. Mrs. Marean survives, with four sons and a daughter. One of the sons is Parker Marean, superintendent of the B. & R. Rubber Co., at North Brookfield, Mass. The interment was at Mount Auburn cemetery, Cambridge.

* * *

WILLIAM T. JENNEY, at one time connected with the Enterprise Rubber Co. (Boston), died on January 8 at his home in Medford, Massachusetts. This business was founded in the summer of 1891 as a co-partnership, the leading member of which was William E. Barker, later president of the incorporated Enterprise Rubber Co., and now at the general offices of the United States Rubber Co. Mr. Jenney joined the business as a partner in June, 1892, and continued for six years, after which he entered another line of business.

ADDITIONAL TRADE NOTES.

THE monthly journal *Gummi-Markt*, published for two or three years past in Dresden, has changed owners, and is now under the editorial direction of Dr. Werner Esch, a widely recognized specialist in rubber, who may be expected to be a liberal contributor to the columns of the paper. The headquarters of the paper are now in Hamburg, of which city Dr. Esch is a resident.

An order issued by the United States treasury department provides for a drawback on automobile tires manufactured for export by The B. F. Goodrich Co. (Akron, Ohio), in respect of any imported leather butts and metal rivets or studs used therein.

NEW TAXICAB COMPANIES.

THE Public Automobile Service Corporation was registered in New Jersey on January 8, with an authorized capital of \$2,000,000, half of which has been paid in, to operate a taxicab service "wheresoever it is required." William R. Buchler, No. 150 Nassau street, New York, is named as the owner of all the common stock; the other incorporators are Charles E. Thorne and Ernest D. Kahn, also of New York.

The Taxi-Service Co., of Baltimore, filed articles of incorporation in New Jersey on December 29, with \$500,000 capital authorized. Incorporators: Frank C. McKinney, James R. Mapletoft, and Raymond E. Taylor, all of No. 525 Main street, East Orange, New Jersey.

PERSONAL MENTION.

MR. FRANCIS LYNDE STETSON, who was elected president of the Bar Association of New York at the annual meeting on January 11, has been a director of the United States Rubber Co. since 1902, besides which he is a director in a number of important banks and railway companies. He is a member of the New York law firm of Stetson, Jennings & Russell.

A recent visitor to the offices of THE INDIA RUBBER WORLD was Mr. Albert Waterhouse, of The Waterhouse Co., Honolulu, who, with the other members of the firm, is interested to an important extent in rubber plantations, not only in Hawaii, but in the Malay peninsula. Mr. Waterhouse was on his way home from Singapore, via London and New York.

Mr. Henry A. Reed, president of the Bishop Gutta Percha Co., New York, started on the 20th ultimo for a three months' sojourn in Florida.

Review of the Crude Rubber Market.

THE essential feature of the month just past is the advance in prices above those quoted by this paper on January 1. The advance appears with regard to every grade, and in every market.

Following are the quotations at New York for Pará grades, one year ago, one month ago, and January 31, the current date:

PARÁ.	Feb. 1, '09.	Jan. 1, '10.	Jan. 31.
Islands, fine, new.....	114@115	103@104	179@180
Islands, fine, old.....	none here	none here	none here
Upriver, fine, new.....	121@122	178@180	187@188
Upriver, fine, old.....	123@124	none here	189@190
Islands, coarse, new.....	56@ 57	..@ 70	75@ 76
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	92@ 93	111@112	117@118
Upriver, coarse, old.....	none here	none here	none here
Cameta	62@ 63	79@ 80	84@ 85
Caucho (Peruvian), ball....	83@ 84	101@102	110@111
Caucho (Peruvian), sheet...	72@ 73	..@ 85	89@ 90
Ceylon, fine, sheet.....	128@129	179@180	200@201
Ceylon, crepe .....	..	181@182	208@209

AFRICAN.	Feb. 1, '09.	Jan. 1, '10.	Jan. 31.
Lopori, ball, prime.....	109@110	133@134	140@141
Aruwimi .....	..	116@117	120@121
Upper Congo, ball, red.....	..	121@122	125@126
Sierra Leone, 1st quality....	96@ 97	..@ 117	123@124
Massai, red	96@ 97	..@ 117	124@125
Soudan niggers	82@ 83	..@100	107@108
Cameroon, ball	60@ 61	77@ 78	79@ 80
Benguela	61@ 62	..@ 74	75@ 76
Madagascar, pinky	91@ 92	98@ 99	99@100
Accra flake	20@ 21	22@ 23	25@ 26

CENTRALS.	Feb. 1, '09.	Jan. 1, '10.	Jan. 31.
Esmeralda, sausage	80@ 81	..@100	104@105
Guayaquil, strip	69@ 70	84@ 85	87@ 88
Nicaragua, scrap	78@ 80	97@ 98	99@100
Mexican, scrap	79@ 80	96@ 97	100@101
Mexican, slab	56@ 57	82@ 83	78@ 80
Mangabeira, sheet	53@ 54	57@ 72	none here
Guayule	30@ 31	60@ 63	64@ 65

EAST INDIAN.	Feb. 1, '09.	Jan. 1, '10.	Jan. 31.
Assam	92@ 93	94@ 95	100@101
Pontianak .....	..	6@6½	..@6½
Borneo	35@ 45	55@ 64	57@ 67

Late Pará cables quote:

Per Kilo.	Per Kilo.
Islands, fine	Upriver, fine
Islands, coarse	Upriver, coarse
Exchange	Exchange

Latest Manãos advices:

Upriver, fine	Exchange
Upriver, coarse .....	..

Statistics of Para Rubber (Excluding Caucho).

NEW YORK.		ENGLAND.				
Fine and Medium.	Coarse.	Total 1909.	Total 1908.	Total 1907.		
Stocks, November 30. tons	181	37 =	218	248	135	
Arrivals, December	2004	671 =	2675	2209	1078	
Aggregating	2185	708 =	2893	2547	1213	
Deliveries, December	2011	675 =	2686	2303	1099	
Stocks, December 31.	174	33 =	207	244	114	
PARÁ.		ENGLAND.				
Stocks, November 30. tons	1385	475	140	500	136	640
Arrivals, December	3140	3015	2285	960	1439	1015
Aggregating	4525	3490	2425	1460	1575	1655
Deliveries, December	4375	2795	2177	1075	800	825
Stocks, December 31.	150	695	248	385	775	830
World's visible supply, December 31. tons		1909.	1908.	1907.		
Pará receipts, July 1 to December 31.		2,358	2,314	2,484		
Pará receipts of Caucho, same dates.		14,970	14,075	12,900		
		1,840	1,665	1,340		

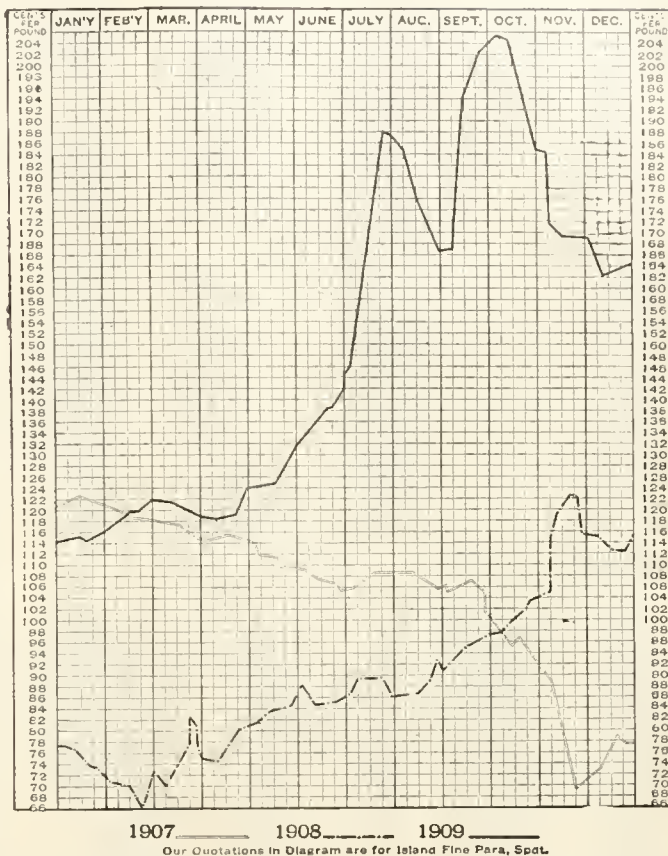


CHART SHOWING FLUCTUATIONS IN ISLANDS SPOT FINE PARA RUBBER AT NEW YORK, FOR THREE YEARS. [Copyright, 1910, by Henry A. Gould.]

Liverpool.

WILLIAM WRIGHT & Co. [January 1]:

Fine Pará.—The market has been active but subject to sudden fluctuations; the tendency, however, has been to a lower level of values. Prices for December at one time declined to 7s. 3½d. [= \$1.76] and the more distant positions to 7s. 2½d., but have since reacted and closed spots 7s. 7d., January 7s. 6½d., January to April 7s. 5d.; there has been steady buying for these distant positions at market rates. America continues to take large supplies from Brazil, as well as buying in this market; as shipments to Europe are comparatively small, any trade orders would naturally stiffen prices. Receipts continue plentiful, but so far this does not seem to affect prices to any great extent.

WILLIAM WRIGHT & Co. report [January 7]:

Fine Pará.—An undreamt record in price has to be recorded for 1909, 5s. 2d. [= \$2.23] being paid for hard fine Pará in September last, and the year closed with prices 2s. 5d. per pound higher than they were in January a year ago, with every indication of a continuance of a very high level of values. January opened with price of hard fine 5s. 1½d., and gradually advanced to 5s. 3d. in March, and, with practically little variation from this, advanced in June to 6s.; July opened at 6s. 4½d., and during the month there was a record jump of over 2s. per pound, 8s. 6d. being paid; in August a sharp reaction to 7s. 11d., followed by an extraordinary advance in September to 9s. 2d. (the record price); October declined to 8s. 10d., and back to 9s. 1d., since which time there has been a gradual decline in values, closing in December at 7s. 6¾d.

London.

WM. JAS. & HY. THOMPSON report [January 7]:

Pará.—Since our last, the leading feature in the Pará market has been the large and continuous buying in Brazil for American account at steadily advancing rates. This has left the European market still rather short for the whole of January, and European manufacturers who have been waiting for a decline have now been compelled to come into the market with the result of further strengthening the position. This situation appears

British Crude Rubber Imports.

OFFICIAL statistics for calendar years, stated in pounds:

YEAR.	Imports.	Exports.	Net Imports.
1898	54,833,072	33,023,536	21,809,536
1899	50,360,912	34,284,320	16,076,592
1900	57,593,312	32,864,832	24,728,480
1901	52,245,088	32,904,704	19,340,384
1902	46,970,000	32,676,112	14,293,888
1903	54,443,760	37,658,768	16,784,992
1904	55,555,584	33,415,536	22,140,048
1905	60,464,944	37,464,112	29,000,832
1906	67,992,624	36,988,336	31,004,288
1907	74,736,928	39,090,912	35,646,016
1908	64,407,392	40,153,792	24,253,600
1909	78,406,944	44,567,488	33,839,456

GUTTA-PERCHA.

YEAR.	Imports.	Exports.	Net Imports.
1898	7,082,656	1,151,136	5,931,520
1899	9,239,664	840,224	8,399,440
1900	14,118,608	1,709,792	12,408,816
1901	9,905,056	1,224,832	8,680,224
1902	9,395,568	1,190,784	8,204,784
1903	5,198,032	741,664	4,456,368
1904	3,056,256	890,624	2,165,632
1905	5,088,608	1,020,880	4,067,728
1906	5,966,352	973,952	4,992,400
1907	6,516,048	1,268,624	5,247,424
1908	3,575,936	521,920	3,054,016
1909	5,064,864	680,736	4,384,128

New York.

SUMMARY OF PRICES FOR 1909.

	UPRIVER.		ISLAND.		CAMETA.
	Fine.	Coarse.	Fine.	Coarse.	
January	120@122	90@ 92	113@116	55@59	62@64
February	120@126	91@ 96	115@120	57@60	62@65
March	122@126	93@ 97	118@121	55@61	63@67
April	121@126	92@ 96	118@123	56@59	63@69
May	126@135	96@ 98	123@131	59@67	69@78
June	135@151	98@105	131@142	67@70	78@82
July	150@195	105@120	141@184	70@75	80@92
August	179@195	110@120	165@184	62@75	80@92
September	190@215	112@132	172@202	65@82	83@96
October	202@215	120@132	183@202	72@82	83@96
November	193@203	117@121	172@184	69@72	80@84
December	175@193	111@121	164@172	69@72	79@82

AVERAGE PRICES.

1909	159¾	107	149¾	66¾	77
1908	93¾	67½	88¾	47½	52
1907	109¾	88	104½	61¾	65½
1906	124½	93½	121	70	72¾
1905	128½	93½	125½	72	74
1904	113¾	87¾	110	65½	65½

Rubber Receipts at Manaos.

DURING December and six months of the crop season, for three years (courtesy of Messrs. Scholz & Co.):

FROM.	December.			July-December.		
	1909.	1908.	1907.	1909.	1908.	1907.
Rio Purús-Acre..... tons	423	775	599	3,898	3,846	3,234
Rio Maderia.....	379	453	273	2,017	1,917	1,568
Rio Jurúa.....	550	838	624	1,491	1,825	1,372
Rio Javary-Iquitos.....	265	536	490	1,779	1,763	1,944
Rio Solimões.....	244	158	217	709	667	828
Rio Negro.....	171	195	111	261	124	141
Total.....	2,032	2,865	2,314	11,155	10,142	9,087
Caucho.....	349	884	490	1,882	1,954	1,424
Total.....	2,331	3,749	2,804	12,037	12,096	10,511

Less Rubber From Bolivia.

THESE figures denote the quantity of rubber exported from Bolivia, by calendar years, in English pounds. In most cases they are official, being supplied to THE INDIA RUBBER WORLD direct:

1891	759,000	1897	3,683,275	1903	2,906,274
1892	799,480	1898	6,943,100	1904	3,456,481
1893	868,600	1899	4,708,000	1905	3,720,908
1894	1,391,500	1900	7,091,728	1906	1,929,608
1895	1,804,902	1901	7,623,138	1907	1,830,513
1896	2,509,566	1902	4,186,585	1908	1,818,187

Up to and including 1902 the figures embraced the production of the Acre territory, which since has been ceded to Brazil. Until that time the Acre yielded the greater part of the Bolivian rubber export. In 1901 the Acre was credited with 5,054,436 pounds and in 1902 with 1,757,510 pounds. For 1903 and the years following the figures relate to Bolivia with the Acre excluded. It will be seen that for this region the yearly output has been declining, though it is known that the Acre has greatly enlarged its output of late.

The World's Stocks.

VISIBLE SUPPLIES PARA RUBBER JANUARY 1.
[Reported by WILLIAM WRIGHT & Co., Liverpool.]

	1910.		1909.	1908.	1907.
	Pará.	Caucho.			
English stocks Pará, first hands.....	240	—	128	773	273
English stocks Pará, second hands....	148	—	147	154	104
English stocks caucho.....	—	390	348	500	25
Pará stocks, first hands.....	30	—	210	240	10
Pará stocks, second hands.....	480	40	580	460	490
American stocks.....	100	50	385	270	190
Continental stocks.....	30	10	20	210	70
Afloat to Europe.....	700	60	450	880	530
Afloat to America.....	910	90	920	240	470
Total visible, including caucho.....	2,638	640	3,188	3,727	2,162

African Rubbers.

NEW YORK STOCKS (IN TONS).

December 1, 1908.....	179	July 1, 1909.....	268
January 1, 1909.....	156	August 1.....	130
February 1.....	157	September 1.....	123
March 1.....	200	October 1.....	67
April 1.....	178	November 1.....	134
May 1.....	268	December 1.....	134
June 1.....	156	January 1, 1910.....	228

Havre.

THE first monthly inscription of the year, on January 27, embraced about 92 tons of rubber, practically all from the French Congo.

CENTRAL ELECTRIC Co. (Chicago) have issued under date of December, 1909, a price list and discount sheet applying to their catalogue No. 26, on Electrical Supplies, among which wire insulated with Okonite figures prominently. [5¾" x 8¾". 64 pages.]

WIRT & KNOX MANUFACTURING Co. (Philadelphia), have brought out a catalogue for 1910 of their Hose Carts, Reels and Racks, which cannot fail to interest dealers in and users of such articles. [5¾ in. x 3¼ in. 44 pages.]

IN connection with the large wheels, the tires have a direct relation to the matter of weight. The over-heavy automobile destroys tires in far greater proportion to its weight than does the car of moderately light weight. Michelin is authority for the statement that a 5 per cent. increase in car weight will produce a 15 per cent. increase in the tire wear and tear. This means that an excess of one-third in weight doubles the destruction of tires.—H. H. FRANKLIN, in *Carriage Monthly*.

AN improvement in rubber vacuum cups whereby a heavy beveled hand mirror can be attached to a window pane and remain for months with perfect safety is what makes the Vacu-Mirror a very valuable adjunct to the toilet. The rubber suction cup fits inside of the semispherical metal cap shown in the engraving. In applying, the rubber cup is compressed or dented with the thumbs through the openings in the metal cup. With the face of the cap against the window pane, the release of the thumbs forms a vacuum that will keep it there indefinitely. [Austin Sales Co., No. 18 Vesey street, New York.]

SEND for a free copy of the Index to Mr. Pearson's "Crude Rubber and Compounding Ingredients," at the office of this paper.

likely to prevail for the next few weeks. The bulk of the crop will be received in Brazil during the next three months, but as it is not on the whole expected to show any extraordinary increase, but only just enough to satisfy the increased consumption, we expect that the large arrivals will find a ready market and that prices—minor fluctuations excepted—will on the whole be maintained and possibly carried ultimately to a higher level than at present ruling.

Antwerp.

THE offerings at the first monthly auction of the year, on January 20, embraced about 295, of which again a goodly proportion was of plantation sorts—from Straits Settlements, Java and Sumatra. The remainder was mostly of good congo sorts. There were also upwards of 27 tons of Maniçoba rubber, at varying estimations. Offerings of Congo sorts for account of the American Congo Co. reached 4,895 kilograms. A heavy advance in prices realized was scored.

RUBBER ARRIVALS FROM THE CONGO.

JANUARY 10.—By the steamer Albertville:

Bunge & Co.....(Société Générale Africaine) kilos	96,300	
Do.....(Comité Spécial Katanga)	5,000	
Do.....(Chemins de fer Grands Lacs)	800	
Do.....(Société Anversoise)	1,150	
Do.....(Société Abir)	11,750	
Do.....(Comptoir Commercial Congolais)	14,700	
Do.....(Cie. du Kasai)	81,700	
Cassart & Henrion.....	1,000	
Congo Trading Co.....	350	212,750

DECEMBER 20.—By the steamer Bruxellesville:

Bunge & Co.....(Société Générale Africaine) kilos	96,400	
Do.....(Société Abir)	6,000	
Do.....(Société Anversoise)	3,600	
Do.....(Comptoir Commercial Congolais)	37,800	
Do.....(Comité Spécial Katanga)	7,500	
Do.....(Chemins de fer Grands Lacs)	16,100	
Société Coloniale Anversoise.....	16,100	
L. & W. Van de Velde.....(Cie. du Kasai)	86,000	
Do.....	2,000	
Charles Dethier.....(American Congo Co.)	5,100	
M. S. Cols.....	5,100	
Société Générale de Commerce.....(Alimaïenne)	1,500	272,250

RUBBER STATISTICS FOR DECEMBER.

DETAILS.	1909.	1908.	1907.	1906.	1905.
Stocks, Nov. 30..kilos	735,616	604,170	1,015,282	714,919	635,296
Arrivals in December..	315,997	520,182	219,544	636,460	474,175
Congo sorts	215,983	454,701	190,000	579,700	436,404
Other sorts	100,014	65,481	29,544	57,760	37,771
Aggregating	1,051,613	1,124,352	1,234,826	1,351,379	1,109,471
Sales in December....	510,101	528,617	227,932	693,195	374,284
Stocks, December 31..	541,512	595,735	1,006,894	658,184	735,187
Arrivals since Jan. 1..	4,685,958	5,035,344	5,054,473	5,772,062	5,713,728
Congo sorts	3,492,332	4,262,531	4,346,141	4,593,759	4,442,607
Other sorts	1,193,626	772,813	708,332	1,178,303	1,271,121
Sales since Jan. 1....	4,740,181	5,446,503	4,705,763	5,849,065	5,519,805

New York.

IN regard to the financial situation, Albert B. Beers (broker in crude rubber and commercial paper, No. 68 William street, New York), advises as follows: "There has been a fair demand for commercial paper this month, principally from out of town banks, and the ruling rates have been 5@5½ per cent. for the best rubber names, and 6 per cent. for those not so well known."

Rubber Exports From Manaos.

THE following figures have been compiled from tables supplied to THE INDIA RUBBER WORLD by Messrs. Sholz & Co. (indicating weights in kilograms):

	Fine.	Medium.	Coarse.	Caucho.	Total.
New York	5,386,167	1,148,979	1,736,992	1,980,799	10,252,937
Liverpool	2,885,032	593,970	698,735	2,193,583	6,371,326
Havre and Hamburg	1,638,244	149,961	239,965	761,016	2,789,186
Total	9,909,443	1,892,916	2,675,692	4,935,398	19,413,449

EXPORTERS OF RUBBER FROM MANAOS.

Dusendschön, Zarges & Co.....kilos	5,381,585
Adelbert H. Alden.....	3,836,214
Scholz & Co.....	3,445,468
Gordon & Co.....	3,161,621
Soc. An. "Armazens Andresen".....	346,973
De Lagotellerie & Co.....	189,841
Günzburger & Co.....	160,473
B. A. Antunes & Co.....	143,511
J. G. Araujo.....	137,581
E. Kingdom & Co.....	104,040
Leite & Co.....	45,356
Mesquita & Co.....	34,131
Sundry shippers	199,014
Iquitos transit	2,227,641
Total	19,413,449

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weight in Pounds.]

DEC. 27.—By the steamer Crispin, from Manãos and Pará.

IMPORTERS	Fine.	Medium.	Coarse.	Caucho.	Total.
A. T. Morse & Co.....	380,300	37,500	131,700	70,900=	620,400
New York Commercial Co.	324,500	128,800	83,800	53,200=	590,300
Poel & Arnold.....	153,900	35,000	123,400	123,200=	435,500
General Rubber Co.....	219,300	53,600	116,000	23,800=	412,700
Hagemeyer & Brunn.....	23,200	1,400	18,500	.....=	43,100
C. P. dos Santos.....	21,400	1,500	2,000	.....=	24,900
Henderson & Kohn.....	.....	.....	13,200	.....=	13,200
G. Amsinck & Co.....	700	.....	3,300	4,400=	8,400
TOTAL	1,123,300	257,800	491,900	275,500=	2,148,500

JAN. 4.—By the steamer Clement, from Manãos and Pará:

Poel & Arnold.....	406,500	72,700	173,700	15,600=	668,500
General Rubber Co.....	240,000	59,700	147,700	34,900=	482,300
A. T. Morse & Co.....	250,400	60,700	120,800	4,200=	436,100
New York Commercial Co.	122,300	24,500	25,600	75,500=	247,900
Henderson & Kohn.....	34,300	.....	72,000	.....=	106,300
Hagemeyer & Brunn.....	15,300	.....	10,500	.....=	25,800
C. P. dos Santos.....	15,000	1,400	7,900	.....=	24,300
G. Amsinck & Co.....	2,200	.....	5,300	.....=	7,500
TOTAL	1,086,000	219,000	563,200	130,200=	1,998,400

JAN. 14.—By the steamer Dominic, from Manãos and Pará:

Poel & Arnold.....	125,300	49,300	111,100	12,500=	298,200
General Rubber Co.....	112,100	21,300	32,500	1,800=	167,700
New York Commercial Co.	62,700	8,600	41,200	43,500=	156,000
A. T. Morse & Co.....	43,500	3,900	58,100	.....=	105,500
C. P. dos Santos.....	72,100	6,100	20,500	.....=	98,700
Hagemeyer & Brunn.....	12,500	4,600	32,400	.....=	49,500
Edmund Reeks & Co.....	3,600	1,400	2,600	.....=	7,600
Henderson & Kohn.....	3,600	.....	4,600	.....=	8,200
Crossman & Sicklen.....	1,700	.....	6,100	.....=	7,800
William E. Peck & Co.....	300	.....	2,600	.....=	2,900
TOTAL	437,400	95,200	311,700	57,800=	902,100

PARA RUBBER VIA EUROPE.

	POUNDS.
DEC. 24.—By the <i>St. Paul</i> —London:	
Poel & Arnold (Coarse).....	8,000
DEC. 27.—By the <i>Laurentie</i> —Liverpool:	
New York Com. Co. (Fine).....	70,000
Robinson & Co. (Fine).....	15,000
New York Com. Co. (Caucho).....	100,000
Robinson & Co. (Coarse).....	11,500
JAN. 3.—By the <i>Pennsylvania</i> —Hamburg:	
New York Com. Co. (Fine).....	9,000
New York Com. Co. (Coarse).....	8,000
General Rubber Co. (Coarse).....	7,000
JAN. 3.—By the <i>Umbria</i> —Liverpool:	
Robinson & Co. (Fine).....	18,000
New York Com. Co. (Caucho).....	56,000
Robinson Co. (Coarse).....	11,000
JAN. 6.—By the <i>Bohemian</i> —Liverpool:	
Poel & Arnold (Coarse).....	45,000
JAN. 8.—By the <i>Waldersee</i> —Hamburg:	
Poel & Arnold (Coarse).....	20,000
W. L. Gough Co. (Fine).....	5,000

JAN. 10.—By the *Minnehaha*—London:

General Rubber Co. (Coarse).....	22,000
JAN. 10.—By the <i>Carmania</i> —Liverpool:	
New York Com. Co. (Fine).....	56,000
Raw Products Co. (Coarse).....	9,000
JAN. 15.—By the <i>Lusitania</i> —Liverpool:	
New York Commercial Co. (Fine).....	17,000
JAN. 17.—By the <i>Philadelphia</i> —Havre:	
Poel & Arnold (Coarse).....	22,500
JAN. 18.—By the <i>Baltic</i> —Liverpool:	
New York Com. Co. (Fine).....	63,000
Livesey & Co. (Coarse).....	33,500
General Rubber Co. (Fine).....	56,000
JAN. 20.—By the <i>Bluecher</i> —Hamburg:	
Poel & Arnold (Coarse).....	11,000

OTHER NEW YORK ARRIVALS.

CENTRALS.

[*This sign, in connection with imports of Centrals, denotes Guayule rubber.]

DEC. 24.—By the *Alleghany*—Colombia:

Cabello & Blanco.....	4,000
R. del Castillo.....	2,500
Anthold Held.....	2,500
J. A. Pauli & Co.....	1,000
West Coast Rubber Co.....	2,000
Schohs & Marturet.....	1,000
Isaac Brandon & Bros.....	14,500
DEC. 24.—By the <i>Mevido</i> —Mexico:	
Harburger & Stack.....	3,500
H. Marquardt & Co.....	2,000
E. Stuger & Co.....	1,500
Isaac Kubic & Co.....	1,500
General Export Co.....	1,000
Graham, Hinkley & Co.....	1,000
DEC. 27.—By the <i>Hugin</i> —Tampico:	
Ed. Maurer	*95,000
New York Commercial Co.....	*67,000
Poel & Arnold.....	*30,000
Rosing Bros. Co.....	*7,000

*199,000

DEC. 27.—By the <i>Laurentic</i> —Liverpool:		
New York Commercial Co.	9,000	
Robinson & Co.	11,000	20,000
DEC. 28.—By the <i>Panama</i> —Colon:		
G. Amsinck & Co.	14,000	
Dumarest Bros. & Co.	5,500	
Piza Nephews & Co.	5,500	
J. Sambrada & Co.	4,500	
A. Rosenthal & Sons.	4,000	
Mecke & Co.	3,500	
Jose Julia & Co.	1,500	
America Trading Co.	1,500	
Meyer Hecht	1,000	
Wessels Kulenkampff & Co.	1,000	41,500
DEC. 29.—By <i>El Valle</i> —Galveston:		
Continental-Mexican Rub. Co.	*200,000	
Chas. T. Wilson Co.	14,000	214,000
DEC. 29.—By the <i>Joachim</i> —Colon:		
G. Amsinck & Co.	4,000	
A. Rosenthal & Sons.	4,000	
New York Commercial Co.	4,000	
Pablo Calvert & Co.	2,500	
A. M. Capen's Sons.	2,000	
Roldan & Van Sickle.	1,000	17,500
DEC. 31.—By <i>El Cid</i> —Galveston:		
Continental-Mexican Rubber Co.		*30,000
JAN. 3.—By the <i>Alliance</i> —Colon:		
Isaac Brandon & Bros.	12,000	
G. Amsinck & Co.	5,000	
Piza, Nephews & Co.	3,000	
New York Commercial Co.	3,000	
L. Johnson & Co.	2,000	
Fidanque Bros. & Co.	1,000	26,000
JAN. 3.—By the <i>Sigmund</i> —Columbia:		
J. H. Rossbach & Bros.	7,000	
Maitland, Coppell Co.	5,500	
Lionel Hagenaer's & Co.	2,000	
G. Amsinck & Co.	1,500	16,000
JAN. 3.—By the <i>Denver</i> —Galveston:		
Poel & Arnold.		*30,000
JAN. 3.—By the <i>Umbria</i> —Liverpool:		
New York Commercial Co.		15,000
JAN. 4.—By <i>El Albo</i> —Galveston:		
Continental-Mexican Rubber Co.		*55,000
JAN. 4.—By the <i>Protens</i> —New Orleans:		
Manhattan Rubber Mfg. Co.	2,500	
A. T. Morse & Co.	4,000	
G. Amsinck & Co.	1,500	
A. Rosenthal & Sons.	1,500	9,500
JAN. 4.—By the <i>Matanzas</i> —Tampico:		
Ed. Maurer	*210,000	
New York Commercial Co.	*120,000	
Poel & Arnold.	*35,000	*365,000
JAN. 5.—By the <i>Kroonland</i> —Antwerp:		
Ed. Maurer	*45,000	
Poel & Arnold.	*34,000	*79,000
JAN. 5.—By <i>El Norte</i> —Galveston:		
Continental-Mexican Rubber Co.		*110,000
JAN. 6.—By the <i>Thames</i> —Columbia:		
G. Amsinck & Co.	3,500	
Suzarte & Whitney.	2,500	
Gravenhorst & Co.	1,000	
Roldan & Van Sickle.	1,000	
Maitland, Coppell & Co.	1,000	9,000
JAN. 6.—By the <i>Hawaii</i> —Mexico:		
George A. Alden & Co.		4,500
JAN. 7.—By the <i>Mexico</i> —Troutera:		
Harburger & Stack.	6,500	
E. U. Lebbals Co.	2,500	
H. Marquardt Co.	2,500	
E. Stuger & Co.	1,500	
Isaac Kubie & Co.	1,500	14,500
JAN. 8.—By the <i>Colon</i> —Colon:		
Piza, Nephews & Co.	6,500	
G. Amsinck & Co.	6,500	
A. Rosenthal & Sons.	2,000	15,000
JAN. 10.—By the <i>Atai</i> —Columbia:		
Roldan & Van Sickle.	2,500	
A. Held	2,500	
R. de Castilla.	1,500	
Cabello & Blanco.	1,000	
De Lima Cortissoz & Co.	1,000	8,500
JAN. 10.—By <i>El Dia</i> —Galveston:		
Continental-Mexican Rubber Co.		*80,000
JAN. 11.—By the <i>San Paulo</i> —Pernambuco:		
A. D. Hitch & Co.		11,000
JAN. 12.—By the <i>Yumuri</i> —Tampico:		
Ed. Maurer	*125,000	
New York Commercial Co.	*34,000	*159,000
JAN. 13.—By the <i>Prins August</i> —Colon:		
A. Santos & Co.	6,000	
G. Amsinck & Co.	3,500	
Suzarte & Whitney.	1,500	
Isaac Brandon & Bros.	1,000	12,000

JAN. 13. By <i>El Rio</i> —Galveston:		
Continental-Mexican Rub. Co.	*110,000	
For Canada	*5,500	*115,500
JAN. 13.—By the <i>Cadour</i> —Bahia:		
Poel & Arnold.	38,000	
A. Hirsch & Co.	5,000	
J. Rossbach & Bros.	5,000	48,000
JAN. 13.—By the <i>Antilles</i> —New Orleans:		
A. N. Rothols.	2,000	
A. T. Morse & Co.	3,500	
Manhattan Rubber Co.	1,500	
Robinson & Co.	1,500	
Eggers & Heinlein.	1,500	10,000
JAN. 15.—By the <i>Samland</i> —Antwerp:		
Poel & Arnold.		*22,000
JAN. 15.—By <i>El Monte</i> —Galveston:		
Charles T. Wilson Co.		*15,000
JAN. 17.—By the <i>Advance</i> —Colon:		
G. Amsinck & Co.	12,500	
L. Johnson & Co.	11,500	
Henry Mann & Co.	8,000	
Isaac Brandon & Bros.	7,500	
Piza, Nephews & Co.	7,000	
Dumarest Bros. & Co.	5,000	
J. Sambrada & Co.	4,500	
New York Commercial Co.	4,000	
A. Rosenthal & Sons.	4,000	
Wessels Kulenkampff & Co.	2,500	
America Trading Co.	2,000	
Roldan & Van Sickle.	1,500	
Mecke & Co.	1,500	
Meyer & Hecht.	1,000	
Tropical Trade Co.	1,000	
De Lima Cortissoz & Co.	1,000	74,500
JAN. 17.—By the <i>Prins Eitel</i> —Columbia:		
Lionel Hagenaers & Co.	5,000	
Maitland, Coppell Co.	3,500	
Cabello & Blanco.	1,500	
Kunhardt & Co.	1,000	11,000
JAN. 17.—By the <i>Monterey</i> —Mexico:		
Harburger & Stack.	14,000	
H. Marquardt & Co.	5,500	
Isaac Kubie & Co.	2,000	
E. Stuger & Co.	1,500	
General Export Co.	1,000	
E. W. Libbals & Co.	1,000	
W. L. Wadeigh.	1,000	
George A. Alden & Co.	1,000	27,000
JAN. 17.—By the <i>Pretoria</i> —Hamburg:		
Rubber Trading Co.		11,500
JAN. 17.—By the <i>Laplond</i> —Antwerp:		
Poel & Arnold.		*15,000
JAN. 17.—By <i>El Sud</i> —Galveston:		
Continental-Mexican Rubber Co.		*55,000
JAN. 19.—By the <i>Sornia</i> —Honduras:		
A. Rosenthal & Sons.	2,500	
Pablo Calvert & Co.	2,000	
Isaac Brandon & Bros.	1,000	5,500
JAN. 19.—By the <i>Baltic</i> —Liverpool:		
Rubber Trading Co.		11,000
JAN. 19.—By the <i>Clyde</i> —Columbia:		
Maitland, Coppell & Co.	4,000	
A. M. Capen's Sons.	2,000	
G. Amsinck & Co.	2,000	
Kunhardt & Co.	2,000	
Gravenhorst & Co.	1,000	
Isaac Brandon & Bros.	1,000	12,000
JAN. 20.—By <i>El Dorado</i> —Galveston:		
Cont.-Mexican Rubber Co.	*55,000	
Chas. T. Wilson & Co.	*22,000	*77,000
JAN. 20.—By the <i>Tennyson</i> —Bahia:		
A. Hirsch & Co.	25,000	
New York Commercial Co.	14,000	
J. H. Rossbach & Bros.	3,500	42,500
JAN. 21.—By the <i>Manzanillo</i> —Tampico:		
Ed. Maurer	*75,000	
New York Commercial Co.	*70,000	
Cont.-Mexican Rubber Co.	*55,000	
Poel & Arnold.	*30,000	
Schroeder & Co.	*9,000	*239,000
JAN. 22.—By the <i>Mcrido</i> —Vera Cruz:		
H. Marquardt & Co.	2,500	
Mexican Products Co.	1,000	3,500
JAN. 21.—By the <i>Panama</i> —Colon:		
Isaac Brandon & Bros.	17,000	
G. Amsinck & Co.	13,000	
J. Sambrada & Co.	7,000	
L. Johnson & Co.	5,000	
Henry Mann & Co.	2,500	
Dumarest Bros. & Co.	2,000	
Andean Trading Co.	1,500	
Suzarte & Whitney.	1,500	
De Lima, Cortissoz & Co.	1,500	
New York Commercial Co.	1,500	
Fidanque Bros. & Co.	1,500	
Roldan & Van Sickle.	1,000	
Jose Julia & Co.	1,000	
Meyer Hecht	1,000	57,000
JAN. 22.—By <i>El Valle</i> —Galveston:		
Cont.-Mexican Rubber Co.		*55,000

AFRICAN.		
POUNDS.		
DEC. 23 By the <i>Teutonic</i> —London:		
Livesey & Co.		11,500
DEC. 27. By the <i>Touraine</i> —Havre:		
General Rubber Co.		22,500
DEC. 27.—By the <i>Laurentic</i> —Liverpool:		
George A. Alden & Co.	45,000	
Poel & Arnold.	11,000	
H. A. Gould Co.	5,500	61,500
JAN. 3.—By the <i>Pensylvania</i> —Hamburg:		
A. T. Morse & Co.	25,000	
Rubber Trading Co.	7,000	
W. L. Gough Co.	6,500	
George A. Alden & Co.	6,500	45,000
JAN. 3.—By the <i>Umbria</i> —Liverpool:		
A. T. Morse & Co.	31,000	
Livesey & Co.	20,000	51,000
JAN. 4.—By the <i>Bretagne</i> —Havre:		
Poel & Arnold.	45,000	
C. P. dos Santos.	2,000	47,000
JAN. 5.—By the <i>Kurdistan</i> —Lisbon:		
General Rubber Co.		110,000
JAN. 5.—By the <i>Kroonland</i> —Antwerp:		
Poel & Arnold.	100,000	
A. T. Morse & Co.	28,000	
Rubber Trading Co.	30,000	
H. A. Gould Co.	11,500	169,500
JAN. 6.—By the <i>Bohemian</i> —Liverpool:		
General Rubber Co.	45,000	
Poel & Arnold.	5,500	50,500
JAN. 7.—By the <i>Adriatic</i> —London:		
Poel & Arnold.		18,000
JAN. 8.—By the <i>Waldersee</i> —Hamburg:		
Poel & Arnold.	34,000	
A. T. Morse & Co.	13,500	
W. L. Gough Co.	11,500	
Robinson & Co.	7,000	66,000
JAN. 10.—By the <i>Arabic</i> —Liverpool:		
George A. Alden & Co.		7,000
JAN. 10.—By the <i>Carnania</i> —Liverpool:		
Poel & Arnold.	40,000	
A. T. Morse & Co.	35,000	
Robinson & Co.	11,500	
W. L. Gough Co.	11,000	
H. A. Gould Co.	9,000	
Rubber Trading Co.	5,500	
George A. Alden & Co.	5,500	117,500
JAN. 10.—By the <i>Hinifredan</i> —Liverpool:		
General Rubber Co.	44,500	
George A. Alden & Co.	5,500	
Rubber Import Co.	4,500	54,500
JAN. 14.—By the <i>Aspomont</i> —Lisbon:		
Poel & Arnold.		33,500
JAN. 15.—By the <i>Lusitania</i> —Liverpool:		
A. T. Morse & Co.		40,000
JAN. 15.—By the <i>Samland</i> —Antwerp:		
Poel & Arnold.	20,000	
A. T. Morse & Co.	17,000	
In Transit	10,000	47,000
JAN. 15.—By the <i>Hudson</i> —Bordeaux:		
General Rubber Co.	67,000	
George A. Alden & Co.	25,000	
A. T. Morse & Co.	15,000	107,000
JAN. 17.—By the <i>McPherson</i> —Lisbon:		
General Rubber Co.	22,500	
Robinson & Co.	11,500	
A. T. Morse & Co.	11,500	45,500
JAN. 17.—By the <i>Pretoria</i> —Hamburg:		
A. T. Morse & Co.	57,000	
W. L. Gough Co.	34,000	
Rubber Trading Co.	18,000	
General Rubber Co.	11,500	
Poel & Arnold.	5,000	125,500
JAN. 18.—By the <i>Baltic</i> —Liverpool:		
George A. Alden & Co.	22,500	
Robinson & Co.	13,500	
Rubber Trading Co.	15,000	
Raw Products Co.	5,500	16,500
JAN. 19.—By the <i>Mexico</i> —Havre:		
Poel & Arnold.	33,500	
Raw Products Co.	3,500	37,000
JAN. 19.—By the <i>Bluecher</i> —Hamburg:		
George A. Alden & Co.	13,500	
General Rubber Co.	13,500	
A. T. Morse & Co.	11,500	38,500
JAN. 22.—By the <i>Lincoln</i> —Hamburg:		
A. T. Morse & Co.	55,000	
Poel & Arnold.	22,500	
George A. Alden & Co.	5,500	
W. L. Gough Co.	8,000	
Rubber Trading Co.	5,000	96,000

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No. 17. Particularly adapted to softening material for tubing machine. Almost universally used for waterproofing wire.

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(I invite inquiries from Manufacturers respecting the various grades of rubber I market)

EAST INDIAN.

[*Denotes plantation rubber.]

	POUNDS.	
DEC. 23.—By the <i>Teutonic</i> =London:		
A. T. Morse & Co.....	*11,500	
DEC. 24.—By the <i>St. Paul</i> =London:		
A. T. Morse & Co.....	*22,500	
Poel & Arnold.....	11,500	34,000
DEC. 31.—By the <i>New York</i> =London:		
Poel & Arnold.....	*45,000	
A. T. Morse & Co.....	*22,500	
Robinson & Co.....	*5,000	*72,500
JAN. 3.—By the <i>Pensylvania</i> =Hamburg:		
Poel & Arnold.....	11,500	
George A. Alden & Co.....	9,000	20,500
JAN. 3.—By the <i>Barotse</i> =Colombo:		
A. T. Morse & Co.....	*8,000	
JAN. 4.—By the <i>Suruga</i> =Singapore:		
Heabler & Co.....	20,000	
Poel & Arnold.....	11,000	
Geo. A. Alden & Co.....	9,000	
O. Isenstein & Co.....	10,000	50,000
JAN. 5.—By the <i>Kroonland</i> =Antwerp:		
Rubber Trading Co.....	*5,000	
JAN. 5.—By the <i>Trifels</i> =Colombo:		
A. T. Morse & Co.....	*15,000	
New York Commercial Co..	*11,500	*26,500
JAN. 7.—By the <i>Adriatic</i> =London:		
Poel & Arnold.....	*65,000	
A. T. Morse & Co.....	*35,000	
Poel & Arnold.....	9,000	109,000
JAN. 8.—By the <i>Albanga</i> =Singapore:		
George A. Alden & Co.....	10,000	
JAN. 10.—By the <i>Minnehaha</i> =London:		
General Rubber Co.....	*25,000	
JAN. 17.—By the <i>Philadelphia</i> =London:		
Poel & Arnold.....	*70,000	
New York Commercial Co..	*10,000	*80,000
JAN. 18.—By the <i>Coulsdon</i> =Singapore:		
Heabler & Co.....	20,000	
George A. Alden & Co.....	8,000	
W. L. Gough Co.....	8,000	36,000
JAN. 19.—By the <i>Foveric</i> =Colombo:		
A. T. Morse & Co.....	*11,500	
Robert Crooks Co.....	*3,500	*15,000

JAN. 19.—By the <i>Mesaba</i> =London:		
General Rubber Co.....	*100,000	
A. T. Morse & Co.....	*34,000	
Raw Products Co.....	*2,500	*136,500
JAN. 20.—By the <i>Oceanic</i> =London:		
A. T. Morse & Co.....	*15,000	
Poel & Arnold.....	*7,000	
Poel & Arnold.....	5,000	27,000
JAN. 22.—By the <i>Stolzenfels</i> =Colombo:		
A. T. Morse & Co.....	*35,000	
New York Commercial Co..	*25,000	*60,000
GUTTA-JELUTONG.		
DEC. 27.—By the <i>Minnetonka</i> =London:		
Heabler & Co.....	33,000	
JAN. 4.—By the <i>Suruga</i> =Singapore:		
Heabler & Co.....	200,000	
Poel & Arnold.....	125,000	
W. L. Gough Co.....	80,000	405,000
JAN. 8.—By the <i>Albanga</i> =Singapore:		
W. L. Gough Co.....	210,000	
JAN. 18.—By the <i>Coulsdon</i> =Singapore:		
Heabler & Co.....	500,000	
Poel & Arnold.....	200,000	
W. L. Gough Co.....	150,000	
W. R. Russell & Co.....	100,000	950,000
GUTTA-PERCHA.		
JAN. 3.—By the <i>Pennsylvania</i> =Hamburg:		
E. Oppenheim.....	13,500	
JAN. 4.—By the <i>Suruga</i> =Singapore:		
Heabler & Co.....	30,000	
O. Isenstein & Co.....	11,000	
R. & J. Henderson.....	65,000	106,000
JAN. 8.—By the <i>Albanga</i> =Singapore:		
Heabler & Co.....	10,000	
JAN. 8.—By the <i>Waldensee</i> =Hamburg:		
E. Oppenheim.....	9,000	
JAN. 18.—By the <i>Coulsdon</i> =Singapore:		
R. & J. Henderson.....	50,000	
BALATA.		
JAN. 3.—By the <i>Korona</i> =Demerara:		
Ed. Maurer.....	7,000	
C. Tennant Sons & Co.....	2,500	9,500
JAN. 14.—By the <i>Parima</i> =Demerara:		
Ed. Maurer.....	3,500	
Middleton & Co.....	3,000	
J. A. Pauli & Co.....	3,000	9,500

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK NOVEMBER.		
Imports:	Pounds.	Value.
India-rubber.....	7,089,264	\$7,914,681
Balata.....	39,491	19,590
Gutta-percha.....	21,871	12,448
Gutta-jelutong (Pontianak).....	1,268,936	45,269
Total.....	8,417,562	\$7,991,988
Exports:		
India-rubber.....	114,545	\$67,850
Reclaimed rubber.....	27,895	3,711
Rubber scrap, imported....	1,735,347	\$159,879
PORT OF NEW YORK DECEMBER.		
Imports:	Pounds.	Value.
India-rubber.....	10,274,128	\$11,337,091
Balata.....	18,114	8,685
Gutta-percha.....	39,544	11,893
Gutta-jelutong (Pontianak).....	2,238,714	120,315
Total.....	12,561,500	\$11,477,984
Exports:		
India-rubber.....	84,625	\$51,320
Balata.....	24,008	13,179
Gutta-percha.....	20,172	11,815
Reclaimed rubber.....	77,518	10,124
Rubber scrap, imported....	2,133,794	\$167,077
BOSTON ARRIVALS.		
DEC. 1.—By the <i>Michigan</i> =Liverpool:		
Poel & Arnold (African).....	34,000	
DEC. 9.—By the <i>Colombian</i> =London:		
Livesey & Co. (African).....	11,000	
DEC. 14.—By the <i>Sagamore</i> =Liverpool:		
Poel & Arnold (African)....	5,500	
Poel & Arnold (Fine Para)...	22,500	28,000
DEC. 17.—By the <i>Schuykill</i> =Singapore:		
Poel & Arnold (Jelutong)...	250,000	
Heabler & Co. (Jelutong)...	65,000	
W. L. Gough Co. (Jelutong)...	55,000	
In Transit (Gutta-percha)...	45,000	415,000
DEC. 27.—By the <i>Sylvania</i> =Liverpool:		
Poel & Arnold (African)....	13,500	
Robinson & Co. (African)...	13,500	27,000
DEC. 28.—By the <i>Sachem</i> =Liverpool:		
Poel & Arnold (African).....	22,500	
DEC. 30.—By the <i>Albanga</i> =Singapore:		
Geo. A. Alden & Co. (Jelutong)...	680,000	
Heabler & Co. (Jelutong)...	498,000	1,178,000

CONSUMPTION OF INDIA-RUBBER BY THE UNITED STATES AND CANADA (IN TONS).

[From the Annual Statistical Summary of ALBERT T. MORSE & Co., New York.]

DETAILS.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.
Imports to United States.....	14333	17671	18620	23095	20468	23208	21842	24760	27623	28635	29936	29433	29477	31129
Exports to Europe.....	500	250	150	300	450	680	430	490	274	357	1625	558	480	681
Add stock on January 1.....	13833	17421	18470	22795	20018	22528	21412	24270	27349	28278	28311	28875	28991	30448
	558	641	744	591	712	1198	1399	331	256	305	537	365	606	1553
Less stock close of year.....	14391	18062	19214	23386	20730	23726	22811	24601	27605	28583	28848	29240	29603	32001
	641	744	591	712	1198	1399	331	256	305	537	365	606	1553	*1332
Deliveries to manufacturers... 13750	17318	18623	22674	19532	22327	22480	24345	27300	28046	28483	28634	28050	30669	
Imports of guayule rubber, 8,674 tons.														

*Includes *Crispin's* cargo, 958 tons.

PARA EXPORTS OF INDIA-RUBBER FOR 1909 (IN KILOGRAMS).

EXPORTERS.	Fine.	Medium.	Coarse.	Caucho.	TOTAL.	Fine.	Medium.	Coarse.	Caucho.	TOTAL.
Gruener & Co.—Pará.....	2,458,307	436,891	1,625,177	614,254	5,134,629	2,687,658	557,668	625,595	1,588,713	5,459,634
Dusendschön, Zarges & Co.—Manaos.....	2,198,528	579,003	960,670	1,029,270	4,767,471	952,145	186,835	302,563	604,487	2,046,030
Ad. H. Alden, Pará-Manaos.....	1,409,544	269,084	434,655	377,978	2,491,261	1,060,098	95,034	201,193	470,849	1,827,174
Scholz, Hartje & Co., Pará.....	1,523,548	327,078	859,803	213,907	2,924,336	658,630	149,677	155,877	389,219	1,353,403
Scholz & Co., Manaos.....	520,012	6,401	854,666	22,770	1,403,849	559,817	5,812	301,028	110,376	977,033
Gordon & Co., Pará-Manaos.....	459,178	54,285	523,163	18,142	1,054,768	361,717	52,837	364,853	63,871	843,278
E. Pinto Alves & Co., Pará.....	23,488	2,912	4,898		31,298	898,041	21,778	106,951	283,164	1,309,934
J. Marques, Pará.....	85,678		4,672	42,381	132,731	378,112	4,324	65,897	361,370	809,703
R. O. Ahlers & Co., Pará.....					433,980	191,250	1,166	158,187	483	351,086
Ahlers & Co., Manaos.....	202,980		231,000		5,522	422,510	60,419	83,991	27,026	593,946
Pires Teixeira & Co., Pará.....					5,522	422,510	60,419	83,991	27,026	593,946
Alves Braga Rubber Est. & Trading Co., Pará.....	231,530	32,455	106,486	67,236	437,707	57,251	13,049	14,855	2,643	89,789
De Lagotellerie & Co., Pará-Manaos										
Guilherme Augusto de Miranda Filho, Pará.....	87,282	17,937	47,822	36,516	188,657	129,027	22,116	23,839	19,472	194,454
S. A. Arnazens Anderson, Manaos.....										
Mello & Co., Pará.....	35,061	6,495	29,166	28,338	99,060	211,502	51,207	55,026	29,238	346,973
Günzburger & Co., Manaos.....	6,938	1,482	9,662	7,866	25,948	8,148	18,473	25,017	21,930	152,568
Leite & Co., Pará-Manaos.....	28,197	2,036	1,969	10	32,192	74,368	1,277	1,848	126,729	134,790
B. A. Antunes & Co., Pará-Manaos.	73,238	16,031	12,982		102,251	35,520	2,560	2,580	600	41,260
I. G. Araujo, Manaos.....	3,560	1,822	4,060		9,442	82,194	19,025	25,443	6,757	133,419
E. Kingdom & Co., Manaos.....				104,040	104,040	673	95	224	357	1,349
Sundry shippers.....	48,024	9,568	52,035	7,397	117,024	96,767	16,223	56,173	78,785	247,948
Itacoatiara direct.....	1,888	4,055	3,877	1,867	11,687	72,021	9,837	53,098	13,218	148,174
Iquitos direct.....	42,741	675	17,427	78,284	139,127	811,228	69,817	316,849	1,429,513	2,627,407
Total.....	9,439,722	1,767,310	5,784,170	2,655,778	19,646,980	9,832,613	1,372,221	2,950,626	5,649,763	19,805,223



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Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for car-load lots, per pound—show a slight decline since last month:

Old rubber boots and shoes—domestic.....	105 ³ / ₈ @103 ³ / ₄
Old rubber boots and shoes—foreign.....	93 ³ / ₄ @ 97 ³ / ₈
Pneumatic bicycle tires.....	7 @ 7 ³ / ₈
Automobile tires.....	7 ¹ / ₂ @ 7 ⁷ / ₈
Solid rubber wagon and carriage tires.....	93 ³ / ₈ @ 9 ¹ / ₂
White trimmed rubber.....	10 @ 11
Heavy black rubber.....	6 ¹ / ₂ @ 63 ³ / ₄
Air brake hose.....	5 ¹ / ₂ @ 53 ³ / ₄
Garden hose.....	27 ³ / ₈ @ 3
Fire and large hose.....	33 ³ / ₄ @ 4
Matting.....	17 ³ / ₈ @ 2

Plantation Rubber from the Far East, 1909.

It is too early yet to present a complete statement of the extent of exports of cultivated rubber from Ceylon and Malaya for the calendar year 1909, but it may be of interest to give here the figures available for the latest dates in the year for which data are available.

From Ceylon, to December 20.....	pounds 1,332,055
From Singapore, to December 16.....	2,348,271
From Penang, to November 30.....	1,076,843
From Port Swettenham, to November 30.....	2,507,913

Total (for incomplete year).....pounds 8,165,082

Complete returns for former years have been:

	1905	1906	1907	1908
From Ceylon.....pounds	168,547	327,661	556,080	912,125
From Singapore.....	180,533	719,133	1,446,417	2,060,238
From Penang.....	48,267	98,636	642,668	1,611,197
From Port Swettenham..	nil	nil	nil	nil
Total.....	397,347	1,145,430	2,645,165	4,583,560

LONDON AUCTION, JANUARY 4.

GOW, WILSON & STANTON, LIMITED, report:

Since the last sale the firm tone has continued, with a considerable volume of business in all grades. At the opening of the New Year the offerings came to a strong market, all descriptions being well competed for. Quotations generally showed a substantial improvement, in the case of the fine qualities to the extent of 2d. to 4d.; the medium and darker kinds of crepe being in some cases up to 1s. higher. Vallambrosa smoked sheet realized 8s. 23³/₄d. [= \$2]; the same grade from Highlands 8s. 2¹/₂d.; and from Bukit Rajah 8s. 03³/₄d. per pound, several parcels of fine crepe bringing 7s. 83³/₄d. [= \$1.88] per pound. Offering mounted to about 146 tons, of which 18¹/₂ tons from Ceylon and the remainder from Malaya. Average price realized, 7s. 33³/₄d. [= \$1.78]. Price of hard fine Pará, 7s. 7¹/₂d. [= \$1.85]. Range of quotations for plantation:

Sheet and Biscuits:	
Smoked sheet.....	7s. 10 ¹ / ₂ d.@8s. 23 ³ / ₄ d.
Good to fine sheet.....	7s. 5 ¹ / ₄ d.@7s. 7 ¹ / ₄ d.
Good to fine biscuits.....	7s. 5 ¹ / ₄ d.@7s. 7 ¹ / ₄ d.
Crepe:	
Very pale.....	7s. 6 ¹ / ₂ d.@7s. 83 ³ / ₄ d.
Medium and polish.....	7s. 1d. @7s. 6 ¹ / ₄ d.
Dark and brown.....	4s. 9d. @7s.
Unwashed Scrap:	
Medium to fine.....	6s. @6s. 7d.
Dark and low.....	4s. @5s. 113 ³ / ₄ d.

Lewis & Peat give the details of several lots of "rambong" (*Ficus*) rubber. Twenty packages of rambong crepe of the Sumatra mark realized 4s. 3¹/₂ d. to 6s. 3¹/₂ d. Rambong scrap sold at 4s. and upward. Small lots from Borneo and Java were offered and sold.

JANUARY 18.—At to-day's auction, when about 1053³/₄ tons of Ceylon and Straits plantation rubber was offered, there was good competition and everything was sold. Lewis & Peat, report: "Prices improved about 3d. per pound during the sales, and we close with an advance of about 4 or 5 pence per pound for sheets and biscuits, 2¹/₂ and 3 pence for good crepe, 6 pence for brown crepes, and 3 pence for scrap. Smoked sheets fetched up to 8s. 7¹/₂d. [= \$2.09.8] and "Lanadron" blocks up to 8s. 9¹/₄d. [= \$2.13.4] per pound for one lot." The price of fine brown Pará is 7s. 7¹/₂d. [= \$1.85.5] per pound.

Para.

R. O. AHLERS & Co, report [December 22]:

Another reaction set in since the middle of this month, and the existing stock found ready buyers at considerably increased prices. This movement seems to find further support from this side by very moderate entries from the serao.

R. O. AHLERS & Co, report [January 11]:

Owing to reports of fairly heavy entries in Manaós, the market is somewhat irregular, showing, however, no real signs of weakness. Supply since our last report consist of 1605 tons including upriver and cacho. Receipts so far in January are 1,605 tons, against 2,300 tons in 1909, making the total entries since the 30th of June 17,962 tons this crop, against 18,850 in 1908-09 and 16,075 in 1907-08. Exports July—December, 8,855 tons to the United States and 7,230 tons to Europe.

Hamburg.

MR. WALTER KIRKERUP, for many years connected with Weber & Schaer, india-rubber merchants, Hamburg, has been granted powers of procuracy for that firm, dating from January 1.

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INDIA RUBBER WORLD

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GUTTA-PERCHA

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Vol. XLI. No. 6.

MARCH 1, 1910.

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TABLE OF CONTENTS ON LAST PAGE READING MATTER.

WHAT MAKES A RUBBER "MARKET."

MANY inquiries reach the office of this journal as to why prices of this or that grade of rubber are not reported regularly in our pages. It is necessary at times to make reply that a real "market" for some specific grade does not exist. It is possible that this explanation does not always satisfy the inquirer, who may have knowledge that the kind of rubber about which he asks actually is being sold from time to time in the New York or some other market.

To turn from rubber to another material scarcely less important to rubber manufacturers—that is to say, cotton—there is one important difference between the two as to market conditions. A contract for the purchase or sale of cotton on the New York Cotton Exchange provides that the material to change hands may be of any grade within a certain range, "at the price of — cents per pound for Middling, with additions or deductions for other grades, according to the rates of the New York Cotton Exchange existing on the day previous," etc. Consequently it is sufficient for most purposes in business to mention a single price per pound for cotton, this being understood to apply to the basic grade, all other classes, whether better than or inferior to middling, being quoted at prices which vary automatically according to an agreed upon system.

COMING NEWS FROM THE AMAZON.

At going to press with this issue of THE INDIA RUBBER WORLD our editor is at Manaus—a thousand miles up the Amazon river from Pará—where he went to attend the "Congresso Industrial Seringueiro" (the Rubber Congress). It is too early yet to report the result of this conference, but in due course our readers may expect to be fully informed in regard to the proceedings, together with the latest intelligence on the rubber situation on the Amazon in general.

It would be very convenient if a similar system could be maintained with respect to crude rubber. To a certain extent the condition does exist that when the best grade of Pará rubber is selling at a given price—say \$1.50 or \$2 per pound—the price of rubbers of lower quality will be found to be in sympathy. And by the way it should be kept in mind, whenever the value of any rubber of lower grade is estimated, that the figure has slight value unless the prevailing price at the moment of fine Pará is mentioned. But there is no such fixed relation of one class of rubber to another as exists in the case of cotton, where one of a dozen or more grades is accepted as the basis of the market, and other grades rate higher or lower by established percentages.

All buyers of rubber, of course, recognize the superiority of Pará grades to any other, and expect to pay less or more for medium sorts in keeping with the fluctuations in the market for Pará's. But as we have intimated, there is no rule governing the trade in this regard, and when we say there is no "market" for a given grade it means that no fixed price exists for it, and that it may find a ready sale or become a drug on the market just as there happens to be a momentary demand for it or the absence of a demand. This is particularly true of newly introduced grades of rubber, which, while perhaps appearing attractive, may not appeal to manufacturers until the same have been thoroughly tested, or until the manufacturer can be assured of being able to obtain regular supplies if the new grade should be adopted in his compounding room.

It may not be appreciated generally by producers of rubber that the basis of the rubber manufacture is the employment of certain compounds, which the factory superintendent is loath to deviate from, and any change is made only after careful and long continued experimenting. Rubber goods have to stand the test of time before their merit can be determined, and the mere appearance in the market of a new grade of rubber, no matter how promising, no matter what the price, does not always tempt the manufacturer to adopt it and thereby upset the established practice at his works.

On the other hand, he will spare no pains or expense to acquire a particular quality of rubber which he has been accustomed to use for a given line of products, rather than change his formulas. In such cases rubbers of comparatively low grade sometimes realize prices higher than fine Pará in a single market, or for a limited period. The explanation is that for the time being there is either a marked shortage of the lower grade rubber,

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or a temporary decline in Pará due to fuller stocks than usual.

In a very informing chart of comparative rubber prices issued by the Messrs. Van de Velde, of Antwerp, covering quotations for 20 years past, it appears that at one time in 1890 the difference between Congo Kasai red I and Pará fine was 1s. 3d. [=30.4 cents] per pound, whereas at the end of the year the difference was only 4d. [=8 cents]. A wider difference than has been mentioned occurred in 1905, since which year at some dates the two grades have come very close together. Some other Congo rubbers have actually sold for more than the prices for Pará at the moment.

Reference may be made also to plantation rubber from the Far East, which now has an established reputation and is coming into market in such quantities that any purchaser can be assured of having his wants covered in respect of this grade. There has been a continuous lack of correspondence between prices of plantation and Amazon Pará. The widest divergence, perhaps, occurred in midsummer, 1905, when plantation was quoted at over a shilling more than Pará fine, while in the latter part of 1907, and again in 1909, plantation sorts realized less than forest rubber.

The considerations which have been set forth here may be of interest from another standpoint—that is, as illustrating the principle that in the market for crude rubber, as in the case of other commodities, prices, however they may happen to fluctuate momentarily, are in the last analysis fixed by the time honored law of supply and demand.

MR. PEARSON ON THE AMAZON.

[FROM "A PROVINCIA DO PARA," JANUARY 31.]

MR. HENRY C. PEARSON, Editor and proprietor of the well known New York review, THE INDIA RUBBER WORLD, devoted to the rubber interest in general and in the trade centers of which it plays a very conspicuous part, was a passenger on the English steamer *Clement*, which arrived day before yesterday [January 29]. This technical journal has just celebrated the twentieth anniversary of its existence under the direction of Mr. Pearson, during which it has been notable for the series of benefits conferred upon the producer and manufacturer by the varied and copious amount of data and reports, among all of which we do not know what to admire most—whether the accuracy, the impartiality, or the disinterestedness which so distinctively characterize them.

In the recent exhibition at London, where the condition of the rubber interest was declared to be prosperous and its future assured, Mr. Pearson, with his unquestioned authority, treated of "Wild and Cultivated Rubber in the Americas" and "Synthetic Rubber," reports on which are incorporated in the book "Lectures on India-Rubber," which is a compendium of the proceedings at "Olympia," in September, 1908.

Mr. Pearson is our guest during his journey to Manáos to take part in the congress of our rubber extracting industry, to be opened in February. The recognized and undisputed authority of the Editor of THE INDIA RUBBER WORLD has made his name respected in the great world centers that are now so intensely interested in the product, the original habitat of which was in our impenetrable midland regions.

Mr. Pearson will receive an audience today in the palace from the Governor of the State.

OUR TWENTIETH ANNIVERSARY.

THE Twentieth Anniversary Number of this journal is the subject of an appreciative notice, prominently placed in *The India-Rubber Journal* (London), which closes with congratulations to the Editors on "a very interesting number," and the hope that the paper "will for long continue to prosper under their able management."

* * *

THE INDIA RUBBER MANUFACTURERS' ASSOCIATION,
MANCHESTER [England], January 25, 1910.

TO THE EDITOR OF THE INDIA RUBBER WORLD, New York:

DEAR SIR: I have received the January number of your esteemed journal, and take the opportunity to thank you for the very interesting copies forwarded to me during the past year and also to wish you a very happy and prosperous New Year. I am desirous to congratulate you on having completed 20 years' publication, and to express the hope that a very great and prosperous future may be before your board. F. B. KNOTT,
Secretary.

* * *

DR. PHILIP SCHIDROWITZ, of the Chemical Laboratories, London, writes on January 22:

"Though somewhat late in the day, allow me to congratulate you on your twentieth anniversary and also on the very excellent number with which it is celebrated. I hope that I will live to see THE INDIA RUBBER WORLD's 'golden wedding' with the industry. It is dangerous to prophesy unless you know, but as it is quite likely that my present words may not be remembered 30 years hence, I make the suggestion that when 1940 comes, there will not be a single pound of crude rubber produced on the old haphazard 'wild' lines. However things turn out, I feel certain that THE INDIA RUBBER WORLD will have contributed very materially to the rational evolution of the industry—as it has done in the past."

* * *

[FROM THE "GUMMI-ZEITUNG," BERLIN.]

THE INDIA RUBBER WORLD, a trade publication of signal importance for the American rubber industry, recently celebrated its Twentieth Anniversary and published a special edition as an anniversary gift to its patrons. We send our most hearty congratulations to our esteemed contemporary across the great pond, with our best wishes that it may continue to thrive and meet with a full measure of success in its valuable work. It would be useless again to point out to our readers the importance of THE INDIA RUBBER WORLD for the rubber industry in general, and for all Americans engaged in the rubber trade in particular. We shall confine ourselves to the statement that it can serve as an example for all trade publications. The issue published in celebration of the Twentieth Anniversary contains a number of special articles, among which we may mention a historical review of the rubber industry in Germany, illustrated by photographs of prominent rubber goods manufacturers (Dr. H. Traun, Senator Carl Maret, E. Spannagel, Professor Dr. A. Prinzhorn, F. Clouth), as well as by a portrait of the late Dr. C. O. Weber. Numerous appreciative and congratulatory letters received by THE INDIA RUBBER WORLD from all parts of the world and published in its anniversary number furnish convincing evidence of the esteem and appreciation which our contemporary has earned for itself during the twenty years of its existence.

RECENT issues of the "New Product Circulars," issued by J. P. WILLIAM & BROTHERS, tropical seeds and plants merchants, of Henaratgoda, Ceylon, relate respectively to *Hevea Brasiliensis* and the newer varieties of "Maniçoba" rubber. They will prove interesting to intending buyers of rubber seeds.

RUBBER IN CABLE INSULATION.

THE London *Electrical Review* (January 21, 1910—page 82) comments editorially at length on a recent article in THE INDIA RUBBER WORLD, on "India-Rubber in the Electrical Field," by Mr. Ira W. Henry. In this connection some comparisons are made between the American and English practice which will prove of general interest. It will be remembered that the first great increase in the use of cables for electric light circuits was ascribed by Mr. Henry to the action of authorities of New York and other large cities in requiring the removal of overhead wires. In New York the passing of such an ordinance was followed by protests from the electrical companies, and at a meeting of electrical engineers it was asserted that it was impossible to furnish current of sufficient voltage to light the streets with insulated wires placed underground. The *Electrical Review* says:

"Such a statement reads strangely now, in the light of our present knowledge of what has since been done in the transmission of high voltage currents by underground cables; but it must be remembered that, at that time, there was practically no experience of underground cables in America. In England, owing to the objections which have always been raised to the use of overhead wires, we were somewhat more advanced; rubber cables drawn into pipes were used in 1884 at Hastings for the Brush series system of lighting at 1,600 volts, and at Eastbourne about the same time for transmitting current at 2,000 volts. When the public supply of current was commenced in London and elsewhere after the passing of the Act of 1888, the undertakers were obliged to use underground cables, and rubber cables drawn into cast iron pipes were laid in connection with"—[here follow details of installations at that time].

As to the covering of conductors our contemporary says:

"The method of covering the conductor with rubber which was adopted by the earlier American companies was that employed in England, and consisted of laying two longitudinal strips of rubber, one above and one below the conductor, and pressing them round the conductor, and making longitudinal joints by passing the conductor and rubber strips between semi circular rolls; but a little later another method was largely adopted in the United States, in which the rubber was fed into a screw machine, which forced it in a compact and seamless mass around the conductor as it emerged from a die. This method, although in regular use in England for coating conductors with gutta-percha, has never been largely used for putting on rubber insulation; but it is said to have proved very satisfactory in America, where it has been used not only for the manufacture of lighting cables, but also for making the core of submarine cables."

Regarding the use of rubber insulated core for submarine cable work, as sanctioned by the American government, after summarizing the details in Mr. Henry's article the *Electrical Review* remarks: "Although rubber-insulated submarine cables were made by Hooper some 40 years ago, and several thousand miles of cable have been made with Hooper's core or on similar lines, yet amongst English manufacturers the gutta-percha core has always remained the standard, and it would be interesting to know more fully the reasons which have led the United States war department to the conclusion that the rubber cable is the better." This subject has been treated at some length in various issues of THE INDIA RUBBER WORLD during ten years past, though it is possible that no single article can be pointed to as a comprehensive answer to the query of the London paper.

An example of the use of rubber cable which the *Electrical Review* regards as of particular interest is in the construction of land lines in Alaska. On account of the cost of telegraph poles a rubber-insulated cable has been used in the goldfields, laid on the surface of the snow covered ground, and in many cases it soon becomes buried under snow and ice. The final comment of the *Review* is:

"As it is reported that communication has been well maintained, it would appear that a rubber-insulated cable has proved its value both for land-lines and for submarine work under extreme conditions of temperature, either in tropical or semi-arctic regions, and that it may become a more serious rival than hitherto to the gutta-percha cable, as soon as the price of rubber falls to a more moderate figure."

WESTERN ELECTRIC CO.'S AFFAIRS.

THE annual report of Western Electric Co., presented at the shareholders' meeting in Chicago on February 3, related to conditions as of November 30, 1909. Sales during twelve months had amounted to \$45,575,138, compared with \$32,313,500 in 1908; \$52,724,168 in 1907; and \$69,245,332 in 1906—the year of the largest volume of business. In recent years lower prices have been realized, and a period of general depression has been undergone, at the end of which the financial position of the company has been strengthened. Two years ago the shareholders authorized an issue of \$15,000,000 in first mortgage 5 per cent. bonds. Of these \$8,750,000 have been sold, and \$6,250,000 are in trust to secure \$5,000,000 in two year 4½ per cent. collateral notes issued toward paying off a floating debt. The trust notes were sold recently at 99, the subscriptions totaling more than \$16,000,000. The company now have 17,835 employes, against 14,449 one year previous, and the business prospect is regarded as most favorable.

The company have discontinued the manufacture of electrical power apparatus, with the idea of concentrating more largely upon the telephone industry, in which connection they operate a large hard rubber plant, inaugurated in 1905. Their patents, tools, and patterns used in the manufacture of power machinery have been sold to the General Electric Co. The Western Electric will, however, continue to accept orders for machinery.

The Western Electric Co. was formed in 1881. Sales in 1884 amounted to \$1,534,784. Since that date the capital has not been increased from \$15,000,000, but the surplus by the latest report is \$17,436,786. No reference is made in the report to the company's foreign business, which has been important for years, particularly in the telephone branch.

On the same date as the annual meeting the newly elected board—there was no change—reelected the following officers:

Chairman of the Board—E. M. BARTON.
 Vice-Presidents—H. A. HALLIGAN, F. R. WELLES, W. P. SIDLEY.
 Treasurer—J. W. JOHNSTON.
 Assistant Treasurers—JOHN BRAY, E. R. GILMORE.
 Secretary—G. C. PLATT.
 Assistant Secretary and Assistant Treasurer—R. E. MCEWEN.

Among the other important corporations in which President Thayer is a director are the Western Union Telegraph Co., and various telephone companies. Although he makes frequent visits to the Chicago plants and offices of the Western Electric Co., he continues to regard New York as his official headquarters and residence.

THE WESTERN ELECTRIC CO. IN EUROPE.

THE Western Electric Co., Limited, with £500,000 [= \$2,433,250] capital, was registered in London, January 10, 1909, to acquire the business and undertaking carried on in the United Kingdom by the Western Electric Co., of Chicago, Illinois, and carry on in the United Kingdom or elsewhere the business of dealers in telephones, telephonic, telegraphic and electric lighting apparatus, instruments, and machinery, electrical cables, wires and goods, electricians, etc. The signatories are: F. R. Welles and G. E. Pingree, both of Norfolk house, Victoria embankment, W. C.—the business address of the Western Electric Co. in London. The company's works in England are at North Woolwich. The company is private. The two gentlemen named and A. Williamson are the first directors. Mr. Welles is a director in and one of the vice-presidents of the American company. The factory at North Woolwich, on the Thames, was established by the Fowler-Waring Cables Co., Limited, registered August 13, 1889.

AFRICAN PLANTATION RUBBER.

BY G. VAN DEN KERCKHOVE.*

WE shall in the course of this article refer only to the systematic cultivation of African rubber-producing plants, *i. e.*, to the cultivation of such plants as have produced practical results. As a matter of course, I shall first of all refer to the *lianes*, these plants, and more especially the *Landolphia*, being actually under cultivation in Central Africa, in the Belgian Congo. Not long ago I had occasion to inform the readers of the *Gummi-Zeitung* that millions of rubber-producing *lianes* had been planted in the Belgian colony, not only by private enterprise, but also by the colonial government. The problem now to be solved is the finding of a method by which this large supply of *lianes* may be rationally worked, as it is a well-known fact that the systematic tapping of *Landolphia lianes* is a very difficult matter—at least as long as the plants are young.

It appears opportune to call attention to the useful measure in furtherance of the planting of the *Funtumia* submitted by the Belgian secretary for the colonies to the chamber of deputies, upon his return from his African journey of inspection. The government proposes to devote annually 2,000 hectares [= 4,942 acres] of land exclusively to the cultivation of rubber-producing plants, and demands for this purpose an annual appropriation of 1,000,000 francs [= \$193,000] for a term of ten years. The plantations already in existence, as well as the further areas which the government intends to devote each year to rubber cultivation, may consequently be expected to throw in the near future large amounts of plantation rubber, produced in these parts of Africa, upon the European market. For this purpose, however, it will first be necessary to determine which rubber-producing plants are best adapted to cultivation in the said districts.

The question whether the *Funtumia elastica* is available for cultivation on a large scale in Malaysia and Central Africa remains to be solved. The rather restricted number of tapping experiments in cultivated *Funtumia*, which up to the present time have extended only over brief periods, have as yet not produced sufficient data for determining whether the said rubber-producing tree will be able to withstand systematic tapping permanently. It therefore still remains an open question whether the rational annual tapping of cultivated *Funtumia* trees will produce a sufficient output of latex. There is a difference of opinion in regard to this matter, and a final decision can only be reached in the near future, when cultivated *Funtumia* trees, grown to the age of three or four years, will be available for experimental purposes on a large scale.

The *Funtumia* undoubtedly develops rapidly and produces a satisfactory output of latex, which, when carefully prepared, produces in turn a good quality of rubber. "Uganda" *Funtumia* rubber, the product of Mabira Forest (Uganda) Rubber Co., Limited, prepared by the smoking process, and tested by me some time ago, was worth 25 francs per kilogram [= \$2.19 per pound], according to market prices current at the time. The said *Funtumia* rubber, and the *Hevea* rubber previously mentioned, were the best African grades which I have had occasion to test during the past 20 years.

[The latter rubber referred to was produced on the plantation "N'Galli-Goko" of the Compagnie Produits Végétaux du Haut-Kasai, in the Belgian Congo, mentioned by the same writer in *Gummi-Zeitung*, December 10, 1909—page 358. The product of trees 9-10 years old realized 26 francs per kilogram = \$2.28 cents per pound.]

The rational tapping of the *Funtumia* trees is one of the most important factors in the successful development of the cultivated *Funtumia*. The incisions should always be longitudinal, in the shape of herringbone cuts. The single herringbone cut is to be used for young trees, and the double cut only after the trees have attained a certain age. Care must be taken to have the

ribs of the herringbone cut as far apart as possible, and due attention should, furthermore, be paid to the fact that the *Funtumia* requires rest, and that even comparatively old trees must not be tapped too frequently or too abundantly.

RUBBER IN MADAGASCAR.

ONE of the latest appeals for British money in respect of rubber is that of the Madagascar Rubber Co., Limited, registered in London on January 25, with a nominal capital of £53,000 [= \$257,924.50]. The declared object is to acquire special grants over 212,000 acres of forests in the island of Madagascar, given by the French government, and to work in conjunction therewith (under an exclusive license for Madagascar) machinery invented by Leon Guignel, of Lyons, France, for extracting rubber direct from the vines, and for purifying rubber produced by crude native methods. The French patent is No. 399,896 (May 7, 1908), issued to Société pour l'Exploitation des Caoutchouc au Congo.

The rubber to be dealt with is described as the product of vines, which are cut off and subjected to decortication, after which the rubber is extracted in the form of clean, well washed crepe. It is estimated that new shoots, resulting from the vine roots, will become producers of rubber at the age of 10 years. The first step proposed is to deal with a tract of 10,000 hectares [= 24,710 acres], cutting off the vines from 1,000 hectares annually, so as to work the whole area in 10 years, after which the vines first cut down will have become renewed. One extracting machine and one purifying machine, it is stated, have been sent to Madagascar, at a cost of about £1,504 [= \$7,319.22]. They are to be worked under license from the company named already as owners of the patent.

This initial tract lies in western Madagascar, in the Menabe region, between the Morondava and Manambolo rivers; the vendors and promoters of the company are the Menabe Syndicate, Limited, registered in London, December 11, 1909. Options are held by the new company on two other tracts, and in case of their being exercised it is proposed to increase the capital of the Madagascar Rubber Co., Limited, to £350,000 [= \$1,703,275]. The prospectus is based upon a selling price of 3 shillings per pound.

The public issue of the Madagascar Rubber Co.'s shares was of 50,000 participating preference shares. The secretary announces that it was necessary to send letters of regret in respect of 1,060,000 shares applied for. In other words the applications were for \$5,168,490 worth of shares in excess of the issue.

TWO SWINDLING TOURISTS.

THE attention of THE INDIA RUBBER WORLD has been called to the fact that members of the rubber trade in the United States have been called upon by a man claiming to be connected with a British rubber company of the first rank and displaying a detailed knowledge of the affairs of that company and of the trade in general. He has accepted hospitality and obtained advances of money for which he has failed to make any return.

Quite apart from this adventurer, and while letters were crossing the Atlantic to THE INDIA RUBBER WORLD showing him to be a swindler, the office of the paper itself as well as various gentlemen connected with the industry in the United States, were visited by a man seeking temporary favors on account of his alleged relation to important members of the trade at Manchester, but without being able to confirm satisfactorily his claims.

It is hardly probable that a *bona fide* member of any important rubber factory in Great Britain, or of any rubber manufacturer's family there, will find it necessary to appeal for aid after the manner of the two persons here referred to.

The friends of this journal in Great Britain will welcome any further information regarding the adventurers mentioned that may be available on this side of the water.

* *Gummi-Zeitung*, Berlin. XXIV-13 (Dec. 24, '09). P. 427.

Mr. Rider's Seventy-fifth Birthday.

THE seventy-fifth birthday of Mr. John P. Rider, president of the New York Rubber Co., was celebrated at his home on "Spy Hill," Fishkill-on-the-Hudson, on the evening of January 28, at which time he gave a dinner to a number of gentlemen prominent in business or the professions in Dutchess county, New York, in which county he was born and has spent the greater part of his life. Mr. Rider is one of the leading citizens of that region, and no less active and progressive than when at half his present age. Indeed, it is said that, at the age of forty, he was disposed for a while to retire from business, in the belief that he had little more time to live.

Mr. Rider, connected with the New York Rubber Co. for nearly half a century, and for most of the time in an official capacity, became its president after the death of Mr. William H. Acken, in 1906, his position before that having been, for many years, vice-president. Similarly he was promoted last year to the presidency of the Matteawan National Bank, of which he had long been vice-president, on account of a vacancy having been caused by death.

At the dinner given by Mr. Rider the table was decorated by a beautiful vase containing 75 Jacqueminot roses, which had been presented in honor of the occasion, and by trailing smilax. Another present much appreciated by the host was a massive table ornament in silver from the New York offices of the rubber company. There were many other gifts, and numerous congratulations by telegraph. One of the guests, Professor De Garmo, read a poem—"A Greeting. To my friend John P. Rider, on his Seventy-fifth Birthday"—which was much appreciated by host and guests alike.

The guests were Dr. Robert Lamb, superintendent of the State asylum at Matteawan; Ralph S. Tompkins, Judge Samuel K. Phillips, Gustavus A. Schrader, James G. Meyer, Professor James M. DeGarmo, Dr. Keith Sears, E. Lakin Tompkins, Sylvanus M. Davidson, John Place, Henry Montgomery, Dr. Amos T. Baker, Rev. George A. Green, A. Montgomery, Jr., and David Graham.

John P. Rider was in his twenty-ninth year when, on October 25, 1863, he became connected with the New York Rubber Co., through a suggestion by Johnson Letson, one of the founders of the New Brunswick Rubber Co., in New Jersey, in 1850, and long president of the same. John Acken, who was also an incorporator of the New Brunswick Rubber Co., was the father of the late William H. Acken, so long president of the New York Rubber Co., and grandfather of John Acken, now first vice-president. William H. Acken, who married a daughter of Mr. Letson, was introduced to the New York Rubber Co. and became its treasurer two years later at the solicitation of Mr. Rider, and he and Mr. Rider were thereafter associated in business for 43 years. Long continued service by the officers and staff has been characteristic of the New York Rubber Co., but Mr. Rider seems likely to exceed any past record in that company.

Mr. Rider was elected secretary of the company in 1864, since which time he has continuously filled an official position with it. For twenty years after becoming connected with the company he resided in New York city, since which time he has made his home

up the Hudson, near the company's factory, at Matteawan, New York.

On becoming connected with the rubber industry Mr. Rider found himself a contemporary of most of its prominent founders. The company was incorporated in 1851 to acquire and work certain licenses under Goodyear's patent. Two of the charter members—original licensees—were still connected with the company: John Greacen, Jr., as president, and Benjamin Franklin Lee, as treasurer and manager. Charles Goodyear was no longer alive, but his brother, Henry B. Goodyear, who had worked with him, survived, and Mr. Rider, in a recent conversation with an INDIA RUBBER WORLD man, quoted the latter with relation to the earlier vulcanization experiments. As is well known, the work of the Goodyears led to important results quite apart from what they had set out to accomplish, and this led Mr. Rider to remark:

"I have been going to school in rubber all these years, and am not yet at the end of the course. I haven't got my degree yet. There is something new coming up in the industry all the time."

Among the newer developments Mr. Rider mentioned the changing régime in the production of crude rubber, and evinced an interest in the Rubber Congress at Manãos, a modern city where stood only an Indian village when Mr. Rider first engaged in business. The place had not then become known in a connection with rubber.

An interesting feature in the interview with Mr. Rider came when he was asked for a few details regarding his connection with the rubber company.

"Why you have it in THE INDIA RUBBER WORLD," he said; and it was true. Back in 1893, in the issue for November 15 (page 55) was the article referred to—an account of the average long service of the company's staff, and likewise the effect upon the fortunes of the company of such devoted and uninterrupted service.

In view of Mr. Rider's having been connected continuously with the manufacture of india-rubber goods in the United States longer than any one else now living, he may appropriately be termed "the dean of the industry."

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JOHN P. RIDER,
President New York Rubber Co.

At the annual meeting of the shareholders of the New York Rubber Co., held in the offices of the company in New York city, January 25, the following were elected trustees for the ensuing year: John P. Rider, A. Montgomery, Jr., John Acken, Rufus A. Brown, William H. Lee, Edward S. Woodward and Henry Montgomery. The trustees later elected officers as follows:

President—JOHN P. RIDER.

Vice-President and Treasurer—JOHN ACKEN.

Second Vice-President and Secretary—HENRY MONTGOMERY.

The Mr. Lee mentioned in the list of trustees is a son of one of the original incorporators of the company.

THE use of flake graphite for lubricating the inner surface of tire covers is recommended by William Hinds in *The Horseless Age*. After a year's use he writes that he considers it so far superior to talc that the latter does not enter into competition with it. Mr. Hinds says: "Flake graphite will adhere to an inner tube for at least a year, whether the tube be carried loose in the car or in use in a casing."

THE BRITISH RUBBER CRAZE.

THE formation of rubber plantation companies in Europe goes merrily on, with no abatement of the feverish enthusiasm with which anything in the name of "rubber" is greeted by whoever can buy a £1 share. It is one thing to announce the registration at Somerset House, London, of a company with a large nominal capital; American corporations with authorized shares mounting up into the millions have been known, where the "public" never so much as gave a sign that any announcement had been made public. They do such things in Britain, too, but the point of this article is that when the prospectus of a RUBBER company is advertised one morning, the office force of the promoters is worn out in the evening sending out to would be investors letters of regret that there are not enough shares to go around.

During January the West Jequié Rubber Estates, Limited, was floated in London, to take over the Jequié Rubber Syndicate, Limited, a *Manihot* rubber proposition in southern Brazil. The first thing was an advertisement in the morning papers. The second chapter appeared in the news columns the next morning:

"This company has gone to allotment, 298 subscribers receiving on an average about 2½ per cent. of the number of shares they applied for. Some slight advantage being given to shareholders in the Jequié Rubber Syndicate, Limited, and to people connected with the rubber trade, so far as they could be identified. The issue having been subscribed so many times over, the directors are compelled to return letters of regret in respect of 561 subscriptions, representing a further 734,511 shares applied for. Letters of allotment and regret will be posted as soon as they can be prepared."

And look at this item in a financial paper, on the day following the public offer of the shares of The Madagascar Rubber Co., Limited: "It was stated last night that the shares of the Madagascar Rubber Co. had already been subscribed twenty times over. A substantial premium, as will be seen, had already been established." Shares in an untried proposition, in an alien country, quoted at a premium before delivery to the subscribers!

What follows is not presented as a complete list of British registrations of rubber planting companies since January 1, but only a record of those which have come to the notice of this journal in respect of the month of January. The list gives an idea of the wide distribution of the enterprises which have appeared during this period to British investors in rubber. The 18 companies mentioned have a combined capitalization of £1,703,000 [= \$8,287,640.50].

FEDERATED MALAY STATES.

Gedong (Perak) Rubber Estate, Limited; Jan. 11.....	£60,000
Vigornia Rubber Co., Limited; in Negri Sembilan; Jan. 27.....	20,000

NATIVE MALAY STATES.

Kota Tinggi (Johore) Rubber Co., Limited; Jan. 15...	£35,000
Kuala Pahi Rubber Estate, Limited; Jan. 5.....	60,000
Gomal Rubber Co., Limited; in Johore; Jan. 21.....	120,000
Peneiro Rubber Estates, Limited; in Johore; Jan. 18...	85,000

STRAITS SETTLEMENTS.

Juru Estates, Limited; Jan.....	£85,000
Rim (Malacca) Rubber Estates, Limited; Jan. 23.....	90,000

SOUTH INDIA.

Malayam Rubber and Produce Co., Limited; Jan.....	£500,000
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BRITISH NORTH BORNEO.

Sapulo Rubber Co., Limited; Jan. 7.....	£150,000
Kapoewas Rubber Co., Limited; Jan. 28.....	100,000

DUTCH EAST INDIES.

Siak (Sumatra) Rubber Estates, Limited; Jan. 15.....	£75,000
Rini (Java) Rubber Estates, Limited; Jan. 25.....	55,000
Baru (Java) Estates, Limited; Jan. 29.....	70,000

BRITISH EAST AFRICA.

Kisumu Rubber Estates, Limited; Jan. 28.....	£45,000
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MADAGASCAR.

Madagascar Rubber Co., Limited; Jan. 25.....	£53,000
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BRITISH WEST INDIES.

West Indian Estates, Limited; in Barbados and Trinidad; Jan. 27.....	£50,000
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BRAZIL.

West Jequié Rubber Estates, Limited; Jan. 12.....	£50,000
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RUBBER SHARES IN THE LONDON NEWS.

THE prominence given to rubber share trading in the London market is indicated by the large headlines on the first page of important daily journals. For example, we subjoin the wording of the top headings appearing daily for one week in *The Financial News*. The subordinate features of these headlines relate to other classes of securities which formerly held first place in the interest of stock traders:

(Monday)	RUBBERS AGAIN THE FEATURE OF THE INDUSTRIAL TRADING.
(Tuesday)	RUBBER SHARES VERY ACTIVE, BUT OTHER INDUSTRIALS QUIET.
(Wednesday)	RUBBER SHARE BOOM CONTINUES, AMID INACTIVE SURROUNDINGS.
(Thursday)	RUBBER MARKET CONTINUES TO MONOPOLIZE ATTENTION.
(Friday)	RUBBER SHARES CLOSE STRONG IN SPITE OF EFFORTS OF BEARS.
(Saturday)	RUBBERS MONOPOLIZE INTEREST IN FIRM INDUSTRIAL MARKET.

[FROM A NEW YORK NEWSPAPER.]

RUBBER BOOM STRETCHES.

Wild Times on London 'Change—Public Rushes to Buy Shares of New Companies.

Special Cable Despatch to THE SUN.

LONDON, Feb. 16.—The boom in rubber shares which has excited the Stock Exchange for some time has reached unexpected dimensions, exceeding any in recent times. The demand is due to the public realizing that rubber can be profitably cultivated in parts of the world where it is not yet grown, such as in Ceylon and the Malay states.

Numerous companies have been formed and some have already declared big dividends. Each day sees riotous excitement in the section of the exchange devoted to trading in rubber shares. The brokers are making huge profits. The public is buying furiously. Many persons who bought shares some time ago and sold out at a handsome profit are now rebuying shares at double the former price.

New companies continue to be floated. The subscription list of three such companies will open tomorrow and they will doubtless be closed before the advertised time, as has been the case with many others.

The brokers and clerks are becoming physically worn out. They rarely leave the city, snatching short spells of sleep at hotels.

BOOTS THE FARMERS WEAR.—The rubber manufacturers realize that there is a point above which it is impolitic to raise prices, namely, to such a point that customers will decide to dispense with rubber footwear and purchase waterproof boots and shoes of leather. This has been found to be the case at previous times when the discrepancy between the two lines of goods has been too great. Farmers are inclined to wear rubber boots or leather ones, according to which will give the best service for the money paid, and they are careful buyers, figuring very closely in this, as in other respects.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

A MONTH or two ago the sort of combination which had existed among the principal asbestos manufacturing firms came to an end, and close competition again ensued. Another feature tending to make business difficult has been the continuous rise in the raw material, which at the time of writing stands at about $8\frac{1}{2}$ pence per pound.

THE ASBESTOS MANUFACTURE.

This means that when the waste, which can only be used for common purposes, is removed, the fibers suitable for spinning cost about 1 shilling per pound. A third important development, which took place in the middle of January, was the consolidation of Bells' Asbestos Co., Limited, with the United Asbestos Co., Limited, with works in East London and at Harefield, Middlesex. These two firms, with Messrs. Turner Brothers, Limited, of Spotland, Rochdale, are the only asbestos firms of practically any importance in the British Isles, and competition for large contracts will now be entirely between Rochdale and the Southern combination, which is to be known as Bells' United Asbestos Co., Limited. Foreign competition has, of course, to be reckoned with under the present fiscal system, and I believe it is a fact that German producers are always ready to quote a discount off British net price lists, in order to get rid of their excess production of low-grade goods. Important work, however, such as that of the government contracts, is restricted to British manufacture by a special clause in the specification, as foreign competition was not to be reckoned with. I understand that with regard to these government contracts it has generally been the rule to distribute the orders between the three firms mentioned above, though the same class of goods is not supplied two or three years in succession by the same firm. As in the case of vulcanized rubber contracts, inspection of the works and goods may take place at any time by government officials, and I heard of a case in which an inspector traveled a considerable distance to inspect and pass two ounces of material! Bells' Asbestos Co. have been handicapped by not having rubber manufacturing plant, while the United and Turners, having their own plant, have no need to buy anything from rubber works. Only a few of the British rubber manufacturers make asbestos goods, of these firms Messrs. George McLellan & Co., of Glasgow, being one of the most prominent. Without, however, wishing in any way to disparage the business done by the rubber works, I believe I am correct in saying that the only real opposition the three big firms mentioned have had to meet in the large scale has come from Germany.

NOTIFICATION of a recent convention by this important company may conveniently follow the topic just discussed. It is well

SIEMENS BROTHERS & CO., LIMITED.

known that asphyxiating fumes, and in cases explosions, occur as the result of rubber cables firing in close situations, and a *contretemps* due to the firing of some rubber cable on one of the London tube railways has led to Messrs. Siemens bringing out an asbestos insulated cable for use in car wiring—that is, for the motor trade. I understand that such cables have given every satisfaction for their particular purpose, though rubber insulation manufacturers may take heart of grace from the fact that they are not likely to compete with rubber where there is any possibility of moisture being met with. The Siemens' firm of course are well known in regard to Atlantic cable laying, their Atlantic work exceeding that of any other company. They were one of the first to run rubber washing machinery by electricity, and it is interesting to note the development which has taken place in this direction, in the case of plant which the firm put in a year or two ago for the St. Helens Rubber and Cable Co., of

Wallington, the new washing rolls having five times the basic force of the original ones at the London works on the Thames. The St. Helens Co. is the joint property of the Siemens and the Callender cable companies; and I am not sure that there is not another permanent cable firm also in it. This joint proprietorship, however, of the rubber works does not affect the competitive business of the cable works, these remaining in competition as of yore. In recent years Messrs Siemens have erected a branch factory at Stafford, but no cable work is done there, electrical instruments and fittings alone being manufactured. It will be remembered that the late Dr. Obach, who became widely known for his "Cantor" lectures on gutta-percha, was head chemist at Siemens', and Mr. Eichenauer, formerly his chief assistant, is now head of the laboratory.

In the Twentieth Anniversary Number of THE INDIA RUBBER WORLD some interesting tabulated statistics are given of the scrap imports into America. The quantity from the United Kingdom shows

SCRAP RUBBER.

a great appreciation in the last decade, and this now forms one of the most prominent external sources of supply for American reclaimers, though in no year has it reached 3,000 tons. It will be interesting to see how this is effected by the operations of the Premier Reforming Co., Limited. In the prospectus of this company it was stated that the waste rubber supply in the United Kingdom is believed to exceed 50,000 tons per annum. Allowing that this figure is approximately correct it is clear that only a portion of it will be suitable for remaking purposes, as a considerable quantity will contain fabric. As far as my knowledge goes only a limited number of goods, or rather classes of goods, have been made by the reforming process, these being made from scrap, such as solid tires, inner tubes, buffers, etc., which contain no insertion. In the above prospectus the existence of practically an unlimited quantity of suitable scrap rubber at current market prices seems to be taken for granted, but it rather looks as if the price is destined to rise for purchases made in the open market if there is an increased and steady demand for particular brands. If all the rubber which goes into consumption was capable of being reformed to sell against new goods it is clear that the demand for new rubber must be affected. As, however, this is not the case, no very great dislocation in the raw market need be apprehended. There will probably be competition between reclaimers and reformers for supplies of material, though if we take the estimated prospectus profits of reforming it is clear that the latter are in a much better position to stand a rise in the market than may be supposed to be the case with the former. As an expert opinion states that reformed rubber is superior in some cases to new rubber, it will be interesting in the efflux of time to see whether the rubber is of a higher quality still after a second reformation, or whether it shows distinct evidences of senile decay. However, this is only one of many interesting points about reforming that remain for solution.

AN interesting article on "The Manufacture and Testing of Rubber Gauntlets," by J. Lurtgarten, appeared in the *Electrical Review* for January 21 (page 111). Although primarily concerned with the

RUBBER GAUNTLETS.

goods of Messrs. David Moseley & Sons, Limited, the elaborate series of tests from the electrical standpoint are of wide general interest. To those, however, unacquainted with the details of electrical testing, any attempted summary would not be easily intelligible, and I shall refrain from anything of the sort in these notes for the general reader.

The brief description which is given of the process of manufacture at the Ardwick works contains nothing of novelty, as mention of the vulcanization was omitted as being a trade secret. Rubber gloves and gauntlets have of course long been generally made in rubber works for surgical and electrical uses, but the increasing use of electrical currents of high voltage has brought the rubber glove into increased demand and prominence. Work, therefore, such as that described in the paper done with a view to the manufacture of goods of the highest reliability is of great interest and importance.

It cannot be said that the demand for this pseudo rubber grows apace in England, and the United States has apparently no need to apprehend any diminution in their supply by reason of British purchases. There are, however, many users of the material, and the present price of £28 per ton, coupled with the scarcity of supplies, has caused some comment and grumbling. Presumably, however, the price has risen in sympathy with rubber brands generally. The quality of what is on offer continues to show wide variations, though this mainly in the water contents. The best quality loses no more than 30 per cent. on washing and sheeting, while other brands lose as much as 50 or 60 per cent. Moreover, the price is by no means in any direct ratio to the amount of water present. No doubt this sort of material, as in the case of Borneo rubber, keeps better in the web condition, oxidation being thus to a large extent prevented. Indeed, I can testify to a superior product being obtained on washing out a jelutong with 60 per cent. loss than in the case of some of much less loss. Still this certainly seems one of those few cases in the raw rubber market where chemical analysis might be profitably employed to a greater extent by purchasers.

THE EDITOR OF THE INDIA RUBBER WORLD has not allowed himself to be so carried away by sentiment as to transgress the *nil nisi bonum* in his obituary notice of the late King of the Belgians. Much the same may be said of the more prominent

British papers. In many of our papers, however, and papers moreover of good standing, there have appeared notices of very scathing character in which the well-worn adage was utterly disregarded. Congo rubber, however, was by no means the only topic with which these flaming obituary notices were concerned. I was glad to see that THE INDIA RUBBER WORLD has republished a good deal of what Mr. Labouchere has written about the Peruvian rubber atrocities. His indictment is terrible enough to read, and I trust that the accused will not be allowed to get out of it by mere statements that the witnesses were actuated by spite. I understand that the matter will be brought up again in Parliament when the House assembles. Mr. Labouchere, by the way, is no longer an M.P., having several years ago relinquished the representation of Northampton owing to advancing years.

I WAS SORRY to hear of the recent death of Mr. C. S. A. Collyns, who for about 20 years had been connected with the management of the Victoria Rubber Co.'s at Edinburgh. The son of a West of England clergyman, his introduction

to the rubber trade occurred about 25 years ago, when he was employed by Mr. Huth to carry out experiments in Gerner's "Heveenoid" process, in which camphor and gum kauri were prominently associated. These experiments were carried on at two Manchester factories and the general results proved to be unsatisfactory. Mr. Collyns was of slight physique, and at the time I knew him a vegetarian, teetotaler, and non-smoker and, as he used to say, was not altogether of the type of that relative of his who was author of the well-known work on "Hunting the Red Deer of Exmoor." There is a good deal of difference in the surroundings of Exmoor and Leith Walk, but it is not the lot or privilege of every man to be able to choose

his own surroundings.

Mr. William Coulter, having terminated his engagement at the Hungarian Rubber Co., Budapest, has returned to England and taken up a position at the Droyledon works of the Garten Rubber Co., Limited.

By way of elaborating what has been said in another column recently about the new Wood-Milne works at Leyland, I may say that about £40,000 is being spent on the mill, and that it is not intended to limit the manufacture as hitherto to heel-pads. A general mechanical rubber business is to be carried on, including, I understand, tires. The manager is Mr. J. W. O. Walker, who has given up his managerial post at Messrs. F. Reddway & Co., Limited, for the purpose. Mr. Walker's earliest appointments were at the Dunlop Rubber Co.; Messrs. McLellan & Co., of Glasgow, and many years back at Charles Macintosh & Co.'s. On January 26 the large engine fly-wheel burst at the Wood-Milne works. Fortunately no loss of life resulted, though considerable damage was done.

WOOD-MILNE.

THE CANADIAN RUBBER INDUSTRY.

AMONG the addresses in response to toasts at the dinner to the directors of the United States Rubber Co., at the Metropolitan Club, in New York, some time ago [see THE INDIA RUBBER WORLD, December 1, 1909—page 87], was one by Mr. D. Lorne McGibbon, president of the Canadian Consolidated Rubber Co., Limited, on "Rubber and Canada." From a printed report of the dinner, prepared for the guests at that dinner, the following extracts are made from Mr. McGibbon's address:

"The rubber industry depends largely for its success on the size and quality of the consuming market, and the climate of that market. The industry in Canada today offers a field which, to my mind, is unequalled in any other country. There are no seven millions of people in the world who manufacture as many lines of goods as the Canadians, and the ideals and ambitions of the young Canadian carry him far beyond the boundaries of his own land, to the day, in the near future, when he will compete, and compete successfully, for the world's trade. The Canadian climate is peculiarly suited to the rubber industry. You might naturally infer that disagreeable weather stimulates trade in rubber, and that we have therefore disagreeable weather in Canada. [Laughter.] On the contrary, I think we have the finest climate in the world; [Laughter.] a long winter season, plenty of snow and a bracing atmosphere, all of which compel people to consider rubber footwear as much of a staple article as coal or flour.

"We have been handicapped in the past by the comparatively small home market, but our western provinces and all our cities are growing by leaps and bounds, and we are now kept busy all the year round; in fact, the immense strides being made in the growth and development of Canada, and her growing importance in the British empire, and among the nations of the world, have brought the business men in Canada to believe that one of our greatest problems is to keep pace with our growing population and to make certain that the home supply is equal to the demand."

ITALY was dependent, up to a short time ago, says a report to the British foreign office, upon foreign markets, especially those of Germany and France, for tires for motor cars and bicycles; now she exports tires to a considerable value, chiefly to Belgium. The rubber tire manufacture in Italy, as is well known, is chiefly in the hands of Pirelli & Co., of Milan.

GUIDE Bridge Rubber Co. is the name of a new rubber manufacturing company, located at Ashton-under-Lyne, near Manchester. The production begins with heels and molded specialties. The proprietor is John Fellows, some time manager of Broadhurst & Co. and later of the Unity Rubber Co.

GUTTA JELUTONG.

PERSONAL MENTION.

Some Rubber Interests in Europe.

THE HARD RUBBER INDUSTRY IN BRITAIN.

CERTAIN arrangements for resumption of work in the plant which was for years the Scottish Vulcanite Co., Limited, mentioned in *THE INDIA RUBBER WORLD*, December 1, 1909 (page 74), failed to be completed, in consequence of which there occurred at Edinburgh on January 12 an auction sale of the plant, the buyers being the North British Rubber Co., Limited, whose works at Viewforth the vulcanite plant closely adjoins.

By entering the hard rubber industry, the North British company are now in a position to manufacture practically every line of rubber goods. They are leading makers of tires, and engage in a large way in the rubber footwear trade, not to mention druggists' sundries and the like. As the readers of *THE INDIA RUBBER WORLD* know, the Scottish Vulcanite plant was founded by interests in common with those originally represented in the North British Rubber Co., so that it is only logical that the newer and smaller plant should in the end be merged with the larger.

It is commonly asserted that the manufacture of hard rubber goods in Great Britain has been rendered unprofitable by the competition of the German trade. The Edinburgh *Scotsman*, in an article evidently sanctioned by the rubber company, in a recent issue, makes the following reference to politics:

"The North British Rubber Co. have been to some extent influenced in their decision to purchase the vulcanite works by the expectation that before very long a tariff will be instituted on manufactured goods to safeguard the home-made article against unfair competition. The North British company, with their great resources, expect to be able to hold their own in the new venture and to capture the larger part of the trade in this country, besides

making inroads into the German trade abroad. They will avail themselves of the highest technical and chemical skill obtainable, both in Germany and America, and will install a large amount of new machinery and up-to-date plant."

THE INDIA RUBBER WORLD reported recently the formation of a joint stock company in Germany by the North British company for the purpose not only of broadening their trade in rubber footwear in the latter country, but also, under certain conditions, of establishing a manufacturing plant there.

DIVERSITY IN THE RUBBER INDUSTRY.

A good point is made by *The India-Rubber Journal* (London) in reference to the taking on a new line of goods by an important rubber factory, with a view to a wider diversification of products. It says: "Business is thus established on a sort of watertight compartment plan, and if any one department from one cause or another becomes unremunerative, it is unlikely to threaten the safety of the ship. In other words, it gives manufacturers a chance of making up on the roundabouts what they may lose on the savings."

In an article on "American and European Factory Policy," in *THE INDIA RUBBER WORLD*, March 1, 1909 (page 211) was pointed out a salient reason for the organization originally of the American rubber industry in special lines. Goodyear granted licenses to different manufacturers to work his vulcanization patent each for a certain product—footwear, clothing, belting, gloves, and so on. During the life of his patent, therefore, diversification in any one factory was impossible. And by the time the patent expired the idea of specialization had taken a deep hold upon the trade.



SCOTTISH VULCANITE WORKS, NOW OWNED BY NORTH BRITISH RUBBER CO., LIMITED.

The more recent development of the rubber industry in the United States has been in the opposite direction. The largest rubber corporation in the country, formed primarily for a combination in the footwear trade, now embraces factories producing practically every kind of goods into which rubber enters. And the same thing is true of some of the larger "independent" factories—amounting to a practical adoption of what has been referred to as the "European" as distinguished from the "American" policy.

A TRAUN MEMORIAL FUND.

FRIENDS of the deceased Senator Dr. Heinrich Traun, so long the head of the important industrial establishment Dr. Heinrich Traun u. Söhne, of Harburg and Hamburg, have issued an invitation to his fellow citizens to contribute to a fund in his memory, to be turned over to the Verein "Volkswohl" (Society for the Benefit of the People). Senator Traun was one of the leaders in industrial circles in Germany in movements for the benefit of employes, and perhaps in no establishment was this idea carried to a fuller realization than in the rubber works of which he was for so long the head. Besides, Senator Traun was the founder of the Volkshaus (People's Home). Just before his death he expressed the wish that this institution be placed upon a solid financial basis, through the establishment of a Senator Dr. Traun-Stiftung (Memorial Fund), in consequence of which his heirs have contributed to such a fund 10,000 marks. With the consent of the donors the gift is to be made the foundation of the fund to which subscriptions are now invited. The death of Herr Senator Dr. Traun, one of the most marked figures in the German rubber industry, was reported in THE INDIA RUBBER WORLD October 1, 1909 (page 15).

INCREASE IN DUNLOP CAPITAL.

At a special meeting of shareholders of Dunlop Rubber Co., Limited (London, February 9), a resolution was adopted for the increase of the capital stock from £220,000 to £240,000, by the issue of 20,000 additional £1 shares, to be offered *pro rata* to the holders of record, at a premium of £6 10s. per share. The effect will be to bring into the funds of the company £125,000 in premiums, in addition to the par value of the new shares. The Dunlop Pneumatic Tyre Co., Limited, were entitled to participate in the new capitalization to the extent of 8,500 shares, out of the 12,000.

A GERMAN VIEW OF RUBBER PRICES.

THE managing director of a leading German rubber works writes to THE INDIA RUBBER WORLD: "Judging from the sudden rise in the raw rubber market, I am of opinion that the manufacturers have a most difficult season before them. In medium grades the European ports are void of stocks, and the crops are short. To my mind we shall see the most extraordinary prices next summer which our branch has ever seen, and I hope never to see them again."

MILLIONS FOR OZOKERITE.

OZOKERITE is a substance which has been brought to public notice to an unprecedented extent by the bringing out in London of The Oil and Ozokerite Co., Limited, with an authorized capital of £1,450,000 [= \$7,056,425]. The vendor syndicate agreed to accept the £500,000 in ordinary shares as part payment. The offer to the public included £950,000 in 7 per cent. participating preference shares and £800,000 6 per cent. first debenture bonds—the latter secured by a first floating charge upon the whole of the company's assets. It will be seen that the overhead interest charge calls for £48,000 [= \$233,392] a year, before the shareholders can come in.

Ozokerite is a mixture of natural paraffine existing in the bituminous sandstones of coal measures. In other words, it is a natural earth wax, adapted as a substitute for most forms of

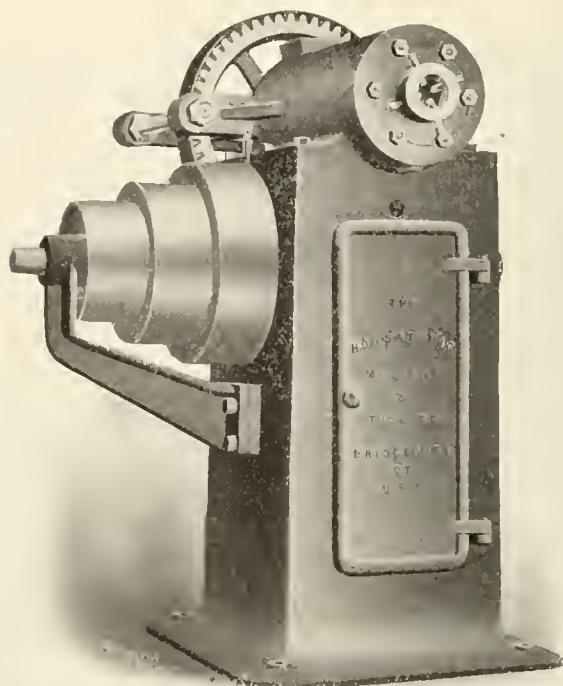
wax. It is an insulator of high quality, and has almost wholly driven out Stockholm tar as a protection for wires insulated with gutta-percha, when placed underground. The basis of Henley's system of curing india-rubber core is melted ozokerite. The preferred American spelling, "Ozokerite," is adopted in Pearson's "Crude Rubber and Compounding Ingredients," in which work further information regarding this material appears.

The new company has been formed to work two ozokerite mines already developed in Galicia, a province in the northeast of the empire of Austria-Hungary, together with related petroleum territories. The yearly production of the mines is stated at 2,278 metric tons; the average cost of production at £40 3s. 2d.; and the average price at the nearest market (Boryslaw) £55 8s. 4d. Petroleum is found both under the ozokerite deposits and in the surrounding region, and when the whole proposed working capital is available it is expected that the larger share of the profits will be realized from petroleum. Galicia is described as a particularly attractive oil field, which already has a Union of Crude Oil Producers—"to secure the termination of all ruinous competition"—and it is stated that the owners of the petroleum wells to be worked by the new company are already members of the Union.

The vendors in this case are Actiengesellschaft für Erdwachs- und Petroleum-Industrie, Boryslaw. The latter word is the name of a town a little south of Lemberg, the capital of Galicia.

HOUSATONIC TUBING MACHINE.

POINTS of particular interest in respect of the new tubing machine illustrated herewith include, first, the fact that all gears are *cut*—not cast—which greatly prolongs the life of the machine. The principal bearing is housed, thus minimizing noise. The machine is so constructed that the outside-gearing runs in and oiled tray, which provides continuous lubrication without



HOUSATONIC TUBING MACHINE.

spilling any oil. The special thrust bearing renders this machine as nearly frictionless, perhaps, as it is possible to make any machine, in consequence of which it is driven with less power. Standard cylinders are in sizes 2½ to 3½ inches; special heads are made for special occasions. [Housatonic Machine and Tool Co., Bridgeport, Connecticut.]

The Editor's Book Table.

VERSLAC OMTRENT DEN STAAT VAN HET ALGEMEEN-
 Proefstation te Salatiga en de Daarbij Behoorende Hulp-inrichtingen
 over het Jaar 1908. [Soerabaia: G. C. T. Van Drop & Co., 1909.]
 [Paper. 8vo. Pp. 391 + xxviii plates.]

THIS comprehensive report on the condition of the general experimental station at Salatiga, in central Java, under the able direction of Dr. F. W. T. Hunger, including three branch stations in various parts of the island, is one of the most comprehensive and interesting reports of the kind from any country or in any language. The work at these stations is devoted to cacao, coffee, quinine, rubber (*Ficus* and *Hevea*), tea, kola, tobacco, and agave. The work involves botany, chemistry, entomology, zoölogy (animal pests), and study of soils. The pages devoted to the culture of india-rubber, which has been carried on at these stations since 1905, form an important contribution to this subject. The volume embraces, among other things, a report on the participation of the Dutch East Indies in the International Rubber Exhibition in London, in 1908, by Dr. A. J. Utlée, chief of the chemical department, and Dr. Pedro Arens, botanical assistant for the caoutchouc-department.

It is unnecessary here to do more than to refer to the thoroughness with which scientific work is carried out in the Dutch colonies, as well as in the mother country. But special attention is due to the 28 half-tone plates, illustrating the plant of the experimental stations and results attained therein—pictures of an excellence which we have never seen excelled in a government publication, and which give a strikingly clear idea of the subjects to which they relate. It is not too much to say that if this were the only publication in existence on rubber culture, it would afford reason for confidence in the success of this interest. There are 185 supporting members of this institution, of whom 47 are engaged in rubber planting; there are likewise many contributing members.

* * *

THE contributions to the subject of rubber culture in Hollandish are becoming increasingly important, which is not surprising in view of the extension of this interest in the Netherlands East Indies. Some figures relative to this interest are compiled here from a lecture to be mentioned below, the figures indicating the investments in rubber planting on record in the two months stated:

	Feb., 1909.	Dec., 1909.
<i>In Java:</i>		
Dutch companies	florins 3,426,000	8,670,000
British companies	5,820,000	17,220,000
Belgian and French companies.....	6,670,000	8,800,000
German companies.....	904,000	900,000
<i>In Sumatra, Bornea and Riouw:</i>		
Dutch companies	1,350,000	9,400,000
British companies	14,254,000	13,000,000
Belgian and French companies	7,850,000	8,600,000
German companies	1,335,000	1,330,000
Total	florins 41,609,000	67,920,000
Total U. S. money.....	\$16,726,818	\$27,303,840

[See THE INDIA RUBBER WORLD, June 1, 1909—page 311.]

Before the Netherlands section of the Nederlandsch-Indische Maatschappij van Nijverheid en Landbouw (Dutch Indies Society of Industry and Agriculture), at a public meeting held on the evening of December 22, at The Hague, a lecture on "India-Rubber and its Cultivation in the Dutch East Indies" was delivered by Professor Dr. P. van Romburgh, long connected with the botanical gardens at Buitenzorg (Java), and now of the faculty of the university at Utrecht. The lecture, which was most comprehensive, was followed by a discussion participated in by Professor A. H. Berkhout, former conservator of forests in the Dutch East Indies, and others interested in the subject. A full

report appears in *De Indische Mercur*, of Amsterdam. [XXXIII-1, 2; Jan. 4, 11, 1910; Pp. 1-2; 19-22.]

IN CLOSED TERRITORY. BY EDGAR BEECHER BRONSON. WITH Illustrations from Photographs by the Author. Chicago: A. C. McClurg & Co., 1910. [Cloth. 8vo. Pp. xix + 299 + half tone plates. Price, \$1.75.]

THE title chosen by our author is a term applied today to a section of British East Africa which, while the most attractive to the Nimrods of every country, is restricted to the very few who are able to obtain licenses for shooting there. Nowhere else now does "big game" abound as in the territory over which Mr. Bronson has been "on safari" for the past year or two, and the barriers which the government has erected against a wholesale slaughter there is appreciated by the true sportsman, who recognizes the duty, while enjoying the chase in 1910, of doing "his level best to insure that a good supply of wild life is left for the sportsman of 2010."

This book, written primarily for American readers, by an American, will be received with a fresher interest than has been accorded to the books written by British sportsmen for some years past, because the field is newer, from the sportsman's standpoint, to people on this side of the Atlantic. But Americans no less than Britishers read with rapt interest the books of David Livingstone, the pioneer missionary, on this identical region. Americans were first in appreciation of Henry M. Stanley's triumphs as an explorer in the same part of the world, with the resultant state making. And all America has watched with interest the progress of the former President, Mr. Roosevelt, in chasing big game through the same wilds.

But in the library of East African adventure no book has appeared which excels that of Bronson as an informing narrative of a country closed to the casual traveler, lightened with a delicious vein of humor. Mr. Bronson is a careful and accurate observer, experienced as an explorer, and when to this is added talent in describing to others what he saw, he could hardly fail to be interesting. Moreover, the camera carried by our author has made many details so plain to the reader as to render descriptive writing unnecessary.

"Closed Territory," it happens, is also "rubber territory" to an important extent, and Mr. Bronson's acquaintance with rubber before going to Africa stood him in good stead when, in the Mabira forest, he chanced to come upon an important enterprise in the exploitation of rubber under British auspices. Not alone to rubber men, but to the general reader, the chapter headed "Rubbering in Uganda" is likely to prove one of the most interesting in this unique book of travel, sport, and incidental general information.

THE SCIENCE AND PRACTICE OF PARA RUBBER CULTIVATION. The new tropical industry of the East. By John Parkin, M.A., F.L.S. Part I. [In *Science Progress in the Twentieth Century*. A quarterly journal of scientific work and thought. London: John Murray. No. 15—January, 1910. Pp. 393-416. Price, 5 shillings.]

It is interesting to note the reappearance as a writer on rubber cultivation of one whose contributions to scientific work in this field have been so notable. Mr. Parkin was first heard of in connection with rubber as scientific assistant in the Royal Botanic Gardens of Ceylon, and it is worth while to recall that in his recent treatise on "Agriculture in the Tropics," Dr. John C. Willis, director of the Ceylon gardens, gives a large measure of credit to Mr. Parkin for having worked out the theory of "wound response," to which is attributed the vastly larger yield of cultivated *Hevea* than had been known previously. Mr. Parkin, in the essay now before us, naturally devotes a good deal of attention to wound response, which he considers to be a peculiarity

of the *Hevea* tree alone: or, to speak more guardedly, it has not been shown to occur in any other rubber tree to the extent that advantage may be taken of it in practice. The demonstration of wound response quickly influenced the method of tapping *Hevea* trees followed in the East, and a considerable part of this paper bears upon tapping systems.

Referring to the tendency to a decline of sources of wild rubber in Africa, Mr. Parkin regards the Amazon region as the only source of real importance for such rubber in the future. The supply on the Amazon is well nigh inexhaustible, and although our author has brought his studies of this region so well up to date as to be able to treat of the recent rubber congress at Manáos, he does not seem to be hopeful of a very large expansion in the Amazon output of rubber.

Mr. Parkin, in THE INDIA RUBBER WORLD, January, 1, 1910 (page 105), emphasized the importance of applying the principle of seed selection to rubber trees such as is carried out for all other cultivated plants. This suggestion was not heeded at the time, but of late its importance is being recognized in many directions. In support of his suggestion now repeated Mr. Parkin writes: "Apparently there is a strain of *Hevea* now growing in the East which is a poor latex yielder but a great seed bearer. If care be not taken, estates may be planted with this variety, only to cause grave disappointment in a few years' time, when the trees reach the bearing age." A concluding part of this paper will deal chiefly with the preparation of rubber from the latex.

RAPPORT SUR UNE MISSION SCIENTIFIQUE EN AFRIQUE Occidentale. Recherches de 1906-07 à la Côte d'Ivoire. Par M. Aug. Chevalier. (Extract from *Nouvelles Archives des Missions Scientifiques*, Paris, Vol. XVIII, 1909.)

This paper has appended an interesting map of the forest regions of the Ivory Coast indicating particularly the distribution of rubber species. There are many different *lianes* (creepers), in addition to the *Funtumia* trees.

ELECTRICITY EXPLAINED. By J. CALVIN S. TOMPKINS, NEW York: Cochran Publishing Co., 1909. [Cloth. 12mo. Pp. iv, iv' 64. Price, 75 cents.]

This is a book for popular reading, and therefore expressed in simple language, which will prove helpful to persons desiring elementary information as to the different kinds of electrical currents and their control and their application to the wants of man.

ADDRESSES IN RESPONSE TO TOASTS AT A DINNER TO THE Directors of the United States Rubber Co. at the Metropolitan Club, November Twenty-third, Nineteen Hundred and Nine. [New York: Privately Printed, 1910. Paper. 8vo. Pp. 48.]

This is a stenographic report of the after dinner speeches at a dinner given by Colonel Samuel P. Colt, president of the United States Rubber Co., and reported in less detail in THE INDIA RUBBER WORLD, December 1, 1909 (page 87). The frontispiece is a half tone view of the guests seated at dinner, from the same photograph as was used at the time by this journal.

ACCOUNTING EVERY BUSINESS MAN SHOULD KNOW. BY Elisha Ely Garrison. New York: Doubleday, Page & Co. 1909. [Cloth. 12mo. Pp. 188. Price, \$1.20 net.]

This book on accounting embodies a thorough treatment of the subject, in a masterly way, indicating that the author has a very broad knowledge of accounting, from both a theoretical and a practical standpoint. Being couched in general terms, the work is more comprehensive to an accountant. It is not sufficiently elaborate for the guide of one knowing little or nothing of accounts.

THE department of agriculture of the Federated Malay States, at Kuala Lumpur, has established a series of *Bulletins*, to be issued occasionally, which, from the first numbers received, promises to be of much value. Of the first six numbers, the first of which appeared in June, four are devoted to topics connected with rubber culture, as follows:

No. 1. Notes on *Terms cestroi* and other species of termites found on rubber estates in the Federated Malay States. By H. C. Pratt, government entomologist. [8vo. Pp. 12.]

No. 2. Root diseases of *Hevea Brasiliensis*—the Pará rubber tree. By W. J. Gallagher, government mycologist. [8vo. Pp. 13.]

No. 3. Observations on *Terms cestroi* as affecting the Pará rubber tree, and methods to be employed against its ravages. By H. C. Pratt. [8vo. Pp. 29.]

No. 6. A preliminary note on a branch and stem disease of *Hevea Brasiliensis*. By W. J. Gallagher. [8vo. Pp. 6.]

OTHER BOOKS RECEIVED.

THE SMOKELESS COMBUSTION OF COAL IN BOILER PLANTS. With a chapter on Central Heating Plants. By D. T. Randall and N. W. Weeks. (United States Geological Survey—Bulletin 373.) Washington: Government Printing Office. 1909. [Paper. 8vo. Pp. 188.]

A FEW PERTINENT FACTS CONCERNING THE PHILIPPINE Forest and Needs of the Forest Service That Should Interest Every Filipino. By Major George P. Ahern, Director of Forestry. Manila: Bureau of Printing. 1908. [Paper. 8vo. Pp. 21.]

INTERNATIONAL CABLE DIRECTORY OF THE WORLD, IN CON-junction with Western Union Telegraphic Code System. Compiled and published by International Cable Directory Co. New York and London: 1909. [Cloth. 4to. Pp. 869. Price, \$7.50.]

AUTO-GUIDES DAC. ITINERAIRES AUTOMOBILES EN FRANCE (Modèle Déposé). Quatrième Série. Paris: [1909]. [Paper. 12mo. Pp. 320.]

GOVERNMENT OF THE GOLD COAST. REPORT ON THE AGRI-cultural Department for the year 1908. [By W. S. D. Tudhope, Direc-tor of Agriculture.] Gold Coast: Government Printer, 1909. [Paper. Folio. Pp. 30.]

IN CURRENT PERIODICALS.

BEITRAG zur Frage des Klebrigwerdens des Rohkautschuks. By Dr. Fritz Frank. = *Der Tropenpflanzer*, Berlin. XIII-10 (Oct. '09). Pp. 453-458.

L'Hevea en Afrique Occidentale. Resultats à la Côte d'Ivoire. By Aug. Chevalier. = *Journal d'Agriculture Tropicale*, Paris. IX-101 (Nov. 30, '09). Pp. 323-326.

Aspect Général des Plantations d'*Hevea* de la Péninsule Malaise à la fin de 1908. [Review of a report by J. B. Carruthers.] By O. Labroy. = *Journal d'Agriculture Tropicale*, Paris. IX-101 (Nov. 30, '09). Pp. 330-334.

Les Mesures Conservatrices des Essences Caoutchoutifères dans les Forêts on Terres Domaniales du Congo Belge. = *Bulletin de la Société Belge d'Etudes Coloniales*, Brussels. XVI-9, 10 (Sept., Oct., '09). Pp. 679-690.

La Caoutchouc d'*Hevea* à l'Exposition de Penang. By E. Mathien. = *Journal d'Agriculture Tropicale*, Paris. IX-100 (Oct. 31, '09). Pp. 289-292.

La Coagulation du Latex de *Funtumia*. By V. Cayla. [Analysis of recent work by Dr. Fickendey and Cuthbert Christy.] = *Journal d'Agriculture Tropicale*, Paris. IX-100 (Oct. 31, '09). Pp. 297-299.

Le Caoutchouc en Côte d'Ivoire. By L. Nicolas, sub inspector of agricul-ture in French West Africa. = *L'Agriculture Pratique des Pays Chauds*, Paris. IX-79 (Oct. '09). Pp. 282-313.

Pavage en Caoutchouc. By F. Main. [Paving with rubber.] = *Journal d'Agriculture Tropicale*, Paris. IX-102. (Dec. 31, '09.) Pp. 362-364.

Les *Landolphin* et les *Mascarenhaisia* à Coatchoune du Nord de l'Analanala. By Henri Jumelle and H. Perrier de la Bathe. [Relating to rubber yielding species in Madagascar.] = *L'Agriculture Pratique des Pays Chauds*, Paris. IX-76 (July, '09). Pp. 9-26; IX-77 (Aug., '09). Pp. 111-122; IX-78 (Sept., '09). Pp. 192-200.

Un Nouveau Procédé de Coagulation du Latex de *Funtumia elastica*. By Aug. Chevalier. = *Journal d'Agriculture Tropicale*, Paris. IX-98 (Aug. 31, '09). Pp. 225-226.

INDIA RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufacturers of india-rubber and gutta-percha for the month of December, 1909, and for five calendar years:

MONTHS.	Belting and Hose.	Boots and Shoes.	All Other Rubbers.	TOTAL.
December, 1909	\$163,282	\$178,907	\$435,440	\$777,629
January to November.	1,637,018	1,474,559	3,978,186	7,089,763
Total, 1909	\$1,800,300	\$1,653,466	\$4,413,626	\$7,867,392
Total, 1908	1,256,490	1,329,170	3,580,685	6,166,345
Total, 1907	1,402,373	1,646,880	3,944,080	6,993,333
Total, 1906	1,162,751	1,213,196	3,282,659	5,658,606
Total, 1905	1,182,761	1,389,226	2,833,511	5,405,498

Exports of rubber boots and shoes have been, in quantity: 3,161,865 pairs in 1907; 2,440,663 pairs in 1908; 3,150,294 pairs in 1909.

Exports of reclaimed rubber: \$598,494 in 1907; \$327,388 in 1908; \$487,675 in 1909.

IMPORTS INTO THE UNITED STATES.

	1907.	1908.	1909.
India-rubber goods	\$2,154,425	\$1,509,629	\$1,390,684
Gutta-percha goods	141,535	97,593	71,857
Total	\$2,295,960	\$1,607,222	\$1,462,541

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

THE United Rim Co., of this city, the organization of which was mentioned in THE INDIA RUBBER WORLD, June 1, 1909 (page 319) have finally completed and announced a plan for the standardization of automobile tire rims. After July 1 The B. F. Goodrich Co., The Diamond Rubber Co., the Goodyear Tire and Rubber Co., the Hartford Rubber Works Co., Morgan & Wright, and The G & J Tire Co. will stop the manufacture and sale of rims. Their patent rights have been transferred to the ownership of the United Rim Co., and the latter will license any qualified manufacturer to make rims under these patents, provided he agrees to conform to two standard types that have been worked out. These are both quick detachable rims and combine the best features of the various patents. One of the two will be settled upon later, after the consumer is given an opportunity to express a preference. Later a standard type of demountable rim will be decided upon. Two manufacturers had already been licensed when the company made the announcement. The Marsh rim factory of The Diamond Rubber Co., at Columbus, Ohio, is to be abandoned. D. W. Patton is president of the United Rim Co., and P. W. Litchfield, superintendent of the Goodyear Tire and Rubber Co., is secretary and treasurer. The offices are at No. 102 South Howard street, Akron.

* * *

THE new plant of the Adamson Machine Co., builders of rubber factory equipment on Carroll street, was completed during February. There are four buildings—a machine shop and a foundry, each 80 x 160 feet and two stories high; a power house 40 x 80 feet; and a blacksmith shop, 40 x 80 feet. All are built of brick and fireproof, with steel frame, cement tile roofs and concrete floors. The machine shop and foundry are equipped with two 15-ton electric cranes, the power plant with a 125 H.P. engine, and the blacksmith shop with a 1,400 pound steam hammer. All of the new lathes and shapers in the new plant are equipped with motor drives of the latest design. Mr. Alexander Adamson, general manager of the company, says the plant will be in full operation some time in March, and that its capacity will be three times that of the old plant.

* * *

FIRE caused by two explosions of benzene destroyed the plant of the Lyon Rubber Co. on February 10. The company manufactured surgical goods and rubber specialties, and occupied a four-story building on the bank of the Ohio canal. Mr. O. G. Lyon, principal owner of the business, was washing a strip of rubber with benzene when an ignition occurred, supposedly from friction. A new employé in the room with him was frightened by the explosion and ran out, leaving the stop-cock of the benzene tank open. Mr. Lyon fought for a few moments to extinguish the blaze, and then, seeing the benzene running over the floor, ran out. He was badly burned about the arms and chest. The fire spread through the building and ten minutes later the tank, containing 300 gallons of benzene, exploded, blowing out the walls of the building. Fire Chief Mertz and six firemen were hurt. The building was valued at \$20,000. It was a complete loss, only partially covered by insurance. Mr. Lyon has not decided whether to rebuild.

* * *

THE Hon. John Barrett, director of the International Bureau of American Republics, in a speech at the first annual banquet of the Akron Chamber of Commerce, on February 14, urged the rubber manufacturers of this city to lend their interest and influence to the development of commerce with Brazil and other South American countries. "There is no city in the United States," he said, "to which this question comes home more forcibly than to Akron, on account of the large amount of raw rubber imported here from Brazil." He made a strong plea for a ship subsidy as a medium for the development of the com-

merce of the United States with South American countries. An address by United States Senator Dick followed that of Mr. Barrett. He declared that commerce with South America must be depended upon by the United States to take the place of our rapidly diminishing trade with the Orient. The banquet was the largest ever held in the city. When Mr. Barrett left Akron he took with him a present for President Taft in the form of four specimen golf balls, each one representing a different stage of manufacture. He asked for them after he had been conducted through the The B. F. Goodrich Co.'s rubber plant. Mr. Barrett also witnessed the process of making automobile tires in the plant of the Goodyear Tire and Rubber Co.

* * *

THE Portage Rubber Co., of Akron, was incorporated under the laws of Ohio, February 17, by G. H. Doolittle, F. D. Cassidy, Marta E. Habicht, T. E. Miller, and J. W. Snyder. The initial capital stock is \$10,000. A. S. Mottinger, attorney for the company, said they would start a rubber manufacturing business in this city, but would not discuss the plans. Cleveland men, he said, whose names do not appear in the list of incorporators, are chiefly interested.

* * *

THE importance of aviation to the rubber industry was shown by the keen interest taken by The B. F. Goodrich Co. in the performance of their tire equipment on the Curtiss machines in the Los Angeles meet. The prizes won by the biplanes of that make were eight or ten in number and the Goodrich company consider the result in a measure as a victory for them. In one event especially, in which a prize was awarded for quick rising, the resilience and lightness of the tire is thought to have an especially important part.

* * *

MR. A. H. MARKS and Mr. W. B. Miller of The Diamond Rubber Co. have each increased the size of their country estates during the last month. Mr. Marks bought from the county for \$37,000 51 acres adjoining land already owned by him, on which will be built his country home. The newly acquired acres will be converted into a deer park. Mr. Miller bought eight acres adjoining his estate on Portage park, paying \$2,000 an acre.

Mr. A. H. Noah, treasurer of The Diamond Rubber Co. left for his vacation on February 8. He went directly to Los Angeles and is spending a month in various parts of California.

Mr. E. H. Cutler, formerly sales manager of the Woonsocket Rubber Co. (Woonsocket, Rhode Island), arrived in Akron during the first week of February, to take up his work as sales manager of the new boot and shoe department of The Diamond Rubber Co. The manufacture of footwear has been stated under direction of J. T. Hart, factory manager of the department.

* * *

AS a means to stimulate the construction of dwelling houses in this city, to supply the demand created by the arrival of men from other towns to work in local factories, the Akron Chamber of Commerce has instituted a novel plan. A "Build-A-House" club has been started and all persons wishing to build houses to rent or sell are asked to join free of charge. The club will conduct a contest and pay prizes for plans of two classes of houses, one to cost \$1,200 and the other \$1,800. When the winning plans have been chosen duplicates will be given free to members of the club. Manufacturers will be asked to submit lists of persons desiring to rent or buy homes.

* * *

IT is understood that shares in The Diamond Rubber Co. have changed hands recently in Akron at 280. The same rate has been paid during the past month for shares of The B. F. Goodrich Co.

THE estimated receipts in the Akron post office for the fiscal year which will close March 31 is \$300,000, an increase of \$50,000 over the year before. This is chiefly ascribed to the increase in mails from general offices of rubber factories here.

A RUMOR that went the rounds at the Chicago automobile show was to the effect that the tire business would be seriously affected by the recent Federal court decisions on the Selden patents. It was reported that licensed automobile manufacturers intended to notify all tire makers that they would withdraw their patronage unless no more tires were sold to unlicensed manufacturers. This is emphatically denied here. "The licensed manufacturers could not pursue such a course," said a rubber company official here, "and they would not if they could."

* * *

MR. C. B. RAYMOND, secretary of The B. F. Goodrich Co., his health impaired temporarily by a severe cold, left his work early in February for Thomasville, Georgia, where he intended spending most of the month.

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

THE month of February has taken the dealers in rubber goods a little by surprise, as trade has not been as active as they anticipated. Business just prior to the first of the year was good enough to warrant them in believing that there would be a period of considerable activity after the first of the year, but the big business did not materialize, and they have been forced to content themselves with an uneventful routine of work. One reason is that in certain lines the retailers stocked up last fall, when the heavy rains came, and as there has been only a small amount of rain since, there were few orders coming in after the first of the year. But besides this it does not appear that there is any great amount of activity in San Francisco for the rubber business, and only a fair amount in the country.

It is a matter of some surprise to the largest houses that the San Francisco trade has been so quiet. With every facility for working the field, and every advantage in meeting the closest prices, and continually working the city thoroughly, they still have been unable to make much of a clean up. They are forced to the conclusion that none of the dealers has done a great deal and that business for some reason or another has simply been backward. Competition is undoubtedly keen in the city, and prices have been urged to so close a margin that it has forced a lot of cheap goods on the market. The handling of cheap goods has come to be one of the chief annoyances in the trade. It is looked upon as one of the results of the low business vitality, and with a renewal of trade activity and freer conditions in the financial market, the dealers believe that prices will rapidly come back to a sounder basis. Country business is generally found to be strong, and especially is the outlook good for increasing business in the future.

* * *

MR. S. L. PLANT, of the Plant Rubber and Supply Co., of San Francisco, states that trade is looking much better now, and that the establishments should make no complaint if the present business continues to improve as it has done in the past few weeks. The Plant Rubber and Supply Co. and the Gladiator Packing and Rubber Co., of Los Angeles, have consolidated. An office will still be maintained in Los Angeles, but in future all orders for both establishments will be filled in San Francisco.

* * *

MR. WILLIAM J. GORHAM, of the Gorham Rubber Co., has been in San Francisco for very short periods of time lately, spending most of his time in Los Angeles. He came up from the southern city a short time ago and after taking a look at things here went on up the coast to Seattle, where the firm has a large branch which he thought he would go and look after. When he comes back to San Francisco for a stay the boys are expecting him to liven things up in the business way. He seems to keep up a flourishing business at the branch offices where he has been making his headquarters.

THE Eccles & Smith Co. have sent Charles Nell, of their rubber goods department, to Portland, Oregon, to handle their balata belting at that point. Mr. Nell will hereafter be stationed at Portland for that purpose.

The Sterling Rubber Co. on Second street, which is no longer the coast agent for the New York Belting and Packing Co., Limited, has recently secured the coast agency for the "Original" balata belting line. This firm reports a fair business, with a good outlook for the future.

* * *

MR. R. H. PEASE, president of the Goodyear Rubber Co., states that business generally is much improved, but not so good as it should be on account of the excellent business which they had through the fall. At that time the trade stocked up with boots and shoes, rubber clothing, and so forth and do not place many orders for this line of goods now. "From the fall of 1908," he said, "there was practically no rain until January, 1909, when the rain came in immense quantities, and as the stocks were well run down the retailers had to buy so that business was unusually good through January and February. But this year we had our good storms in the fall, and the trade will not buy at the present time, with their stocks on hand, and this has made an impression during the past two months. But in the mechanical lines business is very good and the sundries business is better than it was at this time last year. Inasmuch as there is plenty of snow on the mountains we look for a good business later on as soon as the mines are opened."

* * *

THE Gutta Percha and Rubber Manufacturing Co. report that business is fair at the present time and that they are preparing for a more active season later on.

* * *

MR. A. H. NOAH, treasurer of The Diamond Rubber Co. (Akron, Ohio) has just arrived in San Francisco, where he is visiting the local branch. He will probably spend a month on the coast for business and pleasure, and as he is a golf player will probably be seen on the links at Del Monte.

The Diamond Rubber Co. have selected a location for their permanent branch store in this city which is maintained to supply the emergency orders of the automobilists. Their location is the old Mechanics' Library building at the northeast juncture of the two principal boulevards, Van Ness and Golden Gate avenues. Here they are fitting up a large and elegant shop and store with tiling floors, inlaid windows for monogram, fixtures and finishings mahogany and everything new and modern. Mr. J. H. Ingersoll is the manager.

FROM RUBBER TO WHIST.

THOSE members of the trade who were active in it so long ago as the earlier months of THE INDIA RUBBER WORLD will recall the name which appears in the following paragraph from *The Electrical World*. This gentleman was understood to have given up his interest in rubber in the sense of twenty years ago; it is possible, however, that the word "rubber," used in another sense, has attracted him to the game in which he is now reported to be an expert. Our contemporary notes:

"Mr. Paul F. Mottelay, translator of Gilbert's 'De Magnete' and one of the collaborators on the A. I. E. E. 'Catalogue of the Wheeler Gift,' is the subject of an appreciative notice in a British society journal. Mr. Mottelay is also an authority on bridge whist, and the notice states that his work on this subject, which is an accepted authority in this country and Great Britain, is soon to appear in a French translation, with the addition of much matter prepared by Mr. Mottelay to cover differences in French rules and codes."

SEND for a free copy of the Index to "Crude Rubber and Compounding Ingredients."

“Castilloa” Rubber in Chiapas (Mexico)—II.

By J. L. Hermessen, A. M. I. E. E.

THE department of Palenque is situated in the extreme northeast corner of the state of Chiapas, and its climate, governed by the influence of the Gulf of Mexico, is differentiated from that of Soconusco by a considerably greater and more evenly distributed rainfall, and a relatively higher degree of atmospheric humidity.

One of the foremost among the seventeen or eighteen plantations in the department is that of “El Chival,” owned by the Orizaba Rubber Plantation Co., of Chicago, Illinois, comprising 15,000 acres of land on the Tulija river, near Salto de Agua, the chief town of the department. Of this area 2,000 acres have been cleared, and 1,600 acres planted to rubber, while the remainder is devoted chiefly to pasturage for some hundred head of cattle. The property is under the management of Mr. P. L. Barrenquy, an able and experienced planter. The oldest rubber is six years of age, and numbers between 8,000 and 10,000 trees—of sound, clean-barked growth. The estimated total number of trees on the plantation, up to the end of 1908, was 600,000. The planting distance adopted at “El Chival” has been 2 x 2½ meters, representing about 800 trees to the acre—to be gradually thinned out to make a permanent stand of 200 trees. It may be remarked here that there is much diversity in opinion and practice in Mexico as to the relative merits of close *versus* wide planting—the former usually denoting anything between 400 and 800 trees per acre, and the latter, 200 or less. Since local conditions, comprehended in topography, soil, climate, etc., may vary appreciably in regions equally well adapted to rubber, demanding, by consequence, modifications in cultural methods, it is manifest that consideration of these conditions should in all cases guide the planter’s judgment with regard to the above, as to any other practical detail.

Thus, for instance, where plantations are not subjected to the scorching effect of hot and more or less violent seasonal winds, tending to cause excessive transpiration and hardening of the bark of the trees, wider planting would generally be preferable, for the sake of the gain both in circulation of air about the trees and in ground space for root and branch extension. There seems, however, a tendency on the part of some planters in Chiapas to go to extremes in this direction; for it is indisputable that the absence of surface shade in rubber fields not only invites the entrance of noxious grasses, but exposes the rubber trees to other harmful agencies, which, in its natural environment, are either subdued by the surrounding vegetation or neutralized by opposing elements.

Instead of throwing up small mounds of fresh soil for the seed, as is done in Soconusco, the practice here is to make holes, about 15 inches deep, at each stake (or, where corn is planted as a catch crop, about 1 foot from the corn stalk) immediately after burning, allowing these holes to remain open to the action of the weather until the seeding is done.

The configuration of the ground

lends itself to natural drainage. The soil is composed of a loose, black, sandy loam, combined with a small proportion of clay, fragmental masses of calcareous rock appearing where the forces of denudation and erosion have been most active. The subsoil is of a disintegrated sandstone, through which the roots of the rubber trees penetrate without difficulty. This formation, tending to assist subsurface drainage, seems to suit the rubber well.

The north side of the property extends up on to a range of well-wooded hills, of no great height, and has been planted up to the commencement of the slope, the abruptness of which, together with the occurrence of much rock, prevents cultivation beyond. The highly beneficial effect of the constantly renewed mulch of decayed vegetable matter and detritus carried down from the forest and deposited by the rains over the lower level of the planting was very noticeable in the superior growth and condition of the rubber, as one viewed the field from a distance, the line of demarcation between the area subjected to this natural fertilizing process and adjacent portions not reached by the same being very distinct.

The permanent labor force at “El Chival” is recruited from the isthmus of Tehuantepec and from the town of Acayúcan, in the state of Vera Cruz, and numbers, on a yearly average, 45 men, while the floating contingent, made up of Indians of the neighborhood, has varied between 100 and 150 men, according to the requirements of the season. The daily wage for the Isthmus men is 75 cents (Mexican), with a ration of meat, rice, beans and coffee—costing the plantation about 50 cents *per capita*—while the local men earn 75 cents to \$1, without ration.

A year or two ago 5,000 *Hevea* stumps were imported from Ceylon; of these, 4,000 arrived in good condition, and were interplanted with bananas on a selected piece of ground. They have not, however, proved a success, and only a few hundred now survive.

The mean annual rainfall recorded at “El Chival” over a period of five years was about 110 inches, the maximum precipitation occurring in the months of September and October.



A VIEW ON “EL DORADO” PLANTATION.

Five months old rubber. [The Land Co. of Chiapas (Mexico), Limited.]



TWENTY-FIVE YEAR OLD *CASTILLOA*.

Plantation "Lumija." [Mexican Plantation Association.]

The average temperature throughout the year was about 72° F.

The Tulijá river, which winds through half the length of the estate, affords communication by canoe with points upstream, but is not navigable in the direction of Salto de Agua, owing to numerous falls and rapids, the difference in river level between the two locations, distant only about 3 miles, being no less than 174 feet. Mule pack-trains have therefore to be employed for bringing in supplies from Salto de Agua.

Mr. Barrenquy has carried out some instructive experiments in coagulating latex by means of alcohol, which he considers the best agent, although for the present its cost prohibits its general use on any scale. Acetic acid has proved detrimental to the resilience of *Castilloa* rubber, and alum, it is known, results in shortening the fiber of the rubber. Alcohol, on the other hand, leaves no injurious effect, nor does it change the physical qualities of the rubber; it can, moreover, be entirely eliminated by evaporation. Its action is instantaneous, and the quantity necessary to induce coagulation is dependent upon the proportion of water contained in the latex.

Two or three days' journey by canoe up the Tulijá river above "El Chival" brings one to the "Agua Calar" plantation of the Graves & Graves Co., Incorporated, of Boston, Massachusetts. There are here some 8,000 or more trees, seven to eight years old, on which tapping operations are about to be commenced. The firm also have a property of 18,000 acres, known as "Hacienda El Coco," on the Rio Trapiche, near Frontera, state of Tabasco, where, up to the present, about 1,500,000 rubber trees have been planted. On this same estate the cultivation of coconuts is being tried.

From "El Chival," northward, it is only a ride of a couple of hours, by the paved road built by the German-American Coffee Co., to Salto de Agua, between which place and the town of San Juan Bautista there is a regular service of sternwheel steamers, conveying mails, passengers and freight. Near Salto de Agua, in what is locally known as the valley of the Michol river, are situated the plantations of "Lumijá," "Philadelphia," "Wisconsin" (with "La Florida"), "Iowa," "San Fran-

cisco," "San Carlos," and "San Leandro." The Michol river is a small but important stream, pursuing a tortuous course through the lowlands eastward of Salto de Agua and draining a considerable area.

The "Lumijá" plantation, of the Mexican Plantation Association, of Chicago, has an area of about 1,000 acres under rubber, with an average of 600 trees to the acre. One of the original ideas of the concern was the cultivation and canning of pineapples and oranges, and a large area was devoted to the growing of these fruits, while a well equipped factory was erected and put into operation. The product seems to have been of fair marketable quality, but it could not compete in cost with the American article, and the enterprise was abandoned. Rubber had also been planted, but apparently failed to receive proper care at the time when it most needed it, and much was consequently lost.

The property was transferred to the stockholders at the beginning of 1909, when Mr. H. H. Markley, who had been manager for some time, removed to the neighboring "Philadelphia" estate, owned by the Mexican Plantation Co., of Philadelphia, Pennsylvania, to assume personal control of the same. The development work on this, as well as on that of the adjoining property of the Wisconsin Rubber Co., of Madison, Wisconsin, had previously been under his general direction, with a resident superintendent in charge in the person of Mr. Harry Dussell.

Mr. Markley has long been connected with tropical agriculture, his first work in Chiapas having been the clearing and planting to rubber, in 1900, of the "Iowa" estate, for the Palenque Development Co., since acquired by the German-American Coffee Co., already referred to, owning the extensive coffee plantations of "El Triunfo" in the hill district of Tumbalá, to the south of Salto de Agua. At a spot near the river at Lumijá may be seen a row of four big rubber trees, known to be 25 years old, which were planted by an Indian who formerly occupied land there. The circumference of the largest (measured by Mr. Markley and the writer in March, 1909, at 6 feet from the ground) was 6 feet 7¾ inches. One tapping of these trees gave 4 pounds and a fraction of dry rubber.

The "Philadelphia" and "Wisconsin" plantations have on them, respectively, 835,000 and 2,560,000 trees, all in very good



P. B. Gibson A. A. McDonald H. H. Markley

PROPERTY OF THE WISCONSIN RUBBER CO.

[View of 800 acres of rubber, 3 years and 8 months old from seed.]

condition. Samples of rubber from the "Florida" plantation of the Wisconsin Rubber Co., exhibited at Olympia, London, in 1908, won high praise, and, to quote Mr. H. Hamel Smith, editor of *Tropical Life*, "showed what excellent nerve and color *Castilloa* can turn out when prepared by scientific methods."

The Chiapas Rubber Plantation Co., of Berkeley, California, own an extensive tract between the towns of Salto de Agua and Palenque, comprising the estates of "San Leandro," "Santa Isabel," "San Luis," and "San Benito," aggregating 25,000 acres, of which area, however, only about one-fifth is under cultivation. The approximate total number of planted rubber trees on the property is 1,000,000, all set out in light forest shade, the ground never having been burned. The age of the oldest trees is seven, and of the youngest three years. The present manager, Mr. W. D. Plant, in a comprehensive series of tapping experiments, has amassed a large amount of useful comparative data on yields of trees under varying conditions. He has tried various coagulants, including corrosive sublimate, which produced a very white rubber that did not become discolored by oxidization, as *Castilloa* ordinarily does; but the extremely poisonous nature

1,000 more this year; "La Arena," of the Chacamax Plantation Co.; and the "San Marcos" and "San Pedro" plantations. The town of Monte Cristo is actually in the state of Tabasco, but all the plantations named are in Chiapas, the Usumacinta river forming the boundary. Near here are the famous historic ruins of Palenque. The total number of planted rubber trees in the department of Palenque might be put, at a rough estimate, at between 9,000,000 and 10,000,000.

About two years ago the Cámara Agrícola de Palenque (Palenque Chamber of Agriculture) was formed at Salto de Agua, to promote agricultural interests. Its first president was Mr. H. H. Markley, who was reelected in 1908. During the first year meetings were convened every month, and later, for a while, every three months; but of late none have taken place. At first the society included representatives of various lines of agriculture, but before long it automatically reduced itself to a community of rubber planters. A proposal was made to convert it into a local branch of the Rubber Planters' Association of Mexico, but that body itself, despite the heroic efforts of a few members, seems now to have passed out of existence.



A VIEW ON THE PLANTATION "JULIAPA."
Rubber $\frac{3}{4}$ years old. [Hidalgo Commercial and Plantation Co.]

of this agent would bar its general use. Rubber coagulated with acetic acid had proved tacky.

On the "San Francisco" plantation of the Rio Michol Rubber Plantation Co., of San Francisco, California, planting in partial shade has likewise been adopted. Nursery stock was used in these cases, seeding being obviously impracticable under such conditions.

Adjoining the above mentioned estate is the "San Carlos" plantation of the Palenque Rubber and Commercial Co., of San Francisco, where, however, but a few hundred acres have as yet been planted.

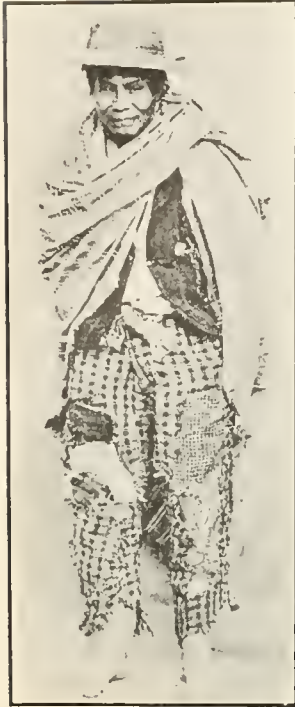
The measured rainfall in the Rio Michol district during the twelve months ending June 30, 1909, was 113.17 inches.

On the Usumacinta river, in the vicinity of the town of Monte Cristo, are several plantations, including the "Chullipa" estate of the Mexican Rubber Culture Co., of Portland, Oregon, managed by Mr. A. B. Mullay, with some hundred acres under cultivation; the "Monte Cristo" plantation of the Monte Cristo Rubber Plantation Co., of Greeley, Colorado, with 900 acres planted; "La Castilloa," on which 500 acres were planted in 1908 and

DEPARTMENT OF PICHUCALCO.

Nature has been lavish in her gifts throughout the state of Chiapas, and nowhere more so than in the department of Pichucalco; but its resources have as yet been exploited to only a very limited extent. As a member of a party whose business it was to make a reconnaissance of a tract containing about 180 square miles the writer had opportunities for study, at close range, of one of the most favored sections of this province. The work involved a five days' tramp, on foot, through jungle and forest, riding being impossible on account of the dense undergrowth. Frequent examination of the soil proved it to be of a mean depth of about four feet—an intensely black, porous loam, with a superimposed layer of humus, the beds of the deeper arroyos draining the land, revealing substrata of sand, gravel, and metamorphic clay.

Mahogany and cedar trees of great girth were abundant, as were also wild rubber trees; but every one of the latter had been tapped and severely mutilated. Many bore marks of the use of spurs, or pole climbers, such as telephone linemen carry, for



A GENTLEMAN OF CHIAPAS.

reaching the upper part of the trunk. By far the greater proportion of the product of wild *Castilloa* trees in Mexico is thus collected by natives having no right to it, and sold by them to merchants and shippers who are not concerned as to the source of supply; but legitimately organized syndicates, operating under government or private concessions, have from time to time entered the field. In general, however, the financial results of such ventures have not been commensurate with the difficulties and risks involved. Little or nothing has hitherto been done by owners of large forest blocks in the rubber belt toward the systematic harvesting of the natural crop, but the depredations of roving bands of rubber thieves have in some instances become so serious as to compel the adoption of defensive measures of some sort.

Notwithstanding the existence of extensive areas in this department admirably adapted to rubber, the amount planted is insignificant. There are, however, numerous small plantations, generally combined with old established cacao estates—the cultivation of cacao, by the way, being of much importance here. The majority of these are located in the valleys between the towns of Pichucalco, Juarez and Teapa—the last named being in the state of Tabasco, which here intrudes, in a wedge shape, into Chiapas. Latterly, rubber has replaced, to some extent, the so-called “madre de cacao” (*Erythrina sp.*) commonly used as shade for cacao, and seems to thrive in such company. In other instances rubber has been planted for the same purpose in conjunction with the “madre de cacao,” the arrangement adopted in the best examples of such practice being as follows:

A—B—C—B—A.

A representing rubber, B “madre de cacao,” and C cacao; and so on throughout each row. Apart, however, from the fact that the *Castilloa*, by reason of its deciduous habit, is not a good shade tree, interplanting of the same with cacao has been condemned by experts as being liable to introduce insectal and fungoid infection.

There are no available authentic records of rainfall in Pichucalco, but certain physiographical features would indicate a somewhat greater precipitation than that occurring in Palenque—probably something like 120 or 150 inches per annum. The elevation of the town of Pichucalco is 114 meters above sea level.

DEPARTMENT OF TONALÁ.

In the installment of this paper first printed mention was made of two or three rubber plantations in Tonalá. An addition which may be made to the list is “La Aurora” estate, established by Mr. A. Zwanziger and sold by him a year or two ago to the present owners. It was twice destroyed by fire, and out of the original plantings there are not now more than a few thousand trees left, these being about six years old. About 200 acres were also planted to rubber in 1908 near Seseapa, on the border line between the departments of Tonalá and Soconusco, by Messrs. Cueto & Co., a large mercantile house of Tonalá and Tuxtla Gutiérrez.

IN CONCLUSION.

Economic progress in Chiapas, with all its latest potentialities in agricultural, forestal, and mineral wealth, has been retarded by nothing so much as by lack of transport facilities. Thus, the inaccessibility of some of the richest regions has preserved them in a “splendid isolation,” and until means of communication shall have brought them within measurable reach of commercial enterprise, they must remain merely “fertile solitudes.” With the exception of the recently constructed wagon road from Jalisco, on the Pan American railway, to Tuxtla Gutiérrez, the capital of the state, and some stretches between the towns of San Cristobal (the former capital) and Comitán, Chiapas is without roads, in the common acceptance of the term. Between all points in the interior the mails are carried on the shoulders of Indians.

The Pan American railway is to undergo forthwith large improvements, so that rapid expansion of industrial activity on the Pacific coast is thus assured. On the Gulf side, including the extensive central plateau, the prime necessity, to the same end, is the removal of the sandbar at the entrance to the harbor of Frontera and of a similar obstruction at the confluence of the Grijalva and Usumacinta rivers some ten miles above. Both these fine waterways would then be open to navigation for distances of respectively 100 and 150 miles inland; and it may readily be conceived what an impulse such a condition would give, not only to the trade of the port of Frontera, but to the general development of the states of Chiapas and Tabasco.

A LETTER FROM “LA ZACUALPA.”

TO THE EDITOR OF THE INDIA RUBBER WORLD: On receipt of the February number of your journal I was surprised, and at the same time exceedingly gratified, to read the article on “*Castilloa* Rubber in Chiapas (Mexico),” by Mr. J. L. Hermessen, and I desire to thank you, and express my appreciation of the clear, concise, and absolutely fair manner in which the Zacualpa properties and methods are described by the author, which stands out all the more prominently in our minds because of the half-truths and misleading sensational stories published recently in certain magazines and newspapers. - - -

It is with sorrow that I have to report to you the death of one of my associates in the Zacualpa properties—Mr. John W. Butler—who held the office of president of La Zacualpa Rubber Plantation Co. for over ten years. Mr. Butler died on December 15, 1909, aged 76 years.

Yours very truly,

O. H. HARRISON,

[President La Zacualpa Rubber Plantation Co.]
San Francisco, February 19, 1910.

A NOTE ON “EL ROSARIO.”

TO THE EDITOR OF THE INDIA RUBBER WORLD: I want to express my personal appreciation of the article in your February issue, entitled “*Castilloa* Rubber in Chiapas (Mexico).” I am glad that you are publishing things as they actually are in that section. I have just returned from “El Rosario” and found things in very fine shape, not only on this plantation, but on the others mentioned by Mr. Hermessen. I would like to suggest that our company owns 9,340 acres, instead of 7,500 as stated, and that we have about 800 planted, instead of 600 acres. We are clearing a 2,000 acre tract for rubber planting in May, and we expect to plant about the same amount next year. I feel that we have a great section in the Soconusco district and that our companies down there are going to “make good.”

W. C. STEPHENS.

[Secretary St. Paul Tropical Development Co.—Plantation “El Rosario.”]

St. Paul, Minnesota, February 10, 1910.

TIRES AS INSULATION.—According to electricians, one of the safest places in a thunder storm is in an automobile, the rubber tires serving to insulate and protect the occupants of the car perfectly.—*Newspaper Paragraph.*

A Sensationalist Writes on Rubber.

THE REPLY OF A PLANTER.

TO THE EDITOR OF THE INDIA RUBBER WORLD: An article entitled "Rubber Slavery in the Mexican Tropics," which appeared in a February magazine (*The American*), gives such a one sided, distorted, and unjust view of rubber planting in Mexico, that I can speak for many of your subscribers when I say that an answer in your columns will be appreciated by those who are interested in knowing the truth.

I made a trip to the rubber belt on the Usumacinta river in Chiapas, Mexico, and I failed to see any signs of slavery, although I was on four rubber plantations with American managers. The laborers were not forced to work in that district. None of the managers carried arms of any description, and good results were obtained without friction by giving piece work to the natives, and paying for work done instead of for hours spent at work. When the allotted number of rows of rubber trees which constituted a day's work was cleaned, the laborer quit for the day, or helped out some slower friend on his stint. I could see the laborers come from the fields as early as 2 o'clock and none later than 6 P. M., and I could see them loaf and smoke and play their musical instruments in the afternoon. As to the "prison huts" mentioned in his "barbarous" article, you have but to look at the photographs enclosed to see that each family on this plantation (which is similar to three others which I visited) has a home of its own and that there is no building for the "herding and guarding of men, women and children by night."

How much exaggeration there is by the author of that magazine article can be determined by his own statements. He says: "Promoters have sown the country [United States] a foot deep in the last few years with their glowing advertisements and impossible pamphlets"; of the battle when an armed force of planters fell upon an unarmed band of escaping *enganchados*, and "simply strewed the ground with lopped fingers, hands, and arms that were raised to protect heads from the keen *machetes*"; and, in speaking of laborers at work, "their pantings could be heard at a hundred yards."

After such statements are we not justified in thinking his imagination overheated and his judgment warped, notwithstanding that he says "it is incumbent upon one to go slowly and keep inside the facts"? Facts! Why he uses the mere statement of an unformed man in Vera Cruz to color his article and convey the impression that there is no rubber in Mexico, but only experiments.

How ignorant of rubber culture the author is, I leave you to judge from his reference to the experimental tapping of seven year old trees from which were obtained the disappointing (?) average of two ounces per tree. "This caused me," he says "to revise the notions of a pound of rubber per tree, gained from advertising pamphlets." Now I know of no company which claims to get one pound per tree per tapping. Several tapplings throughout the year are necessary to get a pound a tree from such young trees. Yet two ounces per tapping is four times as great as the amount obtained from *Hevea* trees at seven years of age in Ceylon and Malaya, whose plantation companies listed on the London stock exchange were reported some time ago, in *The Financier and Bullionist* to have an average market valuation of \$615.00 per acre for trees averaging three years old, in 80 companies.

That magazine writer will do a great injustice to some small investors if he causes them to throw up their rubber investments in honestly managed companies. He not only runs down the industry but all company management as being dishonest. Such wholesale censure is worth no more attention than the man who

gives it. No business man would be influenced one way or another by such a prejudicial writer who is looking for notoriety to advertise the book he writes. He is a sensationalist, and paid for being one. A sane article would not be as readable in some quarters.

I for one would rather get my information on rubber culture from United States and Mexican government reports; from such reputable journals as *The Financier and Bullionist*, and THE INDIA RUBBER WORLD, the Editor of which latter has traveled in nearly all the rubber producing districts of the world, and who has studied rubber culture for so many years, than to be guided by a novelist, who has spent only six months on some out of the way rubber plantations that are no criterion.

W. L. HASBROUCK.

Second Vice President The Castillio Rubber Plantation Co.
(Portland, Oregon).

Syracuse, New York, February 17, 1910.

BY WAY OF COMMENT.

THERE is much in the point of view. Once on a holiday the writer of these lines, in walking about New York with a man of large attainments and national reputation, pointed out that the section in which we happened to be was filled with people who, in their native lands, were oppressed to a position beneath cattle. They were people who, as immigrants crossing the Atlantic—or any other ocean—were treated on shipboard even worse than cattle, and it did not occur to them to resent it. Here they had imbibed ideas of self respect; their children were clean faced, not in rags, and had shoes on their feet. Here was improvement in conditions which later would make their descendants free and equal citizens of the United States. What followed was a signed article in an important periodical by the writer's friend, whose heart bled at seeing such miserable conditions in America's leading city. The surroundings were such as he would not like to have his own family subjected to.

The writer's friend doubtless would be shocked to see the conditions under which some men work in producing rubber on every continent. To begin with, the production of rubber has been brought about by foreigners coming in and starting the natives to work; else there never would have been any rubber in any civilized or other market. It is not implied that rubber gathering necessarily involves cruelty to or inhuman treatment of a single individual who happens to become employed in this work. But conditions which up to date are inseparable from the work of getting out forest rubber may prove repugnant to one whose knowledge of life takes no account of cotton factory conditions in England or of coal mining in certain parts of the United States—to go no farther for comparisons.

The magazine to which our correspondent alludes, edited by able minds as it is, owes its success to providing its readers with "thrillers"—stories of life that shock its readers that such things can be, and yet they flock to read such magazines as certain misguided ones flock to see opium smoking and other horrors in "Chinatown," with the result that the "heathen Chinee" is always in waiting to give "slumming" parties every thrill they are looking for and more—with details previously unknown in Chinatown. The particular issue of the magazine referred to contains a thrilling story of New York life—"The Young Girl." No doubt such "young girls" have lived in New York, and in every other city, and in many villages, but is the "Ida" of Mr. Oppenheim's story typical of civilization in the United States? And if it is, does the imaginative writer suggest any remedy? By the way, the writer on Mexico fails either to show that the conditions he claims to exist are typical, or to propose remedies.

There is a list in THE INDIA RUBBER WORLD office of every rubber plantation enterprise in Mexico which it has been possible for the office to become informed of—with details regarding them—based upon the expenditure of a large amount of money. No doubt the expenditure amounts to more than that all other periodicals combined for a similar purpose. The future demand for rubber depends upon cultivation rather than upon forest production. For this reason this journal for twenty years past has advocated plantations, and the condition of the market to-day

seem to justify our position. But neither from personal visits or from other sources has any information been gained that would substantiate the story in *The American Magazine* [New York: February, 1910. Pp. 546-555]. In fact, no details are given by means of which that story can be verified in Mexico or elsewhere, as to plantation conditions. It is no news that some so called plantation prospectuses have been fraudulent—a detail not unknown in connection with gold mining, banks, and so on.

General News of Rubber Planting.

HAWAIIAN INTERESTS IN RUBBER.

WHILE a very substantial interest in rubber culture has been exhibited in Hawaii, in connection with local enterprises, and while the Hawaiian Rubber Growers' Association maintains an active existence, there is also a disposition among capitalists in that territory to consider rubber planting propositions in the Malay peninsula. Two plantations in the latter region from which promising reports come to hand are owned entirely by Hawaiian capital, there being some 60 stockholders in the two corporations and with all the shares very closely held. These are the Tanjong Olak Rubber Plantation Co., Limited, in the native state of Johore, and The Pahang Rubber Co., Limited, in Pahang, one of the Federated Malay States. [See THE INDIA RUBBER WORLD, June 1, 1909—page 312.] The latest report regarding the Tanjong Olak company was that a meeting was about to be held in Honolulu to consider exercising an option which the company had acquired on Muar river



TANJONG OLAK RUBBER PLANTATION.
[*Hevea* at 2½ years. One of the drains.]

properties adjoining their estate in Johore. They are adjacent to one of the most important and most profitable rubber plantations in the world, and the shareholders in the Tanjong Olak are hopeful of being equally successful with their neighbors. The Messrs. Waterhouse, of Honolulu, have been particularly active in the development of the plantations in Malaysia, to which reference is made here.

A BIG DUTCH PLANTING COMPANY.

ONE of the largest companies yet organized in the rubber planting interest, measured by the amount of capital stated, is reported from Holland—the *Nederlandsche Rubber Maatschappij* (Netherlands Rubber Co.), gazetted in the *Staats-Courant* of January 12, 1910. The share capital is 10,000,000 florins [= \$4,020,000]. The purpose is to engage in planting rubber and other crops in the Dutch East Indies, and particularly in Sumatra; to deal in the products of such cultivation, and to participate in other companies devoted to similar purposes. The

directors are: J. F. de Beaufort, Th. C. Dentz, P. J. J. Jonas van's Heer Arendskerke and P. van Leeuwen Boomkamp. The head offices are in Amsterdam.

MEXICAN RUBBER PLANTING NOTES.

THE Wisconsin Rubber Co. (Madison, Wisconsin), on January 25, 1910, announced their tenth dividend (5 per cent.), being the sixth year's dividend, making a total of 49 per cent. from the beginning. The company's large rubber plantation in Chiapas, Mexico, has not yet reached a productive age, but dividends are afforded by "side crops."

The annual meeting of shareholders of Hacienda del Corte, Inc., owners of "Del Corte" rubber plantation, in Oaxaca, Mexico, will be held on March 2 at Milwaukee, Wisconsin, where the principal offices of the company are located. The company is that known formerly as the Isthmus Plantation Association of Mexico.

A recent tapping of a nine-year-old *Castilloa* tree on "La Amistad" estate, owned by Mr. V. S. Smith, near Tapachula, Mexico, gave 21 ounces of dry rubber.

Shareholders in Mexico Mutual Planters' Co. (Chicago), have received a letter from the general manager, Mr. Joseph Cummins, mentioning the sale in New York, at different times, of two small lots of rubber, the result of experimental tappings. The first realized \$1.45 per pound for sheet and \$1.07¼ for scrap; the second, \$1.50 for sheet and \$1.15 for scrap. The dates not being stated, it is impossible to compare these figures with Pará rubber of corresponding dates.

BRIEF MENTION.

J. P. WILLIAM & BROTHER, seed merchants at Heneratgodla, Ceylon, report correspondence with parties in Panama who contemplate the planting of considerable *Hevea* rubber in that republic. The writer in Panama mentions having received a shipment of seeds of *Hevea* from Ceylon, the results from which were quite satisfactory.

Vilmorin-Andrieux & Cie., 4, Quai de la Megisserie, Paris, send us some new catalogues of plants and seeds which they are prepared to supply, including the more important rubber yielding species.

IN ANSWER TO INQUIRIES.

MR. JOHN LOUIS HERMESSEN, an associate member of the Institution of Electrical Engineers, in Great Britain, is a native of England, educated in important schools in his own country and on the Continent, a linguist, connected at various times with leading electrical engineering concerns on both sides of the Atlantic, a contributor to technical journals of note. In Mexico he undertook, on the Isthmus of Tehuantepec, the installation of telephone lines for large rubber plantations. Subsequently he became field superintendent on "La Junta" plantation, owned by Mexican Mutual Planters Co., and acquired a practical knowledge of rubber culture under Mr. James C. Harvey, then resident manager of that property. Still later he made further studies of rubber in association with Mr. Harvey, on the latter's estate, "La Buena Ventura."

IMPORTATION OF RECLAIMED RUBBER.

THE importers at New York of certain merchandise which the port collector assessed for duty as "manufactures of india-rubber" appealed to the board of United States general appraisers, who decided that, whereas the merchandise in question had at one time been in the form of manufactured articles, "it had again been reduced to the crude state, and it is the condition of merchandise as imported which must control in settling its classification, and thus the claim for free entry of this rubber must be sustained."

The rubber referred to "was reclaimed or recovered from old scrap, boots and shoes and automobile tires, and in the condition imported had, by reason of the processes of separation and grinding to which it had been subjected, been reduced to a condition comparable only with the crude rubber from which the articles from which it was reclaimed had been originally made." [See *Treasury Decisions*, April 15, 1909—page 21; *THE INDIA RUBBER WORLD*, May 1, 1909—page 285.]

Within a month following this decision the Treasury department issued an order to port collectors: "After a careful consideration of this question, the department is of the opinion that the merchandise is a non enumerated manufactured article, and you are accordingly directed to classify future importations thereof - - - at the rate of 20 per cent. *ad valorem*." [See *Treasury Decisions*, May 13, 1909—page 3; *THE INDIA RUBBER WORLD*, June 1, 1909—page 309.]

The original protestants, The Michelin Tire Co., have not been idle meanwhile, and a new set of protests, in respect of imports of reclaimed rubber, has been before the general appraisers. [See *Treasury Decisions*, February 10, 1910—page 27.]

In the first place, the appraisers point out that the government has taken no appeal from their original decision. "Consequently it stands at this writing as an authoritative interpretation of the statute governing the classification of the character of rubber here involved."

A new hearing having been granted, considerable new testimony was adduced, in the face of which the appraisers [through Mr. McClelland] decide:

It was unmistakably disclosed upon the hearing that certain domestic interests engaged in the reclaiming and recovery of rubber are affected by the admission free of duty of this rubber, and that therefore the evidence of the representatives of these interests as given is not to be considered as wholly disinterested. They desire the imposition of a duty on this merchandise as a matter of protection against so called foreign competition; but it is the duty of this board to interpret the law as it is written, regardless of how it may affect conflicting interests. The law making power must be presumed to have determined the question of whether a duty for the protection of domestic interests should be imposed. If there is one thing that such added evidence tends to show more than another it is the inferiority both from the standpoint of value and use of this so called reclaimed or recovered rubber to crude rubber, and the further fact that by itself, as a material for manufacture, it is practically valueless, its only practical use being in combination with crude rubber, and its value is shown to be from one-tenth to one-twelfth of pure crude rubber in its original state.

It is unquestioned that all kinds of crude rubber before importation have been subjected to various cleansing processes, but no classifying officer or judicial authority has ever gone so far as to hold that these cleansing and purifying processes made the cleansed or purified rubber other than crude; and if crude rubber thus cleansed and purified is entitled to free entry we think, on the same basis of reasoning, that reclaimed or recovered rubber which, by various processes, chemical and otherwise, has been reduced from old scrap to the crude state, is also entitled to free entry.

A final point in the appraiser's decision is that, since their original decision, the Congress has considered and passed upon a revision of the tariff schedules, and it must be presumed that the rulings of the board were known to the Congress. Hence, since no modification or change in the language of the old law is embodied in the new law—

Other than a mere rearrangement of words which does not alter or narrow or broaden the scope of the paragraph, we must assume that the law as it stood, together with the interpretations put upon it by the

board, were satisfactory to the law making body, and that no change therein was desired.

Following is the paragraph in the Tariff act under which reclaimed rubber thus becomes entitled to entry under the free list: "591. India-rubber, crude, milk of, and scrap or refuse india-rubber, fit only for remanufacture and which has been worn out by use."

* * *

It will be understood that the board of United States general appraisers has a judicial rather than an administrative character, and that its decisions may be appealed from by the government, the same as in the case of any other Federal court. *THE INDIA RUBBER WORLD* is advised that the treasury department, which hitherto has regarded reclaimed rubber as properly dutiable, has directed the collector of customs at New York to file an application in the United States circuit court for a review of the decision of the appraisers in the matter of the admission of reclaimed rubber. The meaning of the new condition is that duties will be paid under protest until a court decision is reached. This may not reasonably be expected for several months; the matter may remain in dispute for years.

RUSSIAN RUBBER SCRAP IN AMERICA.

TO THE EDITOR OF *THE INDIA RUBBER WORLD*: The communication headed "Old Rubber Shoes in Russia," in your issue of January 1 (page 155), prompts me to offer the following remarks:

During the current year the American rubber reclaiming works will not be successful in following their policy of depressing the price of old rubber shoes, even though they should unite ten times over, or refrain for a considerable length of time from purchasing old rubber shoes. Although they may possibly succeed in buying 100 or 150 tons of Russian scrap at a low price, this amount would not by any means be sufficient for their requirements.

Last year's supply of old rubber shoes, which had been accumulating in Russia for two years, because America did not buy on account of the financial panic, has now been exhausted, and the quantity available in Russia during the current year will amount to at most 50 per cent. of the supply which had accumulated in previous years, inasmuch as the sale of new rubber shoes during the present winter season has been 50 per cent. less than in past years.

New rubber is very high in price, and the crop is said to have been poor. Some additional rubber reclaiming works, however, are to be started in America during the current year, and it is reported that American dealers in old rubber have only a very small supply of old rubber shoes to offer.

The American rubber reclaiming works will, therefore, only have the choice between suspending operations during the current year, or very considerably advancing the prices they are willing to pay for old rubber shoes, to procure supplies, for they should not forget that the English rubber works are at present likewise using large amounts of old rubber shoes.

Those who now buy old rubber shoes at the prevailing low rates, and hold some time before selling the goods, will undoubtedly make a great deal of money.

Again, in your January issue, on page 153, I see, under the heading "American Imports of Scrap Rubber," that Russian scrap holds a very important position in the United States market. It appears that Russia supplies direct 35 to 45 per cent. of the total American importation. Not only this, but of the amount imported from Germany perhaps 85 per cent. is derived originally from Russia.

Consequently the question arises: What would the rubber reclaiming works of America do without Russian scrap?

A DEALER IN SCRAP RUBBER.

St. Petersburg, Russia, February 9, 1910.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED JANUARY 4, 1910.

- N**^{O.} 945,937. Tire. [Pneumatic, with clincher shoe spreader.] D. Hays, assignor to E. B. Stimpson, both of New York city.
- 945,957. Anti-sidding device. [For tires.] E. B. Stimpson, assignor to Edwin B. Stimpson Co., New York city.
- 945,115. Vehicle tire. [Pneumatic with special tread.] E. P. White, Chicago, assignor to White Tire Co., New York city.
- 945,289. Horseshoe with elastic bridge covering both ends. E. Schmitz, Cologne, Germany.
- 945,352. Process for making rubber fabrics. A. D. Warner, Mishawaka, Ind.
- 943,353. Rubber tubing for tires, etc. *Same*.
- 945,470. Tire. [Pneumatic; metallic springs are involved, in which is a rubber bumper.] B. W. Meredith and O. Wildman, Morrisville, Pa.
- 945,649. Tire protector. J. C. Warring, assignor to G. V. Krichbaum, both of Ashland, Ohio.
- 945,686. Steam hose. W. T. Bonner, Trenton, N. J.

Trade Marks.

- 40,911. The Tiresole Co., Newark, N. J. The representation of a complete pneumatic tire. For a powder for sealing punctures.
- 45,188. Shawmut Tire Co., Boston. For rubber tires.
- 45,266. The B. F. Goodrich Co., Akron Ohio. The representation of a steam engine. For steam hose.

ISSUED JANUARY 11, 1910.

- 946,001. Rod packing. E. J. Armstrong, Erie, Pa.
- 946,044. Wheel tire. [With rubber section.] H. H. Hodgson, Toronto, Canada.
- 946,396. Pipe or hose coupling. [For air brake hose.] J. H. Phillips, Jr., Jackson, Mich.
- 946,090. Machine for armoring cables. E. Witzemann, Pforzheim, Germany.
- 946,974. Insulation clipping pliers. G. A. Seessle, assignor of one-half to T. Angst, both of Chicago.

ISSUED JANUARY 18, 1910.

- 946,557. Reinforcement for pneumatic tires. A. L. Murray, Grand Rapids, Mich.
- 946,614. Vehicle wheel. [With inner and outer members, between which resilient substances are placed.] R. J. Moore, Cincinnati, Ohio.
- 946,638. Tire. [Pneumatic, with special tread.] D. W. Jones, Taunton, Mass.
- 946,674. Means for securing a spare rim to the wheel of a vehicle. W. R. Hughes and P. Cave-Moyle, Cheltenham, England.
- 946,681. Hose reel. B. H. Montgomery, W. A. Gray, and A. S. Chapin, Toronto, Canada.
- 946,935. Hose coupling. G. B. Clay, Jenkintown, Pa.
- 947,141. Tire armor. C. G. Wright, Greensboro, N. C.

Trade Mark.

- 45,843. The Hartford Rubber Works Co., Hartford, Conn. The word *Aéronaut*. For rubber tires.

ISSUED JANUARY 25, 1910.

- 947,221. Emergency tire for automobile wheels, etc. W. Rudesheim and J. D. Stinchcomb, Baltimore, Md.
- 947,371. Vehicle tire. L. E. Clawson and Frederick L. Dow, San Francisco.
- 947,416. Thread supply device for braiding machines. J. O. McKean, assignor to Foster Machine Co., all of Westfield, Mass.
- 947,442. Tire [Pneumatic.] W. D. Harris, assignor to Harris Tire and Rubber Co., Philadelphia.
- 947,501. Hose coupling. F. E. Thomas, Portland, Me.
- 947,517. Tire pump. W. S. Stapley, assignor to Bridgeport Brass Co., all of Bridgeport, Conn.
- 947,527. Tire case. P. Evans, Philadelphia.
- 947,535. Cushion tire for vehicle wheels. Pump. M. Wenkel, Schlottwitz, Germany, assignor.
- 947,543. Vehicle tire. [Solid rubber; held in place by special flanges.] H. S. Firestone, assignor to Firestone Tire and Rubber Co., Akron, Ohio.
- 947,645. Gasket for hose couplings. R. S. MacEwan, Troy, N. Y.
- 947,698. Dress shield. H. R. Hinkley, Waterbury, Conn.

Trade Marks.

- 45,844. The Hartford Rubber Works Co., Hartford, Conn. The word *Acroplane*. For rubber tires.
- 45,845. The Hartford Rubber Works Co., Hartford, Conn. The word *Aviator*. For rubber tires.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the application, which in the case of these listed below was in 1908.

*Denotes Patents for American Inventions.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 31, 1909.] 19,014. (1908). Tire inflater. A. R. Price, Birmingham.

- 19,030 (1908). Tread for pneumatic tire. J. E. Neale, London.
- 19,069 (1908). Spring wheel with pneumatic chambers between inner and outer rims. R. Guereta, Madrid, Spain.
- 19,063 (1908). Studded tread for pneumatic tire. E. Kempshall, London.
- 19,075 (1908). Jacket between a tire cover and the air tube, for repair purposes. V. Brown and Union Rubber and Chemical Co., Manchester.
- 19,203 (1908). Double ended air tube for pneumatic tire. J. Jelley, Coventry.
- 19,245 (1908). Tread for pneumatic tire. J. P. Griffiths, Dudley.
- 19,275 (1908). Detachable tire carrying rim. C. Pride and S. I. Michaelson, Bristol.
- 19,284 (1908). Puncture preventing band for pneumatic tire. A. F. Walker and J. Gilles, London.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JANUARY 12, 1910.]

- 19,629 (1908). Gutta-percha waterproofing for leather boots. M. Hoefler, Arnstadt, Germany.
- 19,631 (1908). Pneumatic tire comprising a series of air chambers. K. Kleinow, Göttingen.
- 19,220 (1908). Puncture closing device for tires, air cushions and the like. J. Roberts and J. Prescott, Liverpool.
- 19,983 (1908). Construction of the edges of a wired on tire cover. J. Starley, Coventry.
- 20,129 (1908). Non-slipping studs for tire covers. T. Sloper, Devizes, Wiltshire.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JANUARY 19, 1910.]

- 20,168 (1908). Detachable studs for pneumatic tires. A. Shaylor, London.
- 20,170 (1908). Solid rubber tire vulcanized to a metal base. A. T. Collier, St. Albans, and Reilloc Tyre Co.
- 20,302 (1908). Manufacture of articles from powdered vulcanized rubber. T. Gare, New Brighton.
- 20,303 (1908). Elastic fabric for tire tubes, cushions, garments and the like. T. Gare, New Brighton.
- 20,602 (1908). Pneumatic tire for use with or without an inner tube. F. Rogers, London.
- *20,606 (1908). Lever for removing a pneumatic tire. H. M. Owens and A. G. Cunningham, San Francisco, California.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JANUARY 26, 1910.]

- 20,652 (1908). Non-skid device for pneumatic tires. G. W. Baldani, London.
- 20,886 (1908). Detachable non-skid studs for tires. E. Payne, Cranbrook, and C. E. S. Marriott, Hawkhurst, Kent.
- 20,896 (1908). Process for extracting resin from rubber. G. F. Flamant and L. G. Worms, Paris, France.

THE FRENCH REPUBLIC.

PATENTS ISSUED (with Dates of Application.)

- 404,612 (July 1, 1909). A. Ripert. Pneumatic tire cover.
- 404,620 (July 1). M. de la Gandara. Elastic wheel.
- 404,595 (June 30). J. K. Williams. Vulcanizer for tire repairs.
- 404,686 (June 24). P. Haillet, Delcourt & Cie. Boot heel.
- 404,848 (July 7). P. Wolfrom. Inner tube for tires.
- 404,882 (July 8). L. Vanderperre. Segmental protector for tires.
- 404,749 (July 5). C. L. Lightband. Leather substitute for rubber and process of manufacture.
- 405,026 (Nov. 4, 1908). W. Damon. Pneumatic tire.
- 405,128 (July 16, 1909). G. G. Trannoy. Leather tread for tires.
- 405,145 (July 16). D. Stourda. Demountable rim for pneumatic tire.
- 405,396 (July 22). A. T. Bosquet. Pneumatic tire.
- 405,392 (July 24). Dodwell. Improvement in pneumatic tires.
- 405,437 (June 26). G. Austerwell. Process for the treatment of rubber.
- 405,345 (July 23). Yherty. Pneumatic boot heel.
- 405,526 (July 28). E. Dive. Nipple for children.
- 405,550 (July 29). C. F. Wren. Elastic tire.
- 405,552 (July 29). G. H. Gillette. Wheel tire.
- 405,562 (July 29). C. Simennet. Improvement in wheel rims.
- 405,762 (Aug. 5). R. Trantwein. Pneumatic tire.
- 404,718 (July 3). Etablissements de Dion Bouton. Envelope for dirigible balloons.
- 405,831 (Aug. 9). F. E. Blaisdell. Elastic tires.

[NOTE.—Printed copies of specifications of French patents can be obtained from R. Robet, Ingenieur-Conseil, 16 avenue de Villier, Paris, at 50 cents each, postpaid.]

THE Gutta Percha and Rubber Manufacturing Co., of Toronto, Limited, send out one of the handsomest calendars of the season which differs from any other yet received in that it begins with February, 1910, and supplies tear-off sheets for twelve months. At the same time the calendar has a complete list of dates for the year on one sheet.

News of the American Rubber Trade.

AFFAIRS OF THE UNITED STATES RUBBER CO.

THE authorities of the New York Stock Exchange, on application by the United States Rubber Co., authorized the listing, on and after February 2 last, of the company's first preferred stock to the extent of \$3,561,400, in addition to the amount previously issued and added to the list. In their application to the Stock Exchange the company stated: "The proceeds of the sale of said shares of first preferred capital stock will be used as additional working capital and applied to the general uses of the company." The capitalization of the United States Rubber Co. is now as follows:

Class of Stock.	Authorized.	Issued.
First preferred	\$40,000,000	\$39,824,400
Second preferred	10,000,000	9,965,000
Common	25,000,000	25,000,000
Total	\$75,000,000	\$74,789,400

The new issue of first preferred stock listed amounted to \$3,561,400. It is stated that of the common stock \$1,344,000 is held in the office of a subsidiary company, and no application has yet been made for its application to the Stock Exchange list.

The new issue of first preferred was offered *pro rata* to shareholders of record at \$110, and it is stated that approximately 75 per cent. of the issue was taken, the remainder being taken at the same price by a syndicate of bankers, under an agreement which existed in advance of the issue.

The entire amount of bonds of the \$20,000,000 issue has now been listed on the Stock Exchange, application in respect of the last \$5,000,000 having been made since the beginning of the year.

Of the \$2,000,000 capital stock of the Revere Rubber Co., it is reported that the United States Rubber Co. acquired 19,774 shares, at the agreed upon price of \$200. Various minor expenses connected with the purchase bring the total amount involved slightly above \$4,000,000.

CANADIAN CONSOLIDATED—ANNUAL.

At the annual meeting of the Canadian Consolidated Rubber Co., Limited, at Montreal, on February 23, net earnings were reported of \$573,319, against \$515,396 last year. Sales of the company showed an increase of nearly 30 per cent., but this is offset largely by an advance in crude rubber. The by-laws were amended to increase the number of directors from 11 to 15. The old board of directors was re-elected, except that Fleetwood H. Ward, assistant general manager for the year past, was chosen to succeed C. C. Ballantyne, recently resigned. Only one of the newly created places on the board was filled, T. H. Rieder, of the Merchants' Rubber Co., Limited, being elected a director.

SEAMLESS RUBBER CO.—INCREASE OF CAPITAL.

The Seamless Rubber Co. (New Haven) have filed with the secretary of state of Connecticut a certificate of increase of their capital stock from \$400,000 to \$500,000, said increase having been paid in cash. This step has been made necessary by the continued expansion of the company's business for three or four years past. It is stated that the business during 1909 was larger by far than any other in the history of the company as regards volume of sales and profits.

PRESTON FABRIC TIRE CO.

The Preston Fabric Tire Co. (Buffalo, New York) have now got under way in manufacturing. The specialty of the company is the Preston pneumatic tire, which is offered as being practically proof against punctures and blow outs, which properties are ascribed to the nature of the weave, the tread being woven in four ply. A department of the factory, by the way, is

devoted especially to the weaving of fabrics. The company also make inner tubes and a general line of rubber accessories for automobiles. In addition the company are making a number of specialties, including a horseshoe pad formed with a fiber back and designed to be impervious to water and ammonia, and is the invention of Mr. C. A. Castor, who is superintendent of the plant. The products include also special lines of gum for the artificial limb and rubber stamp trades. The interest in this business owned formerly by Mr. James F. Preston has been purchased by the company, as reconstituted with the following officers: John J. Shay, president; M. R. Evans and Frank P. Ford, vice-presidents; S. J. Richards, treasurer; Charles F. Benzing, secretary and general manager.

A NEW TIRE COMPANY IN NEW YORK.

STEIN LAPLOCK TIRE Co. was incorporated February 7, 1910, under the laws of New York. Clarence H. Loewenthal has been elected president; Charles K. Sunshine, treasurer; and R. A. Loewenthal, secretary. These gentlemen are also the directors. The new company, located at No. 1864 Broadway, New York, are exclusive Eastern agents for the Stein Double Cushion Tire Co.



THE "LAPLOCK" PNEUMATIC AUTOMOBILE TIRE.

(Akron, Ohio), of which the Mr. Sunshine mentioned is president. The president of the new company is a son of Mr. Rudolph A. Loewenthal, whose retirement from the U. S. Rubber Reclaiming Works, after so long a connection with that trade, was reported in THE INDIA RUBBER WORLD December 1, 1909 (page 97).

The tire which the new company will market is a pneumatic tire on a new plan which is the outgrowth of the Akron enterprise, the Stein Double Cushion Tire Co., established in 1901 to make a tire of a different type, which still holds an important place in the market. The original company having become identified widely with its initial product, it has been thought wise, in view of its introduction of a pneumatic tire, to adopt a separate corporate title for use in connection with the latter—hence the name "Stein Laplock Tire Co." The distinctive feature of the new pneumatic is a solid lapped and locked base, as shown in the illustration. The overlapping of the beaded edges of the tire cover makes of this a clincher tire that will stay in place without lugs; it prevents water and sand from entering the tire; the inner tube cannot be pinched; it is interchangeable, fitting any single piece clincher or standard detachable rim. Besides, it is provided with an extra heavy tread.

DUPLEX RUBBER CO.

THE Duplex Rubber Co., at Greeley, Colorado [see THE INDIA RUBBER WORLD, February 1, 1910, page 189], has been formed to market a newly patented ladies syringe. Jacob Kussart, president of the company, advises that the capital stock has all been taken by physicians.

NEW INCORPORATIONS.

THE Fisk Rubber Co., January 18, 1910, under the laws of Delaware; capital, \$4,000,000. Incorporators: Warren N. Akers, E. Butterworth Davis and William J. Maloney, all of Wilmington, Delaware. This is a step preliminary to increasing the capital of The Fisk Rubber Co. (Chicopee Falls), a corporation under the laws of Massachusetts, which has been found to be necessary owing to the rapidly increasing business of the company. The shareholders of the Massachusetts corporation will hold the major portion of the stock of the Delaware corporation, and the officers of the latter are the same as of the former: H. T. Dunn, president; A. N. Mayo, treasurer; and H. G. Fisk, secretary.

The Lyman Tire and Rubber Co., February 2, 1910, under the laws of Pennsylvania; capital, \$20,000. Incorporators: Clement Restlin, J. Walton Lyman, and Frank J. Ford—all of Philadelphia. Further details appear in another column.

Cauca River Concession Corporation; February 3, 1910, under the laws of Delaware; capital authorized, \$5,000,000. Incorporators: Henry W. Goodrich, New York; Isaac Morgan Price, Philadelphia; Warren N. Akers, Wilmington, Delaware. While the Cauca river penetrates a rubber district in Colombia, THE INDIA RUBBER WORLD is advised that the new company will not engage in the rubber business.

Globe Tubing Co., January 29, 1910, under the laws of New Jersey; capital, \$25,000. Incorporators: George M. Nicholls, No. 339 West Fifty-fifth street, New York; Edward A. von Sothen, No. 725 Home street, Bronx, New York; and Robert W. Thompson, Jr., Ridgefield, New Jersey. The headquarters of the concern are at No. 227 Grand street, Hoboken, New Jersey. The company will manufacture and deal in all kinds of flexible tubing.

HOOD RUBBER CO.—BALANCE SHEET.

BELOW appears the condensed balance sheet of the Hood Rubber Co. (Boston), as of December 31, 1909, certified to by Edward P. Comins, public accountant:

ASSETS.	
Plant	\$1,400,000.00
Merchandise	626,281.04
Receivables	1,425,919.82
Cash	233,998.91
Stock owned in other corporations.....	213,519.09
Patents	1,000.00
Total	\$3,900,718.86
LIABILITIES.	
Capital stock, common.....	\$1,000,000.00
Capital stock, preferred	1,000,000.00
Notes payable	470,000.00
Surplus	1,430,718.86
Total	\$3,900,718.86

As was mentioned in THE INDIA RUBBER WORLD of February 1 (page 187), the preferred capital stock of the Hood Rubber Co. has been increased, since the date of the above balance sheet, to \$1,500,000, by the creation of \$500,000 in new 7 per cent. cumulative shares. The issue was made at \$125 for the \$100 shares, since which time shares have been offered in market by holders at \$135.

NEW RUBBER COMPANY IN CANADA.

THE business existing hitherto in Hamilton, Ontario, as the Tire and Rubber Goods Co., for the sale of motor tires and accessories, has been extended with a view to taking on the sale of a general line of rubber goods, including mechanicals, druggists' sundries, and so on. The business was incorporated under the laws of Ontario on January 13, as Tire and Rubber Goods, Limited, with \$40,000 capital. At the first meeting of shareholders, on February 16, Parry D. Saylor, K. R. Spencer, W. H. Daniels, and W. E. Burke were elected directors. At a meeting of the directors on the same day Parry D. Saylor was elected president and general manager, and K. R. Spencer vice-

president and treasurer. In addition to their general jobbing business, the company have a very complete modern tire repair plant, and facilities for doing light manufacturing which will be increased as the business may warrant it. Mr. Saylor gained his training in the rubber trade under the late Charles H. Dale, in the United States, and for the past three years has been general purchasing agent of the Canadian Consolidated Rubber Co., Limited, at Montreal.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for four weeks, ending February 19:

COMMON STOCK, \$25,000,000.

[The treasury of a subsidiary company holds \$1,344,000.]

Last Dividend, April 30, 1900—1%.

Week January 29	Sales 7,000 shares	High 46½	Low 42½
Week February 5	Sales 11,455 shares	High 43¾	Low 36½
Week February 12	Sales 19,350 shares	High 42	Low 35
Week February 19	Sales 9,100 shares	High 46½	Low 39¾

For the year—High, 52½, Jan. 3; Low, 35, Feb. 7.
Last year—High, 57½; Low, 27.

FIRST PREFERRED STOCK, \$39,824,400.

Last Dividend, Jan. 31, 1910—2%.

Week January 29	Sales 4,331 shares	High 112¾	Low 111
Week February 5	Sales 5,280 shares	High 111¼	Low 108¾
Week February 12	Sales 2,150 shares	High 110¾	Low 108
Week February 19	Sales 3,014 shares	High 114½	Low 111

For the year—High, 116½, Jan. 10; Low, 108, Feb. 7.
Last year—High, 123½; Low, 98.

SECOND PREFERRED STOCK, \$9,065,000.

Last Dividend, Jan. 31, 1910—1½%.

Week January 29	Sales 1,400 shares	High 79½	Low 78
Week February 5	Sales 200 shares	High 80	Low 77
Week February 12	Sales 900 shares	High 79	Low 76
Week February 19	Sales 600 shares	High 80½	Low 80

For the year—High, 84, Jan. 3; Low, 76, Feb. 7.
Last year—High, 89½; Low, 67½.

SIX PER CENT. TRUST GOLD BONDS, \$19,500,000.

Week January 29	Sales 96 bonds	High 104	Low 103½
Week February 5	Sales 77 bonds	High 104¼	Low 103½
Week February 12	Sales 107 bonds	High 104¾	Low 103½
Week February 19	Sales 288 bonds	High 103½	Low 102½

Last year—High, 106, July 19; Low, 102¼, Jan. 16.
Sales, 1909—4,667,000.

TRIBUTE TO THE LATE MR. ALLERTON.

At a special meeting of the executive committee of the Rubber Sundries Manufacturers' Association, held in New York on December 27, 1909, the following preamble and resolutions were adopted:

WHEREAS, MR. GEORGE M. ALLERTON, a member of the executive committee of this Association departed this life on October 16, 1909; and,

WHEREAS, His interest and loyalty in behalf of the Rubber Sundries Manufacturers' Association as a member of the executive committee was so marked; and,

WHEREAS, His happy disposition and generous character has endeared him in the admiration of all members of this Association; be it

Resolved, That his associates of the Rubber Sundries Manufacturers' Association, through the death of Mr. GEORGE M. ALLERTON, have suffered a great loss; and be it further

Resolved, That in commemoration of the friendship and esteem in which he was held by all members of this Association, and to evidence their sorrow and deep sympathy with the bereaved family, this preamble and resolutions be spread upon the minutes of this association and a copy be forwarded to the family of our deceased associate and beloved friend.

The above paper was signed by the members of the executive committee: H. C. Burton (president), E. E. Huber (secretary), G. B. Hodgman, H. E. Raymond, C. J. Davol, and F. H. Jones. An obituary notice of Mr. Allerton appeared in THE INDIA RUBBER WORLD, November 1, 1909 (page 51.)

CHANGE OF STYLE.

THE name General Asbestos and Rubber Co. has been adopted by a company organized nearly fourteen years at Charleston, South Carolina, as The Charleston Metallic Packing Co., and operated since under that name. Their business has been chiefly in high grade steam packings, but it is intended now to broaden the scope of operations. C. B. Jenkins is president; M. B.

Barclay, vice-president; J. P. Thomas secretary and treasurer; W. F. Taylor manufacturing manager; and James E. Rice, sales manager.

THE B & R RUBBER CO.—ANNUAL.

At the annual meeting of shareholders of The B & R Rubber Co. (North Brookfield, Massachusetts), on February 1, the following directors were elected for the ensuing year: Alvin F. Sortwell, Robert M. Currier, George R. Hamant, Thomas G. Richards and Charles C. Beebe. The board later reelected the officers:

President—THOMAS G. RICHARDS.
Vice-President and Treasurer—CHARLES C. BEEBE.

It was reported that the business in 1909 showed a gain of 62 per cent. over 1908. Also that a fair profit was made and that prospects are very favorable for 1910.

CENTRAL CITY RUBBER CO.—ELECTION.

The annual meeting of the Central City Rubber Co. (Syracuse, New York), was held on January 24. The directors were re-elected: David A. Gould, George H. Lloyd, A. Park Sager, and Daniel A. Pierce. The showing made since the incorporation of the company [see THE INDIA RUBBER WORLD, October 1, 1909—page 24] was very satisfactory, and the prospects for business are bright. The officers were reelected:

President—DAVID A. GOULD.
Vice President—GEORGE H. LLOYD.
Secretary and Treasurer—JOHN R. GRAHAM.

The three officers were formerly in the employ of Frank C. Howlett—later the Syracuse Rubber Co.—for an aggregate of 38 years, and are thoroughly familiar with the trade in that territory in tires, mechanicals, and general rubber goods.

WHERE RUBBER AND POLITICS DO NOT MIX.

An order has been posted at the factory of the National India Rubber Co. (Bristol, Rhode Island), against the participation in local politics of any employee of the company. A caucus had just been held by one of the political parties for the nomination of candidates for town offices, in which some of the factory employees had been successful, and these have withdrawn their names from the list of candidates.

THE LYMAN TIRE AND RUBBER CO.

This is a corporation under the laws of Pennsylvania for which a charter was granted on February 2. They have entered into a contract for a term of years with the Republic Rubber Co. (Youngstown, Ohio), whereby they will control the sale of the automobile and other rubber tires made by the latter, in the territory embracing eastern Pennsylvania, southern New Jersey, Delaware, Maryland, Virginia, and the District of Columbia. J. W. Lyman, who is president of the new company, has been with The B. F. Goodrich Co. for more than 13 years, the past 9 of which he served as manager of their Philadelphia branch. On severing his connection with the Goodrich agency Mr. Lyman was presented with a loving cup, inscribed with the names of 26 of the employes who united in donating it. The Lyman company are occupying temporary quarters in Arch street, but about May 1 expect to move into a new building at No. 328 North Broad street, in the center of Philadelphia's automobile row.

THE GROWING FIELD OF TIRE USERS.

The United States Motor Co., with an office at No. 15 Exchange Place, Jersey City, filed an amended certificate with the secretary of state at Trenton, New Jersey, on January 28, increasing its capital stock from \$2,000 to \$16,000,000. The new stock is divided into \$8,000,000 preferred, bearing 7 per cent. cumulative dividends, and \$8,000,000 common stock. The papers were signed by Lawrence Arnold, president, and Walter F. Crosby, secretary. The incorporators of the company are Henry E. Torrey, of New York city; James A. Daily, of Ossining, New York; and Kenneth K. McLaren, of Jersey City. The corporation is to manufacture and deal in all kinds of motors, flying machines, automobiles, and all kinds of motor vehicles.

TRADE NEWS NOTES.

LYDEN C. LAWTON, formerly of the Duck Brand Co.—the firm of Lawton & Hall—of Chicago, has been elected president and manager of the Chicago Rubber Co., to fill the vacancy caused by the death of H. N. Johnson, which is reported on another page of this issue.

The Colorado Rubber Co. (Denver) have filed with the secretary of state of Colorado a certificate of increase of their capital to \$100,000. The original capital, at the date of incorporation, October 12, 1903, was \$25,000. Jacob Hammer and Frank H. Donahower, respectively president and secretary-treasurer, have filled these positions from the beginning.

The Eureka Fire Hose Manufacturing Co. (New York), have made a change in their western territory. The states of North Dakota, Montana and Wyoming are now under the management of W. S. Nott Co. (Minneapolis), who will be pleased to answer all inquiries.

It is reported that the best business for years in in hand at the two factories of the Boston Rubber Shoe Co. The factories are working full time, and early in the past month the company advertised for more help, for the first time in many years. Superintendent Piper is quoted as saying that stocks in the factory storehouses are exceptionally small.

Picher Lead Co. (New York and Chicago), have opened a branch office at Pittsburgh, Pennsylvania, for the sale of their sublimed white and blue lead, litharge and other supplies for rubber manufacturers. The location of the new office is the Keenan building, and Mr. C. W. Chatham is in charge.

A reception given by the Converse Rubber Shoe Club at the Young Men's Christian Association building, in Malden, Massachusetts, on the evening of February 18, was attended by over 500 employes of the Converse Rubber Shoe Co., and their friends. The reception committee included Mayor Fall, of Malden; Mayor Brewer, of Medford; President Hawley, of the Christian Association; and M. M. Converse, president of the rubber company.

The semi-annual dividend of 3½ per cent. on the preferred stock of the Converse Rubber Shoe Co. is announced for March 15. At a recent meeting of the directors it was voted to sell 1,500 more shares of the preferred stock, the proceeds to be used to enlarge the plant.

The regular quarterly dividend of 1½ per cent. on the preferred stock of the Manufactured Rubber Co. (Philadelphia) is payable March 1.

The Firestone Tire and Rubber Co. (Akron, Ohio), announce the establishment of the following new distributing agencies for their tires and demountable rims: Central City Rubber Co., No. 129 East Water street, Syracuse, New York; Shuler Rubber and Supply Co., No. 345 Baronne street, New Orleans, Louisiana; Chesapeake Tire and Rubber Co., No. 202 St. Paul street, Baltimore, Maryland.

It is announced that the Hartford Rubber Works Co. are making tests on an important scale, looking to the substitution of pneumatic for solid rubber tires, at least in so far as the lighter commercial vehicles are concerned.

PERSONAL MENTION.

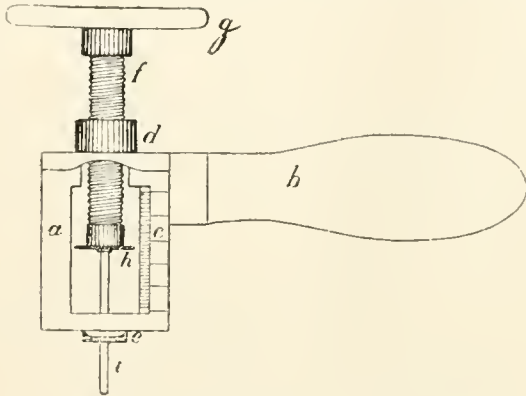
MR. EDWIN S. KELLY, known to the rubber trade particularly through his former connection with the "Kelly-Springfield" tires, was inducted into office as president of the Springfield (Ohio), Commercial Club on the occasion of the annual banquet on the evening of February 4.

Miss Virginia Stickney, whose public debut as a professional violoncellist, in Boston, on the evening of February 5, was in every way successful, is a daughter of Mr. Allison M. Stickney, of the Wellman Co., of Medford, Massachusetts, a gentleman widely known in the rubber trade of America and Europe. Miss Stickney's musical education was gained in part at the New England Conservatory of Music, and latterly she has been an assistant to a member of the faculty of that institution.

A GAGE FOR THE BARK OF "HEVEA."

IN a recent number of *Tecysmania* (Batavia, Java), Dr. Tromp de Hass has described an instrument for determining with exactness the thickness of the bark of the plants containing the essential elements of caoutchouc—an instrument which he was led to have constructed in order to overcome the lack of exactness that has obtained hitherto with the use of a punch, the only instrument possible to be used.

This instrument, represented by an illustration herewith, consists principally of a blunt needle moving in a brass framework, where it is controlled by a very short thread screw operated by a hand wheel G. Between the needle A and the



FOR MEASURING THE THICKNESS OF "HEVEA" BARK.

screw F there is a small disk D, the edge of which grazes the graduated scale C fastened to one side of the framework. The apparatus is furnished with a handle B. It is operated by turning the screw until the needle is entirely clear of the framework, and it is then sunk into the bark until it reaches the wood. The screw is then turned inversely to bring the framework down until it touches the bark, care being taken not to have the needle come out behind when this has been done, the needle is withdrawn by turning the screw until it reaches the top of the framework. A simple reading will then give in millimeters the depth reached by the needle, and consequently the thickness of the bark. The price of the apparatus is 9.50 florins [= about 38 cents].

NEW TRADE PUBLICATIONS.

NEW ENGLAND BUTT CO. (Providence, Rhode Island), issue a new illustrated catalogue of their Braiders and Machinery for Insulating Wires and Cables, in the form of a separate detachable leaf for each machine described. Their production in this line is extensive and varied, representing the latest improved devices for the different lines of work for which they supply equipment. Besides, the catalogue is a tasteful example of the printer's art. [7½ in. x 11 in. 51 leaves.]

WESTERN ELECTRIC CO. (Chicago), devote their Bulletin No. 1105 to Selection, Installation and Wiring of Intercommunicating Telephone Systems. The use of such systems is becoming rapidly larger, and involves not only the best work of the electrical engineer, but an important consumption of india-rubber. [7¾ in. x 10¾ in. 40 pages.]

THE GOODYEAR TIRE AND RUBBER CO. (Akron, Ohio), issue "A Dictionary for 'Tired' People," which diversifies practical hints with regard to automobile tires with a vocabulary of facetious interpretations of motoring terms which cannot fail to produce many a laugh. [3¾ in. x 5¼ in. 60 pages.]

STEIN LAPLOCK TIRE CO. (New York), issue an illustrated booklet devoted to the distinctive features of their "Laplock," invented by Charles Stein, as contrasted with other types of pneumatics. [3¾ in. x 6 in. 6 pages.]

ALSO RECEIVED.

THE Bristol Co., Waterbury, Connecticut.—Bulletin No. 108—William H. Bristol Indicating Electric Pyrometers for Hardening Furnaces. 8 pages. Bulletin No. 112—Bristol's Recording Thermometers. 4 pages. Bulletin No. 113—Bristol's Patent Steel Belt Lacing. 8 pages. Bulletin No. 115—Indicating and Recording Units of William H. Bristol Electric Pyrometers for Annealing Furnaces. 8 pages.
Strong Machinery and Supply Co., New York.—Strong's Tisafine Belting. 12 pages.
Neidlinger Brothers, New York.—Hospital Supplies. 48 pages. Drug-gists' Glassware and Sundries. Hospital Supplies. 96 pages.
Preston Fabric Tire Co., Buffalo, New York.—Our Side of the Tire Problem. 8 pages.
Joseph Dixon Crucible Co., Jersey City, New Jersey.—Valuable Graphite Products. 22 pages.
Wirt & Knox Manufacturing Co., No. 22 North Fourth street, Philadelphia.—Wirt's Patent Hose Carts, Reels, and Racks. Catalogue for 1909. 44 pages. The "Royal" Swinging Hose Rack. 4 pages.
The Cawn Mining and Manufacturing Co., Canton, Ohio.—Aluminate, Wood and Iron Fillers. 4 pages.
Richard Beaumont, Kankakee, Illinois.—The Beaumont Fire Hydrant. 24 pages.
Westinghouse Electric and Manufacturing Co., Pittsburgh, Pennsylvania.—Electrically Heated Glue Pots. 20 pages. Wattmeters and How to Read Them. 12 pages. Fan Motors. 16 pages.
Morgan & Wright, Detroit, Michigan.—Motorcycle Tires. 16 pages.
The North British Rubber Co., Limited, Edinburgh.—North British Aëroplane and Balloon Fabrics. 4 pages.

* * *

MORE CALENDARS FOR 1910.

Two artistic calendars for 1910, issued by The North British Rubber Co., Limited (Edinburgh), have failed to have earlier mention in THE INDIA RUBBER WORLD through a regrettable mishap. One reminds the daily observer of the wide range of the company's products in rubber goods, while the other serves only to call attention to "North British" clincher tires. Both are excellent specimens of lithography, and altogether are the handsomest calendars issued by the rubber trade so far as we have seen this year.

The United States Rubber Co. have been distributing in the trade one of the handsomest calendars yet seen in the new year. The monthly tear-off leaves are attractive by reason of the color contrasts, and above them is a tasteful design in which the white lettering used for the company's name is artistically offset by the green leaves of the *Hevea* rubber tree.

The twelve leaves which make up this year's calendar of the Birmingham Iron Foundry (Derby, Connecticut) have at the head of each a well executed illustration of one of their rubber factory machines—a different one for each month.

James Boyd & Brother, Inc., Philadelphia, as usual, have been sending out a combined calendar and memorandum pad, comprising a tear off leaf for every week in the year. Incidentally these leaflets call attention to a wide range of mechanical rubber goods for which this firm are distributors.



FROM THE "FIRESTONE" ART PANEL CALENDAR.

[Firestone Tire and Rubber Co.]

Review of the Crude Rubber Market.

THE last month has shown an advance in crude rubber which has scarcely been equaled in the same brief space of time either in the amount of the advance or its general application to all grades of rubber. The advance is more notable in view of the fact that this is the season of the year when the output of the Amazon comes to market most liberally. The largest cargo of rubber on record reached New York during the month, in addition to other large supplies, but this fact had no apparent effect in checking the rise in prices. It is asserted that not a pound of the record cargo went into importers stores, the rubber having been sold in advance of arrival. This having been an exceptionally good winter for the footwear trade undoubtedly has tended to keep rubber prices up.

Following are the quotations at New York for Pará grades, one year ago, one month ago, and February 28, the current date:

PARÁ.	Mar. 1, '09.	Feb. 1, '10.	Feb. 28.
Islands, fine, new.....	119@120	179@180	199@200
Islands, fine old.....	121@122	none here	201@202
Upriver, fine, new.....	125@126	187@188	212@213
Upriver, fine, old.....	127@128	189@190	214@215
Islands, coarse, new.....	61@62	75@76	89@90
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	96@97	117@118	128@129
Upriver, coarse, old.....	none here	none here	129@130
Cameté.....	66@67	84@85	97@98
Caucho (Peruvian), ball....	85@86	110@111	130@131
Caucho (Peruvian), sheet....	74@75	89@90	101@102
Ceylon, fine, sheet.....	129@130	208@209	230@231

AFRICAN.			
Lopori, ball, prime.....	108@109	140@141	152@153
Lopori, strip, prime.....	none here	none here	none here
Aruwimi.....	120@121	125@126	133@134
Upper Congo, ball, red.....	none here	none here	none here
Ikelemba.....	97@98	123@124	135@136
Sierra Leone, 1st quality....	97@98	124@125	136@137
Massai, red.....	85@86	107@108	none here
Soudan niggers.....	60@61	79@80	94@95
Cameroon, ball.....	61@62	75@76	88@89
Benguela.....	91@92	99@100	110@112
Madagascar, pinky.....	20@21	25@26	30@31
Acera flake.....	81@82	104@105	117@118

CENTRALS			
Esmeralda, sausage.....	72@73	87@88	none here
Guayaquil, strip.....	78@80	99@100	116@117
Nicaragua, scrap.....	62@63	none here	none here
Panama.....	80@81	100@101	115@116
Mexican, scrap.....	57@58	78@80	none here
Mexican, slab.....	52@53	none here	85@86
Mangabeira, sheet.....	30@31	64@65	75@76
Guayule.....	92@93	100@101	100@101

EAST INDIAN.			
Assam.....	202,547	186,189	504,451
Pontianak.....	35@45	57@67	none here
Borneo.....	202,547	186,189	504,451

Late Pará cables quote:		Per Kilo.	
Islands, fine.....	9\$800	Upriver, fine.....	11\$800
Islands, coarse.....	3\$800	Upriver, coarse.....	7\$200
		Exchange.....	15 5/32d.

Antwerp.

RUBBER STATISTICS FOR JANUARY.					
DETAILS.	1910.	1909.	1908.	1907.	1906.
Stocks, Jan. 1.....	541,512	595,735	1,006,804	658,184	735,187
Arrivals in January....	261,867	283,955	547,968	317,692	605,029
Congo sorts.....	202,547	186,189	504,451	242,806	414,613
Other sorts.....	59,320	97,766	43,517	74,886	190,416
Aggregating.....	803,379	870,690	1,554,862	975,876	1,340,216
Sales in January.....	321,217	281,913	294,853	357,226	821,521
Stocks, January 31....	482,162	597,777	1,260,009	618,650	518,695
Arrivals since Jan. 1....	261,867	283,955	547,968	317,692	605,029
Congo sorts.....	202,547	186,189	504,451	242,806	414,613
Other sorts.....	59,320	97,766	43,517	74,886	190,416
Sales since Jan. 1....	321,217	281,913	294,853	357,226	821,521

Statistics of Para Rubber (Excluding Caucho).

NEW YORK.						
	Fine and Medium.	Coarse.	Total 1910.	Total 1909.	Total 1908.	
Stocks, January 1....	174	33	207	244	114	
Arrivals, January.....	1349	691	2040	1778	1160	
Aggregating.....	1523	724	2247	2022	1274	
Deliveries, January.....	1333	682	2015	1787	1164	
Stocks, January 31....	190	42	232	235	110	
PARA.			ENGLAND.			
	1910.	1909.	1908.	1910.	1909.	1908.
Stocks, January 1....	150	695	248	385	775	830
Arrivals, January.....	4500	4335	4045	810	1190	1184
Aggregating.....	4650	5030	4293	1195	1065	2016
Deliveries, January.....	3840	3955	3048	850	1785	1164
Stocks, January 31....	1170	1075	1245	345	180	850
World's visible supply, January 31....	1910.	1909.	1908.	1910.	1909.	1908.
Pará receipts, July 1 to January 31....	4,083	3,540	4,060	19,470	18,410	16,945
Pará receipts of caucho, same dates....	2,920	2,840	2,195	1,160	890	445
Afloat from Pará to United States, Jan. 31	1,160	890	445	1,170	1,080	1,410
Afloat from Pará to Europe, January 31	1,170	1,080	1,410			

Plantation Rubber from the Far East, 1909.

At the date of printing this issue complete reports are not at hand of the shipments of plantation rubber from Ceylon and the Malay States, but the figures below will indicate how rapid has been the increase of shipments from year to year.

FEDERATED MALAY STATES.		Pounds.
From Singapore (to December 29).....		2,405,613
From Penang (to December 11).....		2,024,710
From Port Swettenham (to December 24).....		2,960,320
Total, 1909 (incomplete).....		7,390,643
Total, 1908.....		3,671,435
Total, 1907.....		2,080,085
Total, 1906.....		817,769
Total, 1905.....		228,800

CEYLON GROWN RUBBER.		Pounds.
[Not included in the above.]		
In 1909.....		1,372,416
In 1908.....		831,905
In 1907.....		530,908
In 1906.....		201,225
In 1905.....		168,547

SUMMARY.
The total 1909 export from the regions mentioned, without reference to the Dutch East Indies, undoubtedly exceeded considerably 9,000,000 pounds, or over 4,000 metric tons—a figure not reached for the Amazon valley until 1866, and not at Manaus until 1882.

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for car-load lots, per pound—show a slight decline since last month:

Old rubber boots and shoes—domestic.....	0 1/4 @	0 3/8
Old rubber boots and shoes—foreign.....	8 7/8 @	9
Pneumatic bicycle tires.....	7 @	7 1/8
Automobile tires.....	7 1/2 @	7 3/4
Solid rubber wagon and carriage tires.....	9 3/8 @	9 1/2
White trimmed rubber.....	10 @	11
Heavy black rubber.....	6 1/2 @	6 3/4
Air brake hose.....	5 1/2 @	5 3/4
Garden hose.....	2 7/8 @	3
Fire and large hose.....	3 3/4 @	4
Matting.....	1 7/8 @	2

NEW YORK RUBBER PRICES FOR DECEMBER (New Rubber.)

	1909.	1908.	1907.
Upriver, fine.....	\$1.75@1.93	\$1.15@1.23	\$3.82@.86
Upriver, coarse.....	1.11@1.21	.89@.94	.66@.72
Islands, fine.....	1.64@1.72	1.12@1.16	.72@.79
Islands, coarse.....	.69@.72	.52@.61	.44@.50
Cameta.....	.79@.82	.57@.64	.43@.48

FEB. 3.—By the steamer *Ucayali*, from Iquitos:

Thomsen & Co.....	16,100	9,000	9,000	34,100
G. Amsinck & Co.....	6,000	1,100	.....	7,100
C. Ahrenfeldt & Sons.....	800	.....	3,700	4,500
Edmund Reeks & Co.....	2,400	600	700	3,700
W. R. Grace & Co.....	1,300	1,100	1,100	3,500
In Transit.....	22,800	6,400	.....	29,200
Total.....	49,400	18,200	14,500	82,100

African Rubbers.

NEW YORK STOCKS (IN TONS).

January 1, 1909.....	156	August 1, 1909.....	130
February 1.....	157	September 1.....	123
March 1.....	200	October 1.....	67
April 1.....	178	November 1.....	134
May 1.....	268	December 1.....	134
June 1.....	156	January 1, 1910.....	228
July 1.....	268	February 1.....	134

FEB. 8.—By the steamer *Rio Janeiro*, from Pará:

A. T. Morse & Co.....	34,000	8,200	7,300	49,500
L. Johnson & Co.....	.....	.....	33,600	33,600
William E. Peck & Co.....	1,400	.....	3,300	4,700
Total.....	35,400	8,200	44,200	87,800

FEB. 8.—By the steamer *Cearense*, from Manáos and Pará:

Poel & Arnold.....	504,800	107,800	229,800	134,500	976,900
New York Commercial Co.....	245,500	91,000	77,900	143,500	557,900
A. T. Morse & Co.....	241,400	49,300	134,800	106,800	542,300
General Rubber Co.....	290,800	66,100	83,000	13,900	454,700
Hagemeyer & Brunn.....	59,500	3,900	59,400	.....	122,800
C. P. dos Santos.....	70,000	12,100	28,400	.....	110,500
Edmund Reeks & Co.....	26,100	.....	31,000	.....	57,100
L. Johnson & Co.....	20,800	.....	3,200	.....	24,000
Henderson & Korn.....	6,500	.....	1,300	.....	7,800
Total.....	1,465,400	330,200	659,700	398,700	2,854,000

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weight in Pounds.]

JAN. 26.—By the steamer *Bernard*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
A. T. Morse & Co.....	202,400	44,400	197,600	88,700	533,100
General Rubber Co.....	309,000	68,900	116,800	11,500	506,200
Poel & Arnold.....	204,800	33,100	41,700	34,100	313,700
New York Commercial Co.....	50,600	20,500	59,000	75,200	205,300
Hagemeyer & Brunn.....	5,700	.....	11,200	.....	16,900
L. Johnson & Co.....	.....	.....	9,900	.....	9,900
Henderson & Korn.....	.....	.....	5,300	.....	5,300
William E. Peck & Co.....	300	.....	2,000	.....	2,300
Total.....	772,800	166,000	443,500	209,500	1,592,700

FEB. 18.—By the steamer *Amazonense*, from Manáos and Pará:

Poel & Arnold.....	548,300	82,800	107,800	88,200	827,100
General Rubber Co.....	259,500	46,100	137,000	6,200	448,800
New York Commercial Co.....	93,600	17,500	35,600	47,900	194,600
A. T. Morse & Co.....	55,300	11,700	50,500	72,700	190,200
Hagemeyer & Brunn.....	17,000	300	44,300	.....	61,600
C. P. dos Santos.....	13,200	400	1,300	.....	14,900
Edmund Reeks & Co.....	6,100	700	4,000	.....	10,800
L. Johnson & Co.....	.....	.....	3,600	.....	3,600
Total.....	993,000	159,500	393,100	215,000	1,760,600

PARA RUBBER VIA EUROPE.

JAN. 24.—By the <i>Compania</i> =Liverpool:		
New York Com. Co. (Coarse).....	17,000	
Livesey & Co. (Coarse).....	10,000	
Livesey & Co. (Fine).....	8,000	35,000
JAN. 25.—By the <i>Celtic</i> =Liverpool:		
Raw Products Co. (Coarse).....	7,000	
JAN. 25.—By the <i>Cincinnati</i> =Hamburg:		
New York Com. Co. (Coarse).....	7,000	
W. L. Gough Co. (Fine).....	11,000	18,000
FEB. 3.—By the <i>Colon</i> =Mollendo:		
W. R. Grace & Co. (Fine).....	5,000	
W. R. Grace & Co. (Caucho).....	10,000	15,000
FEB. 14.—By the <i>Bohemian</i> =Liverpool:		
New York Com. Co. (Fine).....	75,000	
Robinson & Co. (Fine).....	30,000	
Livesey & Co. (Coarse).....	11,000	116,000
FEB. 15.—By the <i>Baltic</i> =Liverpool:		
New York Com. Co. (Fine).....	22,500	
Livesey & Co. (Fine).....	15,000	
New York Com. Co. (Coarse).....	11,000	
Poel & Arnold (Fine).....	5,500	54,000
FEB. 16.—By the <i>Minnchaha</i> =London:		
Geo. A. Alden & Co. (Coarse).....	20,000	
General Rubber Co. (Coarse).....	11,500	31,500

OTHER NEW YORK ARRIVALS.

CENTRALS.

[*This sign, in connection with imports of Centrals, denotes Guayule rubber.]

JAN. 24.—By the <i>Campania</i> =Liverpool:		
Rubber Trading Co.....	11,500	
JAN. 24.—By the <i>Alleghany</i> =Colombia:		
Louis Delius & Co.....	3,000	
Paola Calve & Co.....	3,000	
Eggers & Heinlein.....	2,000	8,000
JAN. 25.—By the <i>Cincinnati</i> =Hamburg:		
New York Commercial Co.....	15,000	
JAN. 25.—By the <i>El Alba</i> =Galveston:		
Continental-Mexico Rubber Co.....	150,000	
Ed. Maurer.....	15,000	165,000
JAN. 26.—By the <i>Joachim</i> =Colon:		
A. Santos & Co.....	10,000	
G. Amsinck & Co.....	2,000	
New York Commercial Co.....	1,500	
Roldan & Van Sickle.....	1,000	14,500
JAN. 26.—By the <i>Finland</i> =Antwerp:		
Poel & Arnold.....	11,500	
JAN. 26.—By the <i>Texan</i> =Mexico:		
George A. Alden & Co.....	5,000	

JAN. 27.—By the *Hugin*=Tampico:

Ed. Maurer.....	80,000	
Poel & Arnold.....	45,000	
Continental-Mexican Rub. Co.....	33,000	
Isaac Kubie Co.....	22,000	
M. Schroeder & Co.....	11,000	191,000
JAN. 27.—By the <i>Colderon</i> =Bahia:		
New York Commercial Co.....	22,500	
Poel & Arnold.....	18,000	
J. H. Rossback & Bros.....	28,000	
A. D. Hitch & Co.....	11,500	
A. Hirsch & Co.....	6,500	86,500

JAN. 27.—By the *Allianza*=Colon:

G. Amsinck & Co.....	7,000	
Henry Mann & Co.....	4,000	
Fidanque Bros. & Co.....	2,000	
Meyer Hecht.....	1,000	
A. Rosenthal & Sons.....	1,000	15,000

JAN. 28.—By the *Esperanza*=Frontera:

H. Marquardt & Co.....	3,500	
Tarburger & Stack.....	2,500	
J. W. Wilson & Co.....	1,000	7,000

JAN. 28.—By the *El Norte*=Galveston:

Continental-Mexican Rubber Co.....	65,000	
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JAN. 31.—By the *Grant*=Hamburg:

Rubber Trading Co.....	11,000	
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JAN. 31.—By the *Cienfuegos*=Tampico:

New York Commercial Co.....	135,000	
Continental-Mexican Rub. Co.....	100,000	
Ed. Maurer.....	125,000	
Poel & Arnold.....	50,000	410,000

JAN. 31.—By the *Sigismund*=Colombia:

Maitland, Coppel & Co.....	9,000	
A. Held.....	4,000	
Kunhardt & Co.....	2,500	
R. del Castillo.....	1,000	16,500

FEB. 1.—By the *Umbria*=Liverpool:

Raw Products Co.....	9,000	
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FEB. 1.—By the *Antillo*=New Orleans:

A. T. Morse & Co.....	2,500	
Manhattan Rubber Co.....	2,000	
A. N. Rotholz.....	2,000	6,500

FEB. 1.—By the *El Paso*=Galveston:

In Transit.....	25,000	
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FEB. 2.—By the *Ortona*=Colombia:

Schulte & Goshen.....	5,000	
Kunhardt & Co.....	4,500	
Louis Delius & Co.....	3,500	
A. M. Capen's Sons.....	2,000	
Mecke & Co.....	1,000	
J. A. Pauly & Co.....	1,000	
Delima, Costisoz & Co.....	1,500	18,500

FEB. 3.—By the *Momusa*=Bluefield:

A. T. Morse & Co.....	4,000	
T. U. Morgan Co.....	2,500	6,500

FEB. 3.—By the *Colon*=Colon:

G. Amsinck & Co.....	9,000	
Isaac Brandon & Bros.....	6,000	
Henry Mann & Co.....	4,000	
National Machinery Co.....	2,000	
J. Sambrada & Co.....	2,000	
Andean Trading Co.....	2,000	
Demarest Bros. & Co.....	1,000	
Markt & Struller Co.....	1,000	27,000

FEB. 5.—By the *Mexico*=Frontera:

Harburger & Stack.....	6,500	
E. Steiger & Co.....	3,500	
Chilean Exportation Co.....	2,500	
Strube & Ulltze.....	1,500	
Mexican Products Co.....	1,500	15,500

FEB. 7.—By the *Altai*=Colombia:

Maitland, Coppel & Co.....	9,000	
Kunhardt & Co.....	2,000	11,000

FEB. 7.—By the *Vasori*=Bahia:

J. H. Rossback & Bros.....	3,000	
A. Hirsch & Co.....	15,000	
Poel & Arnold.....	27,000	
New York Commercial Co.....	5,000	50,000

FEB. 8.—By the *Vigilante*=Tampico:

Continental-Mexican Rub. Co.....	135,000	
Ed. Maurer.....	150,000	
Poel & Arnold.....	50,000	
New York Commercial Co.....	35,000	370,000

FEB. 9.—By the *Prins August*=Colon:

G. Amsinck & Co.....	3,500	
A. Santos & Co.....	2,500	
J. Sambrada & Co.....	1,500	
Henry Mann & Co.....	1,500	
Isaac Brandon & Bros.....	1,000	
Kunhardt & Co.....	1,000	
Suzarte & Whitney.....	1,000	12,000

FEB. 10.—By the *Advance*=Colon:

G. Amsinck & Co.....	15,000	
Piza, Nephew & Co.....	8,500	
Isaac Brandon & Bros.....	5,500	
New York Commercial Co.....	4,000	
J. Sambrada & Co.....	4,000	
L. Johnson & Co.....	1,500	
Demarest Bros. & Co.....	1,500	
Andean Trading Co.....	1,000	
Wessels-Kulenkampff & Co.....	2,500	
Mecke & Co.....	1,500	
Gillespie Bros. & Co.....	1,500	
American Trading Co.....	1,500	
Fidanque Bros. & Co.....	1,500	49,500

FEB. 14.—By the *Moro Castle*=Mexico:

Harburger & Stack.....	7,500	
E. Steiger & Co.....	5,500	
H. Marquardt & Co.....	2,500	
E. N. Tibbals & Co.....	2,500	18,000

FEB. 14.—By the *Bohemian*=Liverpool:

Rubber Trading Co.....	15,000	
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FEB. 14.—By the *Manconillo*=Tampico:

Ed. Maurer.....	90,000	
New York Commercial Co.....	40,000	130,000

RUBBER FLUX

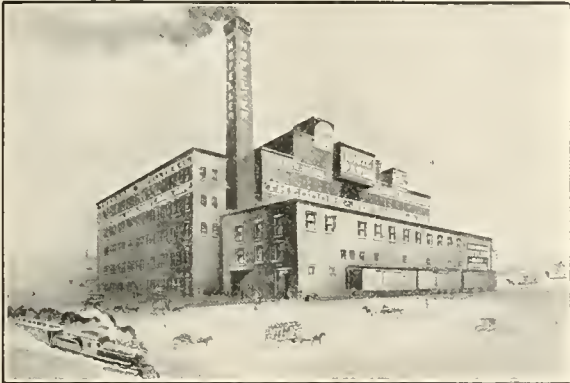
No. 17. Particularly adapted to softening material for tubing machine. Almost universally used for waterproofing wire.

No. 48. For fluxing pigments in compounding. A valuable adjunct to the manufacture of moulded goods as it DOES NOT BLOW UNDER CURE.

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WALPOLE RUBBER WORKS -
WALPOLE VARNISH WORKS -
ELECTRIC INSULATION LABORATORY



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BUFFALO, N. Y.

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IN THE WORLD

MINERAL RUBBER

MALTHA HYDRO-CARBON
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(I invite inquiries from Manufacturers respecting the various grades of rubber I market)

FEB. 15.—By the <i>Antella</i> =New Orleans: A. T. Morse & Co..... 5,500 A. N. Rotholz..... 3,000 8,500			FEB. 2.—By the <i>Vanderland</i> =Antwerp: Poel & Arnold..... 11,000 W. H. Stiles & Co..... 7,000 18,000			FEB. 11.—By the <i>St. Louis</i> =London: Poel & Arnold..... *45,000		
FEB. 15.—By <i>El Valle</i> =Galveston: C. T. Wilson & Co..... *20,000 E. S. Churchill..... *20,000 *40,000			FEB. 3.—By the <i>Adriatic</i> =Havre: Poel & Arnold..... 56,000 Livesey & Co..... 15,000 71,000			FEB. 14.—By the <i>Louther</i> =Singapore: Heabler & Co..... 22,500		
FEB. 15.—By the <i>Baltic</i> =Liverpool: Poel & Arnold..... 56,000			FEB. 4.—By the <i>Appenberg</i> =Lisbon: General Rubber Co..... 115,000 W. L. Gough Co..... 5,000 A. T. Morse & Co..... 6,000 126,000			FEB. 14.—By the <i>Barendse</i> =Colombo: A. T. Morse & Co..... *35,000		
FEB. 16.—By <i>El Valle</i> =Galveston: Continental-Mexican Rubber Co..... *135,000			FEB. 8.—By the <i>Zeeland</i> =Antwerp: George A. Alden & Co..... 30,000 Poel & Arnold..... 22,500 A. T. Morse & Co..... 11,000 Raw Products Co..... 7,000 70,500			FEB. 14.—By the <i>Bohemian</i> =Liverpool: A. T. Morse & Co..... *22,500		
FEB. 16.—By the <i>Lapland</i> =Antwerp: Poel & Arnold..... *11,000			FEB. 10.—By the <i>Laurent</i> Havre: General Rubber Co..... 90,000 George A. Alden & Co..... 25,000 A. T. Morse & Co..... 15,000 C. P. dos Santos..... 8,000 138,000			FEB. 15.—By the <i>Minnchaha</i> =London: New York Commercial Co.... *22,500 General Rubber Co..... *9,000 *31,500		
FEB. 17.—By the <i>Nile</i> =Colombia: Maitland, Coppell & Co..... 13,500 Kunhardt & Co..... 1,500 Gravenhorst & Co..... 1,000 G. Amsinck & Co..... 1,000 17,000			FEB. 13.—By the <i>Bohemian</i> =Liverpool: George A. Alden & Co..... 115,000 A. T. Morse & Co..... 11,000 Robinson & Co..... 22,500 W. L. Gough Co..... 2,500 151,000			FEB. 17.—By the <i>Oceanic</i> =London: Poel & Arnold..... *35,000		
FEB. 17.—By <i>El Alba</i> =New Orleans: A. N. Rotholz..... 5,500 A. T. Morse & Co..... 4,500 10,000			FEB. 15.—By the <i>Minnchaha</i> =London: Poel & Arnold..... 60,000 George A. Alden & Co..... 6,000 66,000			FEB. 18.—By the <i>Lindenfels</i> =Colombo: A. T. Morse & Co..... *45,000 New York Commercial Co.... *25,000 *70,000		
FEB. 18.—By the <i>Castillan</i> =Babia: J. H. Rossback & Bros..... 6,000			FEB. 15.—By the <i>Baltic</i> =Liverpool: Poel & Arnold..... 85,000 George A. Alden & Co..... 35,000 A. T. Morse & Co..... 3,000 Robinson & Co..... 3,000 Livesey & Co..... 16,500 H. A. Gould Co..... 11,000 214,500			FEB. 17.—By the <i>Bohemian</i> =Liverpool: A. T. Morse & Co..... 13,500 George A. Alden & Co..... 7,000 C. Tennant Sons & Co..... 2,500 23,000		
AFRICAN. JAN. 24.—By the <i>Campania</i> =Liverpool: George A. Alden & Co..... 33,500 A. T. Morse & Co..... 25,000 Robinson & Co..... 11,500 General Rubber Co..... 22,500 92,500			FEB. 16.—By the <i>Lapland</i> =Antwerp: A. T. Morse & Co..... 65,000 Poel & Arnold..... 40,000 Robinson & Co..... 5,000 110,000			FEB. 17.—By the <i>Oceanic</i> =London: George A. Alden & Co..... 125,000 Livesey & Co..... 11,000 136,000		
JAN. 25.—By the <i>Cincinnati</i> =Hamburg: Poel & Arnold..... 48,000 A. T. Morse & Co..... 33,500 General Rubber Co..... 20,000 George A. Alden & Co..... 16,000 Rubber Trading Co..... 7,500 125,000			FEB. 17.—By the <i>Oceanic</i> =London: George A. Alden & Co..... 125,000 Livesey & Co..... 11,000 136,000			GUTTA-JELUTONG. JAN. 24.—By the <i>Ghazec</i> =Singapore: Heabler & Co..... 225,000 W. L. Gough Co..... 150,000 Poel & Arnold..... 165,000 540,000		
JAN. 25.—By the <i>Celtic</i> =Liverpool: Poel & Arnold..... 45,000 General Rubber Co..... 45,000 George A. Alden & Co..... 30,000 120,000			EAST INDIAN. [*Denotes plantation rubber.] JAN. 24.—By the <i>Ghazec</i> =Singapore: George A. Alden & Co..... 10,000			GUTTA-PERCHA. JAN. 24.—By the <i>Ghazec</i> =Singapore: Heabler & Co..... 11,500		
JAN. 26.—By the <i>Finland</i> =Antwerp: A. T. Morse & Co..... 15,000 W. L. Gough Co..... 11,500 H. A. Gould & Co..... 13,500 40,000			JAN. 25.—By the <i>Minneapolis</i> =London: Poel & Arnold..... *80,000 New York Commercial Co.... *60,000 A. T. Morse & Co..... *7,000 General Rubber Co..... *30,000 *177,000			JAN. 31.—By the <i>Grant</i> =Hamburg: E. Oppenheim..... 35,000		
JAN. 27.—By the <i>Festa</i> =Lisbon: A. T. Morse & Co..... 11,000 Robinson & Co..... 7,000 18,000			JAN. 27.—By the <i>New York</i> =London: Poel & Arnold..... 45,000 George A. Alden & Co..... 30,000 75,000			FEB. 2.—By the <i>Amerika</i> =Hamburg: E. Oppenheim..... 11,500		
JAN. 27.—By the <i>New York</i> =London: Poel & Arnold..... 45,000 George A. Alden & Co..... 30,000 75,000			FEB. 1.—By the <i>Minnetonka</i> =London: New York Commercial Co.... *5,000 Poel & Arnold..... *9,000 *14,000			FEB. 9.—By the <i>Campania</i> =Demerara: G. Amsinck & Co..... 13,500 George A. Alden & Co..... 7,000 C. Tennant Sons & Co..... 2,500 23,000		
JAN. 31.—By the <i>Grant</i> =Hamburg: George A. Alden & Co..... 35,000 Poel & Arnold..... 35,000 A. T. Morse & Co..... 20,000 Rubber Trading Co..... 25,000 W. L. Gough Co..... 35,000 Unknown..... 25,000 175,000			FEB. 1.—By the <i>Umbria</i> =Liverpool: Poel & Arnold..... 45,000 A. T. Morse & Co..... 33,000 Robinson & Co..... 7,000 85,000			BALATA. JAN. 31.—By the <i>Grant</i> =Hamburg: George A. Alden & Co..... 20,000		
FEB. 1.—By the <i>Umbria</i> =Liverpool: Poel & Arnold..... 45,000 A. T. Morse & Co..... 33,000 Robinson & Co..... 7,000 85,000			FEB. 1.—By the <i>Laurentic</i> =Liverpool: George A. Alden & Co..... 45,000 General Rubber Co..... 22,500 A. T. Morse & Co..... 2,500 70,000			FEB. 2.—By the <i>Marowayne</i> =Trinidad: G. Amsinck & Co..... 22,500		
FEB. 1.—By the <i>Amerika</i> =Hamburg: A. T. Morse & Co..... 11,500 Rubber Trading Co..... 5,000 W. L. Gough Co..... 5,000 21,500			FEB. 8.—By the <i>Zeeland</i> =Antwerp: Robinson & Co..... *45,000			JAN. 9.—By the <i>Campania</i> =Demerara: G. Amsinck & Co..... 13,500 George A. Alden & Co..... 7,000 C. Tennant Sons & Co..... 2,500 23,000		

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK JANUARY.

Imports:	Pounds.	Value.
India-rubber	10,078,404	\$9,931,773
Balata	23,888	10,550
Gutta-percha	25,400	11,348
Gutta-jelutong (Pontianak)	2,056,600	87,014
Total	12,184,418	\$10,040,775
Exports:		
India-rubber	49,512	\$33,500
Balata	22,279	11,963
Gutta-percha	21,133	2,326
Reclaimed rubber	118,428	15,499
Rubber scrap, imported	2,108,261	\$181,228

BOSTON ARRIVALS.

JAN. 7.—By the <i>Devonian</i> =Liverpool: Poel & Arnold (Africans)..... 22,500
JAN. 8.—By the <i>Indrasamba</i> =Singapore: J. Littlejohn & Co. (Jelutong) 60,000 Poel & Arnold (Jelutong).... 440,000 500,000
JAN. 16.—By the <i>Canadian</i> =Liverpool: Poel & Arnold (Africans)..... 20,500
JAN. 27.—By the <i>Victoria</i> =Liverpool: Poel & Arnold (African)..... 33,500

L. & W. VAN DE VELDE'S INDIA-RUBBER STATISTICS.

WORLD'S PRODUCTION OF INDIA-RUBBER (IN TONS).

	1865.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.
Para sorts	20,700	21,550	22,650	21,900	25,100	26,750	30,300	28,700	31,100	30,000	33,900	35,250	37,300	38,850	39,150
African and Central American	13,577	16,175	17,240	23,359	24,686	27,177	21,547	23,638	24,827	32,080	35,428	32,022	30,171	26,061	26,522
Plantation (East Indies)				1	4	4	5	8	21	43	179	646	1,175	2,120	3,700
Total Production	34,277	37,725	39,890	45,260	49,790	53,931	51,852	52,346	55,948	62,123	69,507	67,918	68,646	67,031	69,372

WORLD'S CONSUMPTION OF INDIA-RUBBER (IN TONS).

	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.
EUROPE:															
Para	9,812	10,660	11,362	10,518	11,738	12,962	14,989	14,623	15,723	14,321	17,464	18,430	19,043	20,169	18,662
Other sorts	7,096	10,854	9,789	13,520	13,539	16,237	12,494	12,765	13,637	17,304	19,860	23,133	16,293	18,382	10,854
Total	16,908	21,514	21,151	24,038	25,277	29,199	27,483	27,388	29,360	31,625	37,324	41,563	35,336	38,551	38,516
UNITED STATES:															
Para	10,701	9,056	10,525	9,847	12,374	11,755	13,313	13,302	13,938	14,381	13,831	15,139	15,101	16,350	18,027
Other sorts	6,343	5,194	7,043	8,926	10,600	8,227	9,694	9,608	10,897	13,193	14,572	14,969	14,091	12,180	13,532
Total	17,044	14,250	17,568	18,773	22,974	19,982	23,007	22,910	24,835	27,574	28,403	30,108	29,192	28,530	31,559
TOTAL	33,952	35,764	38,719	42,811	48,251	49,181	50,490	50,298	54,195	59,199	65,727	71,671	64,528	67,081	70,075



Vol. 41. MARCH 1, 1910. No. 6.

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Liverpool.

WILLIAM WRIGHT & Co., report [February 1]:

Fine Pará.—The market has been active and the high level of values has been more than fully maintained. At the beginning of the month prices declined about 2d. per pound, but since then have advanced, and close fully 3½d. per pound dearer than at the end of December. America still continues to absorb large quantities, the last steamer taking a record cargo of 1,380 tons, while, in addition, about 200 tons have been shipped from this market. Receipts are fully up to those of last year, but so far this has had no effect on prices. Closing value of Up-river 7s. 10½d. [= \$1.92]; Islands 7s. 8d. [= \$1.86].

London.

WM. JAS. & HY. THOMPSON report [February 10]:

The salient feature of the sales was the prices paid for dark crepes compared with fine grades, the former being readily taken within a few pence of the latter. This feature may be due in part to "shorts" covering sales of dark grades, but in our opinion it shows that the dark grades are rapidly coming into favor with manufacturers, who are now beginning to realize their true value.

THE OBITUARY RECORD.

JAMES ROSWELL CHAMBERLIN, who died on January 29 at his home in Rochester, New York, was born eighty-four years ago at Troy, N. Y., in which city he received his education and began business. In 1849, upon his marriage to Miss Jane Bellows, he removed to Rochester. The pair celebrated their golden wedding on December 4, 1899, and Mrs. Chamberlin died six years later. As a soldier Mr. Chamberlin served with distinction in the civil war. Mustered in as a company sergeant, he took part in some important engagements, and at the end of the war wore a colonel's commission. Mr. Chamberlin was prominent in Masonic circles, a member of numerous civic institutions, and at times filled positions in the city government.

On first settling in Rochester Mr. Chamberlin engaged in the lumber business. Later he left this for the retailing of rubber goods, to which the greater part of his business career was devoted. This business was incorporated April 22, 1904, as the Chamberlin Rubber Co., two of the three incorporators being Mr. Chamberlin and his wife. The business was continued at the old location, No. 93 Main street, East, which is still maintained.

* * *

HIRAM N. JOHNSON, aged fifty-five, and president and treasurer of the Chicago Rubber Co., was taken suddenly ill at his desk on January 26, and died three days later, following an operation in a hospital. Mr. Johnson became connected with this business, then known as the Chicago Rubber Shoe Co., in 1897, taking for his field one of the northwestern territories, in which he continued for twelve years. "During this time," writes one of his associates, "Mr. Johnson built up an enormous trade, a trade that was purely his own, one that none could take from him. He held his own wherever he went, and always found them waiting for him whenever he went back. Mr. Johnson had a peculiar way of working himself into the life of whoever he came in contact with. His trade had the same confidence in him that his house had." In August, 1909, Mr. Johnson was made president and treasurer of the Chicago Rubber Co., succeeding Mr. Edgar G. Stearns. Mr. Johnson was buried at Aurora, Illinois, where he had made his home. He is survived by a widow, two daughters and a son.

* * *

GEORGE J. BRADLEY, who died on January 27, at his home in Cleveland, Ohio, aged thirty-one, had been in the employment of The Diamond Rubber Co. (Akron, Ohio), first at their factory, then as manager of the company's branch at Detroit, and latterly as manager at Cleveland. Mr. Bradley, while in attendance upon the recent automobile shows in New York contracted a cold, which developed into pneumonia. C. B. Meyers was lately assigned from Akron to be in personal charge of the Cleveland branch, in order that Mr. Bradley might devote more time to the outside trade developing in that territory.

* * *

EDWARD T. HOWE, president of the Howe Rubber Co. (Newark, New Jersey), died of pneumonia in Terre Haute, Indiana, on February 17. He was 39 years old and a native of Hartford, Connecticut. Funeral services were held in Newark on February 21. Mr. Howe is survived by a widow and two children.

* * *

THE death is reported of HARRY B. WENTZ, who since the foundation of The Beacon Falls Rubber Shoe Co., has represented them in the trade in Iowa.

THE INDIA RUBBER WORLD regrets the oversight which prevented the mention earlier in these pages of the "Annual Review" of the statistical position of india-rubber for 1909, compiled by the Henry A. Gould Co. (New York). A reproduction of the chart, which is a distinctive feature of this chart, appeared, however, in the last issue of this journal (page 192).

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INDIA RUBBER WORLD

OUTCHOU

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DICHOSES GUTTA

GUTTA-PERCHA

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APRIL 1, 1910.

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TABLE OF CONTENTS ON LAST PAGE READING MATTER.

THE PROSPECT FOR CHEAPER RUBBER

THE price of crude rubber received special attention in the first issue of THE INDIA RUBBER WORLD, something more than twenty years ago, for the reason that, while 60 cents a pound had been considered a normal price, manufacturers were then being charged several cents more. The question was, whether the industry could survive the infliction. Of course there was much trade gossip regarding "speculation" as the cause of the advanced price of rubber, and no little bitterness in the minds of the consumers in consequence.

At the London rubber auction on March 22, 1910—a function which no one is forced to attend, and where every man is free to bid what he thinks proper, after an inspection of the samples exposed—rubber actually changed hands at 11 shillings [= \$2.67] a pound. In other words, \$2 a pound more than the price which was spreading consternation in the trade at the time THE INDIA RUBBER WORLD was first getting on its feet.

Of course so high a price as the record made at the last London auction cannot be maintained permanently. And of course the price was paid for a choice small lot of specially prepared rubber. But the fact remains that 11 shillings per pound has been paid for rubber, and we see no reason for believing that a still higher price will not be paid for rubber before the end of summer.

THE AMAZON RUBBER CONGRESS.

OUR REPORT BEGINS IN THIS ISSUE.

Of late the consumption of rubber has been actually larger than the world's production, and at no time in the history of the trade has the industry, in all lands, been so active as today. The Amazon crop for 1909-10 has been gathered, and it will be nearly a year before the next crop will be available. Meanwhile the Eastern plantations are making shipments regularly, on a constantly advancing scale, but so far the plantation output has been hardly more than "a drop in the bucket," compared with the world's needs. What it will amount to later is another story.

Even the best plantation rubber will not always bring 11 shillings. Doubtless many planters will be pleased, before THE INDIA RUBBER WORLD is twenty years older, to get 2 shillings for their product, but they will make money even at that price.

Meanwhile there is not enough rubber "to go round." This is a broad, general, proposition. "Speculation" of course, is ever present in the rubber trade, as it is in every branch of trade in which the human race is interested. But speculation does not account for the advance in the price of rubber from 60 cents, in 1889, to \$2.67 in 1910.

THE INDIA RUBBER WORLD has been the apostle of rubber planting, from the beginning. It is today. Our position always has been that dependence upon forest products means the ultimate decadence of the rubber industry. As our readers know, we have studied at first hand the planting of rubber in the Far East, but the results there, promising as they are, do not meet the requirements of today. Hence our attention is turned now to the Amazon region—the home of the *Hevea* species—with the idea that forest rubber must be for a long time yet an important factor in meeting the world's demands for a most important commodity.

The very important distinction remains to be made, however, that the term "forest rubber," in the generally accepted sense, is ceasing to be applicable to the *Heveas* in South America. As our friend, Mr. Fischer, of the Liverpool trade, said publicly some time ago, the well laid out *seringal* in Brazil is already a "plantation." Already the *seringaes* are sending to market every year more than half the world's supply of rubber, and rubber which uniformly commands higher prices than any other—with the exception of the carefully cleaned plantation product.

The next development on the Amazon will be the clearing out of the forests now surrounding the wild trees which already bring so many millions yearly into north Brazil, and the planting of young *Hevea* trees in the intervening spaces. Will it take time? Yes. Will it cost money? Yes. But such considerations need not deter the men who already own the naturally planted trees which now furnish the world with the substantial part of its supply of rubber.

AMAZONIA VERSUS THE EAST.

THE function of THE INDIA RUBBER WORLD as a representative trade paper brings it in contact sometimes with widely conflicting interests. From the beginning this journal has been a constant and persistent advocate of rubber culture, on precisely the same principle which would lead one to advise planting potatoes, rather than have the world depend upon the natural supply. By the way, the potato, like caoutchouc, was first introduced to the world at large from Quito. Similarly mention may be made of the cinchona plant (the source of quinine), first discovered in the forests of Peru and profitably introduced to cultivation in the Far East by individuals who, later, encouraged by their success with cinchona, transplanted the Amazon rubber tree to Ceylon. The modern world cannot live without potatoes or quinine or rubber. And it cannot depend upon natural sources of supply.

But it does not follow that all the money being invested to-day in the scores of companies mentioned in this paper in each issue under the heading "The British Rubber Craze" will ever yield dividends. The returns of 40 per cent., 60 per cent., and even 80 per cent. in the case of certain rubber plantation companies have been honestly earned, and we should not be surprised to see the largest figure mentioned doubled within a very few years. Without doubt, the cultivation of rubber offers the greatest possibilities in the way of honestly earned dividends of any business in which the public of any country has ever been allowed to invest. But the biggest dividend payers so far are companies in which the public has not been invited to participate.

No doubt, every day sees the birth of a rubber plantation company which will prove astonishingly prosperous. The public, however, invest in this business without discrimination. One rubber company yields 80 per cent. on its capitalization; another company may do the same thing; therefore people buy shares in the first new company that is announced. We reported lately the issue to the public of £50,000 in shares by a company formed to work out a new and untried proposition in wild rubber, and the subscriptions received in one day amounted to £1,110,000—or *twenty-two times as much as was asked for*. And this sort of thing is repeated daily in London.

One mistake which our transatlantic friends have made in regard to rubber, as has been pointed out in THE INDIA RUBBER WORLD, is assuming that plantation products from the Far East will drive the forest rubber areas of the Amazon out of competition. It is true that the world no longer derives potatoes from Quito, or quinine barks from Peru, but the rubber situation on the Amazon differs in many ways from the other interests mentioned. Rubber is in vast demand and the millions upon millions of trees now yielding this material, on the ground where nature planted them, are being guarded by a lately awakened public intelligence as closely as any gold miner ever protected his rights to a "find." One may as well

argue that the cotton planters of the United States will retire from business because a few Britishers are producing good cotton in Africa as that Brazil will cease to produce rubber on account of what many Britishers are doing in Asia.

There were no rubber trees in Ceylon, and extensive rubber forests were created there. There are rubber trees already in the Amazon countries which in a year yield about 85,000,000 pounds of the best rubber ever known, and great profits to people who manage their business with intelligence. It would be a simple matter for the rich owners of large *seringaes* to remove from the properties all the forest growth but rubber and to substitute rubber trees. They can also introduce cattle and the cultivation of vegetables—instead of importing food—and while waiting for a few years for the growing rubber to become productive, derive handsome profits from the giant trees already on the ground.

THE INDIA RUBBER WORLD believes in rubber culture to-day even more than at any time in the past, but it believes no less earnestly that an improved rubber régime in the Amazon region is at hand. Another way in which to put it is that rubber will yet be planted in South America under the system the Britishers have developed in the East. There will always be such a demand for rubber as will insure a profit in this production, and however much Ceylon and Malaysia may produce, Brazil will be called upon continually to increase its output.

Meanwhile, it is wise to deliberate before investing in any sort of rubber-producing enterprise in whatever country, precisely as one should deliberate before buying bank stocks or "gold bricks."

LIKE INVESTMENTS IN THE MOON.

THERE is more than one form of rubber craze. The frenzy of the British investor to put his money into planting shares is more comprehensible than the fiction which finds space in the columns of sober American newspapers and later forms part of the stock of knowledge of the reading public. Let us look into the columns of the New York *Tribune*, owned by the American ambassador at the Court of St. James's, and regarded by itself and by many devoted readers as one of the most carefully edited newspapers existant. A leader in the *Tribune* of March 13, 1910, begins:

The extraordinary activity in dealings in shares in india-rubber companies on the London Stock Exchange recalls a remark which was made by the late Collis P. Huntington to a representative of this paper, perhaps twenty years ago. He was discussing the future industrial developments of the world and the prospective opportunities for the making of fortunes, and the conclusion to which he came and which he unhesitatingly expressed was that no young man could do better than to invest his means in rubber forests or plantations in Central Africa. A good rubber plantation, he declared, was to be preferred to a gold mine. That estimate appears to be verified at the present time [and so on].

The fact is that the connection of the name of Huntington, the greatest American railway builder of his time, with rubber was due to a surplus of imagination in the

office of the New York *Herald*—not the *Tribune*. When ever a *Herald* young man felt disposed to dream rather than work as a means of gaining access to the cashier's window, he prepared an interview with Collis P. Huntington on the duty of young men of business instincts to go in for African rubber.

One day THE INDIA RUBBER WORLD decided to interview the railway king regarding his reported interest in rubber gathering on the Congo. And the result appeared in the issue of this journal of March 10, 1895 (page 176):

"I have none," he said. "I know nothing of the interview with me in the *Herald*. I never could have said anything of the kind. I know so little about rubber in Africa that I would no sooner advise any one to invest money in the industry than I would advise him to make investments in the moon."

What keeps the Huntington rubber fiction alive is most incomprehensible. Cold facts about rubber today are apt to be forgotten tomorrow even by the people who have most reason to keep informed on the subject. Perhaps the best explanation is to be found in the expression by Barnum, the one-time great circus proprietor, who excused certain palpably fraudulent exhibits on the ground that "the people like to be humbugged."

There can be no doubt that many of the excited investors in so-called rubber planting propositions today are as little informed regarding rubber as Mr. Huntington admitted himself to be. Moreover, they probably would make "investments in the moon" just as readily, if an attractive moon prospectus appeared. And if they lose, probably no complaint will be heard—if it be true that "the people like to be humbugged."

AN "OFFICIAL ORGAN."

"THE INDIA RUBBER WORLD," the official organ of the rubber trade.—*The New York Herald*, March 3.

OUR first thought on reading this complimentary mention in the columns of an esteemed contemporary was that it was not exactly correct. This paper has not been elected or appointed to any specially defined post by any representative body of the rubber trade. But on second thought reference was made to "The Century Dictionary," where, on page 4092, one of the definitions of the word "official" reads:

Performing duties or offices; rendering useful service.

In this sense we feel complimented, not only by *The New York Herald*, but by the whole rubber trade—on every continent—which, by its continued generous support, indicates that the paper, during more than twenty years, has been "rendering useful service" to its patrons.

HOW TO CHECK THE RUBBER BOOM.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Our crude rubber market of late has continued to rise, and the leading papers in London, even those of the most conservative nature, affirm that nothing equal to the present boom has ever taken place on the Stock Exchange. Rubber seems to have taken the

lead of everything else, dethroning even gold mining speculations of the wildest form ever recorded in the annals of the Exchange. The oldest and best informed authorities affirm that there is no sign of an early abatement of the present fever. The prices of the crude rubber also seem to offer a more preponderant inclination to rise than otherwise, latest quotations at Liverpool being 10s. 8d. for April-May delivery. This means we shall have high prices for the rest of the year, if consumption keeps the present level.

What is now taking place confirms my opinion that the time has come when leading manufacturers must make an effort to maintain the necessary equilibrium in the primary markets, so as to check the terrible oscillations which speculation will be capable of producing forever, unless hindered by powerful and intelligently handled combinations. It is true these oscillations are likely to give us a fortune this year, just by our pluck in holding back the sale of our stock, and I should not quarrel with any state of affairs which benefits our concern to the tune of so much more over and above our ordinary profits, than if the market was steady. But from a purely economic standpoint, and viewing the consolidation of the automobile trade and every commodity in which rubber enters largely—in a word, as a matter of protection to both producer and manufacturer—I would rather see the market weeded of this obnoxious speculative element, with its kaleidoscopic surprises that are seldom advantageous to either producer or manufacturer, and mostly injurious to both, simultaneously.

Of course, I am not so optimistic as to believe that speculation can ever be totally eliminated, but I venture to affirm that it can be kept within such circumscribed bounds that speculators will seek other spheres of action. I believe that the violent and brusque oscillations that we are witnessing can be checked, with a steady price ruling for every season. Look at what has been achieved by the Brazilian government in regard to the prices of exchange. No one thinks of speculating on it nowadays, because the margin is not sufficiently tempting. Mind that this device grew out of a simple conversation of mine with a statesman who had the courage of putting it in practice, and its success has brought the nation millions in favor of legitimate commerce that would have otherwise gone towards swelling Stock Exchange speculators.

The next point which, to my mind, deserves the immediate attention of the Captains of the Rubber Industry, should be the aim at getting nearer mother earth than they are at present. When you glance at the list of successes which have followed the control of crude materials from their primary sources, by manufacturers, you cannot help recognizing that the principle which has given such marvelous results must be economically sound. Take Pears, for instance, who have owned their coconut estates, from which they have derived the oil which has made their soap famous. The greatest chocolate manufacturers of the world—such as Epps, Fry's, Cadbury, Menier, Van Hooten, and Suchard, all own their cocoa estates. Steel corporations mine their own ore and handle it right through until it gets to the consumers' hands.

While on this point I may mention that the government of this country is offering special advantages to any who may build factories for rubber goods, and I think Brazil as good a field as any in South America, from any standpoint you wish to consider the country as a whole. And it behooves the American manufacturer to take in the situation and improve the opportunity for developing an industry that only needs to be started to be a huge success.

A PARAENSE.

Pará, Brazil, March 16, 1910.

MR. T. C. REDFERN, managing director of Redfern's Rubber Works, Limited, of Hyde, near Manchester, England, was a recent visitor to the United States and Canada when he favored THE INDIA RUBBER WORLD offices with a call.

A GOOD RUBBER FOOTWEAR SEASON.

THE season which is just closing in the American rubber shoe trade has been one of the best ever known in the industry. This has been largely due to the fact that blizzards and snowstorms have been general over the entire territory of the United States. No single section has escaped an excessive number of snowstorms. The result of it has been that everywhere in the country stocks of rubber footwear are depleted. This is true not only with regard to the retailers, but also true with regard to the jobbers and the manufacturers. A representative of the United States Rubber Co. said, concerning the present situation:

"This has been the best season in the experience of the company. Beginning early in the fall there occurred snow and rain storms all over the country that called on the retailers for their full stocks of goods. Before Christmas we began to feel the result of these weather conditions. Repeat orders and duplicate orders were poured in upon us from all parts of the country. There were many rush orders which were so insistent that we were scarcely able to fill the demand. The jobbers had not bought very heavily last spring because the retailers were fairly well overstocked. This was due to the unusually mild winter of the previous season. As soon as the bad weather began to appear, however, there was a heavy rush upon the retail merchants, and in order to keep up with the demand of the actual consumers these merchants began pouring in telegraphic orders upon the jobbers, who had in turn to order from the manufacturers.

"This condition created a pre-holiday demand which, if the bad weather had not continued, might have been the end of the business. But, as you know, beginning with Christmas week, the entire country was covered with blizzards and snowstorms. The result was that the early demand was not sufficient for the consumers. People had to have rubbers and they had to have them quick. Orders came to the manufacturers in a volume never before known, and the demand has kept up from the beginning of the new year until the present time. Never before has there been such a succession over as wide spread a territory of storm conditions. Even the south has had snow storms beyond anything ever known before.

"We have found that our business has increased not only in those parts of the country which have heretofore been subjected to severe weather conditions, but way down in Texas, Louisiana and lower Mississippi, the demand for rubber footwear has been unprecedented. You understand that there are some sections of the country that have a considerable amount of snow every year and these sections furnish our dependable regular trade. It is when the other sections, those that ordinarily have few severe storms, suffer from adverse weather conditions, that we get this extraordinary demand. I believe that it would be safe to say that not for very many years has there been a condition where all the stocks—retail, jobbing, and factory—are as thoroughly depleted as at the present time. It would be impossible to say that there has been any extraordinary demand for any given type of rubber footwear. The demand has been created by weather conditions, and under these circumstances the consumer buys what he can get. The volume of sales of the United States Rubber Co. probably will be found to be the best in its history."

* * *

In discussing the situation of the rubber footwear trade, a member of one of the largest firms of jobbers in New York city, and one not particularly allied with the manufacturing interests, said:

"Our own business is largely confined to New York city and adjacent territory. During the past season, however, it has been better than ever before in rubber footwear. At the beginning of the season the retailers were pretty well stocked, but the storms of the early winter cleaned their shelves rather thor-

oughly, and we began to feel the press of orders before the first of January. This has kept up until the present time, and to-day we are receiving hurry up orders from retailers who cannot meet the immediate demands of their customers.

"In volume of pairs this has been the largest year we have ever had in the shoe trade. It has not, however, been the largest year in the total amount of money received. The reason for this is the change which has occurred in the character of footwear that is demanded. As I said before, our trade is largely in the big cities. Every year these cities are succeeding in cleaning off the streets quicker and better than ever before. This results in their being a demand for lighter rubber goods than ever before. Each year we find in our territory that fewer boots and arctics are used, and more sandals and light rubbers. The better cleaning of the streets also makes more people go without rubbers entirely. This year, however, there were a number of sudden storms that caused people to hurry to the nearest store and fit themselves out with rubber footwear.

"As far as I am able to judge, the retailers in this section of the country are very nearly sold out. We expect a big business next year, in spite of the high prices of rubber goods. People must have rubber footwear no matter what it costs, and we have not found, when there have been a series of storms and widespread inclement weather, that price made much difference in the volume of sales."

* * *

THE manager of the shoe department of one of the largest department stores in New York said, with regard to the rubber shoe sales of the past season:

"The numerous storms of the past winter have kept us hustling to the jobbers to keep enough rubber shoes on hand to fill immediate demands. Every time that one of these heavy snows came, followed by a lot of slush on the streets, our aisles were filled with customers who wanted rubber covering for their feet before they left the store. When we were not able to give these people exactly what they wanted they generally took what we were able to give them.

"We carried over a considerable stock of rubber footwear from last season, because, as you know, that season was exceptionally mild, and the only severe storms which occurred were so late that many people put off buying. This year the storms began early and were fairly consistent. The result has been an unprecedented rush. Time and time again our stock clerks have reported that we must have more rubber footwear. The result has been that we have bought and have sold more rubber shoes this season than in the past two or perhaps three seasons. At the present time we are none too well stocked, and on account of the prices of rubber goods are not anxious to buy immediately."

A CONSPICUOUS success among automobile accessories during the past year has been the Twitchell air gage, for registering instantly the air pressure in tires. This has been illustrated and described in THE INDIA RUBBER WORLD (April 1, 1909—page 254). A statement during the past month was that during one year more than 100,000 of these gages had been sold, all over the United States, they having been ordered largely by tire and automobile manufacturers. A traveling representative is now in Europe, conducting a campaign for the introduction of the gage in Great Britain and on the continent. Mr. W. D. Newerf, of the W. D. Newerf Rubber Co. (Los Angeles, California), who control the Twitchell gage says: "Out of the last 90,000 gages manufactured we have had to replace less than one dozen, although all were sold under a guarantee insuring absolute accuracy."

Under the customs laws of Japan imported bicycle tires hereafter will be classed not as rubber goods but as parts of bicycles.

A BOOK for rubber planters—Mr. Pearson's "What I Saw in the Tropics."

RUBBER CONGRESS AT MANAOS.

THE Congresso Commercial, Industrial e Agrícola, organized by the Commercial Association of Amazonas, with the support of the government of the State, and held at Manáos February 22-26, will long be held in remembrance in connection with the unfolding of the new régime just now developed in the Amazon region. In control for so long of the world's supply of rubber, it is not singular that the North Brazilians should come to regard as impossible any menace to their interests from any source. But the challenge has come—from the rubber planters of the Far East—and Amazonia has hastened to the defence. This is the meaning of the Congress at Manáos.

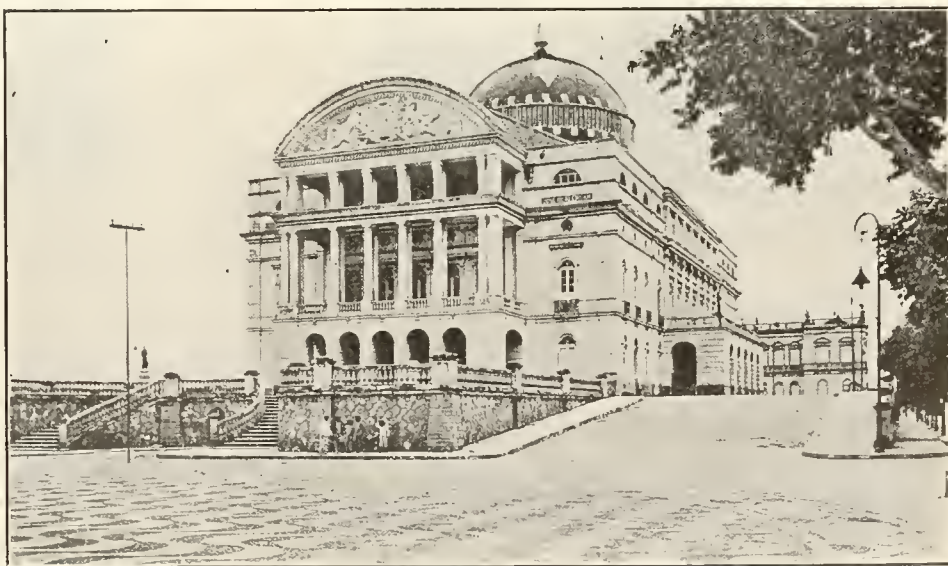
The new régime on the Amazon of course has its basis and center in the crude rubber trade which hitherto has been the sole interest of the people of that region. Not only has this been true of the past, but it will be true farther into the future than any one now living can hope to see. But rubber is destined to be produced under changed conditions, involving the introduction into north Brazil of agriculture, which in the modern sense of this term in North America and in Europe, has never existed there. The Amazonian *seringueiros* who to-day supply the world with more than half in volume of the crude rubber used, and vastly more than half in value, for the most part depend upon foreign markets for their food, clothing, and other requirements in life. The introduction of agriculture in Amazonia means making the *seringaes* self-sustaining and independent of the outside world, with the ultimate result of a better systemization of the rubber producing industry and its more economical conduct, all of which leads to (1) better and more certain profits for the producers; (2) more certain and more regular supplies for consumers; and (3) a large reduction in the cost to consumers.

Hand in hand with this step

NOTE.—The present report of the Congress at Manáos, compiled from information supplied by "The India Rubber World's" correspondents on the Amazon, is preliminary to a fuller treatment of the subject by our Editor, who attended the Congress in person.

in progress must be improved commercial conditions, not only in the Amazon region, but between the states there and the outside world, which will facilitate the sale and transportation of rubber, and the foundations for which are already being laid. The Congress lately held at Manáos was essentially a rubber congress, for the reason that, as has been intimated in this article, there is no other interest on the Amazon river about which or in regard to which any kind of congress could be convened. At the same time it was properly described as a commercial and agricultural congress, its promoters having in mind the general proposition that the best development of the Amazon rubber interest involves general agriculture and the modernization of its commerce, instead of, as in the past, dealing with rubber as a sole interest, without regard to conditions existing elsewhere in respect of rubber or trade in general.

Too much cannot be said in praise of the Commercial Association of Manáos, whose enterprising management had the perspicacity to recognize the condition confronting their region, and to bring about a propaganda of progress such as the congress just held exemplifies. In no city elsewhere, perhaps, would any public movement whatever attract such general in-



THEATRO AMAZONAS (THE STATE THEATER) AT MANAOS, ON THE UPPER AMAZON.

[The building in which was held the Congresso Commercial, Industrial e Agrícola, February 22-26, 1910. The salon in the great theater where the Congress held its sessions is perhaps as beautiful a meeting place as any business body were ever fortunate enough to occupy. Rectangular in shape, a row of lofty fluted columns reserved the space where were the seats of the delegates fronted by a great table for the president and secretaries. Outside of the row of columns was the assembling place of the reporters and friends of those engaged in the debates. At each end of the room were great mirrors which reflected and re-reflected the room until one gained the impression that a score of congresses all housed in elegant conference rooms were simultaneously at work. To speak of the great panels on either side of the mirrors decorated with beautiful tropical scenes in oil, of the crystal chandeliers, triumphs of art, of the ceiling covered with allegoric figures by De Angelis at his best, would be but to faintly suggest the artistic completeness of the whole. Mr. Fearson's two lectures were given in the evening, in the auditorium, which on both occasions was filled to the topmost gallery with an audience ranking from the Governor of the State down to the smallest clerks in the rubber houses.]

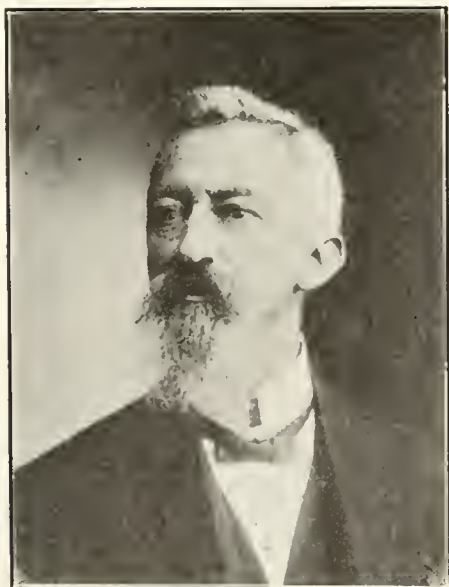
terest as did the rubber congress in Manáos. Not only the Commercial Association, composed of the leading merchants in the town, and the handlers of largely more than half the "Pará" rubber of commerce were interested, but all the rubber producers in the area of which Manáos is the center, general merchants, the whole body of the governmental authorities, bankers, transportation companies—in fact every intelligent element in Amazonia was represented at the sessions of the Congress by interested, forceful, influential men, intent upon setting on foot a movement for a revolution of business conditions.

A new régime this certainly is. And the old régime began not so long ago. There are men living to-day who remember when the price of Pará rubber was less than a shilling a pound, and when the output was insignificant. A recent important work on the botany of the Amazon region was brought out by a gentleman who studied the neighborhood of Manáos before the existence of rubber thereabout had ever been known, even to the natives. This journal in a recent issue reported the death of an American naval officer who was one of the first white men to visit the same

rubber was held, this being housed in the public library, also an attractive building. The newspapers reported the proceedings of the Congress very fully, going to the extent of printing the names daily not only of those participating, but of the general audience, which embraced representatives of the best society of the city. At the evening sessions admission was to be had only by ticket.

THE INCEPTION OF THE CONGRESS.

THE first announcement regarding an industrial congress to be held at Manáos, representative of the best interests of the Amazon region, was contained in a circular from the Associação Commercial do Amazonas, under date of July 22, 1909. The general scope of the proposed congress was soon outlined, and a more or less detailed program of topics to be discussed, of which a summary was given in THE INDIA RUBBER WORLD, October 1, 1909 (page 7). The Commercial Association at Manáos has done much for the development of commerce in Amazonia, which is an earnest of what may be done in bringing about a



COLONEL ANTONIO CLEMENTE BITTENCOURT.
[Governor of Amazonas.]



SENHOR WALDEMAR SCHOLZ.
[President Manáos Commercial Association.]

region, his visit having occurred before the then small Indian trading village on the Negro had taken the name of Manáos. This also was before the discovery of rubber up the Amazon.

Manáos to-day has many of the characteristics of modern cities elsewhere—with fine buildings, electric lights, electric street railways, waterworks, and improved docks, accommodating ocean steamers which arrive frequently and regularly from New York and several European ports. It has banks likewise, four daily newspapers, and telegraphic communication with the world. How far away from "the world" it is, however, is indicated by the fact that THE INDIA RUBBER WORLD's representative had to leave New York nearly two months before the sitting of the Congress, in order to be on time there; no letters mailed to him from the office reached him before the Congress sat, and the only medium of communication with him was the telegraph, at the rate of \$1.60 a word.

The visitors to Manáos on the occasion of the Congress were most hospitably received in official and commercial circles, and by the people in general. The sittings of the Congress were held in the beautiful State Theater, of which a view is given in this paper.

In connection with the rubber congress an exhibition of crude

better development of the "extractive industry," this being the term applied on the Amazon to the production of rubber. The president of the Manáos association, Senhor Waldemar Scholz, long has been identified in an important way with the rubber trade, particularly on the upper Amazon.

It will be remembered that when the International Rubber and Allied Trades Exhibition was held in London, in September, 1908, the federal government of Brazil neglected to provide for an adequate representation of that country. The state of Pará itself was represented only by exhibits arranged by individual members of the rubber trade. What saved the day for Brazil was the interest taken in the matter by the Commercial Association at Manáos, with the support of the Amazonas state government, with the result that the Amazon section was one of the most interesting at Olympia. [See THE INDIA RUBBER WORLD, October 1, 1908—page 40.] The Amazonas commissioner was Mr. N. H. Witt, the former head of and still a partner in the Manáos firm of Scholz. It was to be expected that, under such auspices, the Manáos Congress would prove a success. Practically all Manáos took a live interest in preparing for the Congress. Now that it is over and the work of a week, and that too during the busy season, can be critically surveyed, it

would be the most peevish of pessimists who did not pronounce it a success. Of the many subjects discussed that of rubber planting seemed the most engrossing.

WHO WERE IN ATTENDANCE.

THE membership of the Congress was for the most part composed of gentlemen who had been formally delegated by governmental, industrial, or commercial bodies, but a few others interested in the subjects under discussion are included in the list which we present, on account of their active participation in the proceedings. The sessions were attended, of course, by many other business men of prominence.

PRESIDENTS.

The Governor of Amazonas, Dr. Colonel Antonio Clemente Bittencourt (for the inaugural session only).

The Vice Governor of Amazonas, Senhor Dr. Antonio G. P. de Sá Peixoto (for the final session only).

Senhor Wildemar Scholz, president of the Commercial Association of Amazonas.

SECRETARIES.

Bertino Miranda, secretary general.
Dr. Castella Simões.
Colonel Raul de Azevedo.
Jeronymo Vicente Gomes.

DELEGATES.

Dr. Passos Miranda and Dr. Jacques Huber—Government of Pará.

Dr. Jonas Correa da Costa and Leopoldo de Mattos—Government of Matto Grosso.

Dr. Candido Marianno—Department of Alto Purus.

Dr. Hercules Weaver—National Society of Agriculture.

Dr. Eneas C. Pinheiro—Pará Society of Agriculture.

Dr. Antonio Monteiro de Souza and Laureno Thury—Amazonas Society of Agriculture.

Dr. Carlos Rey de Castro—Republic of Peru and Chamber of Commerce of Iquitos.

M. Lamy Torrilhon—Syndicate de Caoutchouc, Paris.

Gaetano Tomez—Republic of Colombia.

Colonel Antonio J. da Silva, Jr.—Commercial Museum, Rio.

Municipalities.

Colonel Agnello Bittencourt—Manãos.

Colonel Raul de Azevedo—Barcellos.

Prudencio Boga de Sa—S. Gabriel.

Colonel Antonio Francisco Monteiro—Humaytha.

Colonel Secundino Salgado—Manicore.

Colonel Manoel Antonio Garcia—Silves.

Colonel José Furtado Belem—Parantins.

Dr. Elviro Dantas Cavalcanti—Manacapuru.

Dr. João Ricardo Gomes de Araujo—Canutama.

Dr. Castella Simoes—Borba.

Alexandrino Taveira Pão Brasil—Maues.

João Nazareth da Silva, Jr.—Urucara.

Dr. Geraldo Rocha—Itacoatiara.

Commercial Associations.

Senhor Emil Zarges—Pará.

Colonel Jose Henrique de Souza and Domingo de Andrado—Parantins.

Dr. Domingos Th. Carvalho Lea—Itacoatiara.

Colonel Manoel Antonio Garcia—Silves.

Colonel Benedicto Alves Pinto—Urucara.

Colonel Antonio Francisco Monteiro and Leopoldo Mattos—Humaytha.

Colonel Secundino Salgado and Rafael Benoliel—Manicore.

Colonel Theodoro Botinelly—Canutama.

The Press.

Henry C. Pearson, editor in chief of THE INDIA RUBBER WORLD and president of The Rubber Club of America.

Dr. Angelino Bevilaqua—La Hacienda (Buffalo, New York).

M. Gabriel Gelly—Le Caoutchouc et la Gutta-Percha (Paris).

M. G. Sanders—Journal d'Agriculture Tropicale (Paris.)

José Amandio Mendes—A Provincia do Pará.

Guilherme de Mello—Folha do Norte (Pará).

Dr. Lyonel Garnier—Amazonas.

Dr. Vicente Reis—Jornal do Commercio.

Dr. Adriano Jorge—Correio do Norte.

Dr. Benjamin Araujo Lima—Diario do Commercio.

Dr. Saturnino Santa Cruz de Oliveira—A Noticia.

The Navigation Interest.

J. Jennings—Amazon Steam Navigation Co., Limited.

Hugo Ohliger—Hamburg-American Line.

E. Schwabe—Manãos Harbour, Limited.

W. Robilliard—Booth Steamship Co., Limited.

Dr. Honorio de Barros—Lloyd Brasileiro.

Commercial Firms.

Jeronymo Vicente Gomes—Gomes & Co.

Raymundo Nonato de Moraes—Solheiro Motta & Co.

Edgar Freitas—Freitas, Ferreira & Co.

Antonio dos Santos Cardoso—A. S. Cardoso & Co.

Commendador Joaquim Goncalves Araujo—J. G. Araujo.

J. Mendes Cavalleiro—Mendes & Co.

Marinus de Vries—B. A. Antunes & Co.

Carlos Montenegro—Carlos Montenegro & Co.

Rodolpho Vasconcellos—Mello & Co.

Eduardo Fernandes—João Alves de Freitas & Co.

Samuel Levy—B. Levy & Co.

A. Cabral—S. A. Armazens Andresen.

Emil Zarges—Dusendschön, Zarges & Co.

W. Stuart Gordon—Gordon & Co.

F. H. Sanford—A. H. Alden & Co., Limited.

Other Members.

Baron of Solimoes.

J. Teixeira de Souza.

R. Benoliel.

Paul Lecoite.

Captain R. Valle.

The members of the Consular Corps.

SUMMARY OF THE PROCEEDINGS.

THE formal sessions of the Congresso Commercial, Industrial e Agricola were preceded by three preparatory sessions, at the



JARDIM DA PRACA GENERAL OSORIO, MANAOS.
[Some planted rubber trees are shown.]



JARDIM DA PRACA DA CONSTITUCAO, MANAOS.
[Some planted rubber trees are shown.]

Amazonas Theater, under the presidency of Senhor Waldemar Scholz, the head of the Associação Commercial of Manaus. At these preparatory sessions, held on February 19, 20, and 21, various preliminaries were discussed, and the work of the Congress marked out. For example, a special jury was appointed for awarding the four prizes of five contos [—about \$1,500] each advertised for the best dissertation on the following theses:

- I. The best way of developing the mercantile marine in the Amazon valley.
- II. How to colonize the soil of Amazonia.
- III. How to develop agriculture in the Amazon valley.
- IV. The best way to develop the planting of rubber trees in Amazonia and the best methods to employ in the preparation of the latex.

The jury took formal possession of the essays which had been forwarded to the association, in response to the advertisements published.

It was decided to divide the work of the Congress into three groups, each to be the special care of a commission, and presidents of these commissions were elected: Baron of Solimoes, for that on agriculture; Dr. Huber, for that on rubber; and J. C. Mesquita, for that on commerce.

Following the preparatory sessions came the inaugural or opening session of February 22 and afterwards ordinary sessions during four days, the program ending with final session on Sunday evening, February 27.

The first day's ordinary session was reserved for the presentation of "projects" for the consideration of the Congress. On the second day the jury presented its verdict on the various essays which had been submitted. On the third day the conclusions arrived at by the various commissions were read and discussed as well as the projects put forward at Wednesday's session. On Saturday a series of final conclusions were approved by formal vote, after discussion. These conclusions, fifteen in number, are printed in full in this paper as summarizing the sentiment of the Congress. It will be noted that they all relate to india-rubber.

* * *

At the inaugural session of the Congress, on Tuesday evening, February 22, under the presidency of Governor Bittencourt, there was not only a full attendance of the delegates to the Congress, but there were present many representatives of the government, military officers, judges, the clergy, and leading business men. Addresses were made, of welcome to the delegates, and by way of outlining the purposes of the Congress. Sympathetic responses were made by visiting delegates, and by the close of the session the Congress was already well under way, though nothing of a formal nature had been offered.

The first speaker of the evening was Senhor Scholz. Dr. Jacques Huber, as the representative of the government of the state of Pará, addressed the audience, being followed by Dr. Candido Marianno, prefect of the department of the Alto Purus, representing the federal territory of the Acre. Incidentally Dr. Marianno mentioned that the first Amazon rubber congress had been held in the Acre district, in August last, at Senna Madureira, where in five years' administration he had succeeded in creating in a "dark forest" a comparatively prosperous city. The Manaus Commercial Association, by the way, was represented officially at the Senna Madureira congress.

Another speaker was Mr. J. A. Mendes, who in addition to having had an intimate relation with the rubber trade, appeared as representative of *A Provincia*, the important Pará newspaper. In saluting the governor and the delegates of the congress, he joined with his own sentiments those of Mr. Pearson, of THE INDIA RUBBER WORLD.

* * *

It is not proposed here to take up in detail the proceedings of the various daily sessions of the congress. The publication of the "Conclusions" reached is alone a summary of the results.

As an illustration of the ideas advocated during the sessions may be mentioned the motion by Dr. Rey de Castro, recommending the study, by the governments represented at the Congress, of the best means for developing coöperative societies in Amazonia.

Dr. Magalhaes presented a motion recommending means of promoting better hygiene and medical assistance on *seringaes*.

Proposals were made regarding improved means of transportation; in fact the program of the Congress was so broad as to permit the introduction of whatever proposal any delegate might regard as having a practical bearing upon the development of the Amazon country.

The three commissions, for the three sections into which the congress was divided, were organized finally as follows:

Commerce.—J. Claudio Mesquita (chairman); Rafael Beniel, J. G. Aranjó, José Teixeira de Souza, Luiz Rodrigues, W. Stuart Gordon, Emil Zarges, W. Robilliard, J. Mendes Cavalleiro.

Extractive Industry.—Dr. J. Huber (chairman); Candido Marianno, H. Weaver, Passos Mirando, Lyonel Garnier, Leopoldo de Mattos, A. F. Monteiro, H. C. Pearson, J. A. Mendes, Carvalho Leal.

Agriculture.—Baron of Solimoes (chairman); Angelino Bevilacqua, Eneas Pinheiro, G. Sanders, Laurence Thury, Monteiro de Souza, M. A. Garcia, Theodore Bottinelly, Ellis Schwabe.

A committee composed of the following was named to edit the official report of the Congress, including the various essays presented: Baron of Solimoes; Dr. Jacques Huber, director of the Pará Museum; Passos de Maranda, representative of the government of Pará; Dr. Eneas C. Pinheiro, of the Pará agricultural Society; Dr. Adriano Jorge, of the Manaus *Correio do Norte*; and Jose Amandio Mendes, of *A Provincia do Pará*.

A committee was formed to prepare gold medals and other awards for the principal exhibitors at the rubber exhibition in connection with the Congress and to the authors of the principal essays presented at the sessions of the Congress. This committee consists of the Baron of Solimoes; Dr. J. Huber; Laurence Thury, of the Amazonas Society of Agriculture; and J. A. de Magalhaes.

* * *

THE essays presented at the Congress will appear in an official report to be made in charge of the committee organized for the purpose. In view of this intended official publication THE INDIA RUBBER WORLD is not presenting any of them at this time.

The jury of award on prizes for essays were unable to bestow the prize offered by the governor of Amazonas for a paper on developing navigation. The two prizes offered by municipalities in the state of Amazonas were awarded. The fourth prize was that of the Commercial Association for a paper on planting rubber. It has not been stated before that essays were sent in signed only by a *nom de plume*. The report in relation to the fourth prize was:

The jury, after careful examination of the theses presented, have found of equal merit, though from different points of view, those signed "Pro Bono" and "Planto Raymundo," and have resolved to divide the prize between them, as they are authorized to do in such cases.

The two papers referred to were those of Carlos Eugenio, of Manaus ("Planto Raymundo") and Henry C. Pearson, of New York ("Pro Bono"). The rubber planting prize was divided equally between these two gentlemen. The jury recommended for honorable mention a paper on rubber planting by Dr. Cerquerio Pinto, whose name is familiar to readers of THE INDIA RUBBER WORLD.

The final session of the Congress—that of formal adjournment—was held on Sunday evening, February 27, under the presidency of the Vice Governor of the State. This meeting was well attended, and the delegates expressed themselves as pleased with the results attained, and in view of the success of the Congress the opinion prevailed that future sessions would be desirable. When it was proposed by a delegate from Pará that the next congress be held in that city, it was pointed out that the by-laws of the Commercial Association of Manaus provide for biennial

congresses, and that the association had already decided upon a new congress at Manáos in 1912. From what developed at the session, however, it is possible that Pará may have a rubber congress next year, as a sort of intermediate session.

THE FINAL CONCLUSIONS.

As has been mentioned, the results of the discussions during the week were formulated in a series of "conclusions," adopted at the last ordinary session, by a vote of the Congress. These follow:

I.

The Congress looks upon the planting of the rubber tree in Amazonia as an urgent and unavoidable necessity.

II.

For the encouragement of such planting the Congress considers the following measures useful:

- a. The making of model plantations of *Hevea* rubber, by the states, municipalities and agricultural and commercial associations, on their own account, and for commercial purposes.
- b. Free concessions by governments of the lands intended for that cultivation; reduction of export duties on cultivated rubber.
- c. Propaganda through the press and by circulars and pamphlets showing the advantages of planting, and giving practical advice upon the means of making the plantations.
- d. Broad distribution of seeds and plants of the *Hevea Brasiliensis*.

III.

Regarding the *seringões* [rubber estates] already exploited, representing an enormous capital, already productive, and which should not be neglected, the Congress advises the present owners:

- a. To interplant and to replant the existing *estradas* [paths].
- b. To plant in open spaces in the forests or in clearings made in them.

IV.

The Congress recommends to the governments to make an extensive propaganda in Europe, and particularly in the United States of America, on the advantage of investing capital in the rubber industry in the Amazon valley.

V.

In order to encourage the establishment of new plantations of rubber trees, the Congress advises the federal governments, and especially those of Pará, Amazonas, and Matto-Grosso, to make a uniform price for the lands intended for the extractive industry and to limit themselves to the lowest prices at present ruling in those states.

VI.

The Congress advises the governments to protect by special laws the caucho trees (*Castilloa Ulei*) and recommends at the same time the maintenance of forest preserves in which it shall be forbidden to cut these or other trees, in accordance with the ideas expressed by Mr. J. A. Mendes, in his work entitled "A Produção do Caucho."

VII.

The Congress does not advise anything, in the present state of our knowledge of the cultivation of caucho and other inferior kinds of rubber, to private parties, in the face of the unquestionable superiority of the *Hevea*.

VIII.

The Congress entirely agrees with the opinions of Dr. Jacques Huber, expounded in his treatise "Processos de Extração," on the methods of tapping rubber trees.

IX.

The Congress advises the governments of the states of Pará, Amazonas, and Matto-Grosso to send competent persons to countries where the cultivation of the *Hevea* has been successfully tried, in order to study and verify by sight the methods there employed, either to cultivate or to prepare the latex and the rubber, as also the extensive distribution of any report presented by such agents.

X.

The Congress advises the governments of Pará, Amazonas and Matto-Grosso, and of the contiguous republics, to establish one or more permanent expositions of india-rubber, of an instructive or educational character, managed by competent parties and having annexed physiological and chemical laboratories.

XI.

The Congress, in accord with unquestionable authorities on the subject like Mr. Henry C. Pearson, for one, advises the *seringueiros* [rubber planters] not to abandon the smoking process.

This process may be yet improved upon by means of simple and inexpensive mechanisms, that would lighten the work of the *seringueiro* and at the same time protect his health. In this connection,

the attention of every one interested is called to the machine exhibited by the firm of Danin & Mello, of Pará, which seems to fulfill the necessary requisites.

For use on planted rubber trees, we call the attention of those interested to the machine invented by Commendador Simão da Costa.

XII.

Meanwhile the Congress can but applaud the efforts made to discover new processes of coagulation, and it recommends that the governments and mercantile associations offer prizes for the best processes, especially for the coagulation of the latex of rubber. It must be seen to that all attempts in this sense should aim at producing a better product from caucho than is obtained by fumigation.

XIII.

The Congress absolutely condemns all and every process of coagulation by acids or by alum, because unfortunately such processes depreciate the value of the latex of the *Hevea*, to the serious injury of the manufacturer and of the state exchequer.

XIV.

The Congress earnestly urges the governments and associations to enact repressive regulations against fraud in the preparation of rubber, including the mixture of the latex of different species of gummiferous trees, and the wrongful designation of type or origin.

XV.

The Congress calls attention of the governments and of merchants to the urgent necessity of organizing a series of well-defined grades of the different qualities of india-rubber, taking into consideration for this classification, not alone the physical qualities, but also the origin of the rubber. The standards of those grades should be kept in the permanent expositions mentioned in Article X.

OUR EDITOR'S LECTURES.

As part of the program of the Congress, the Editor of THE INDIA RUBBER WORLD gave two lectures in the Amazonas Theater, on the evenings of February 23 and 24, both illustrated with lantern slides. The journal *Amazonas* of February 24 reported as follows:

"At 9 o'clock last night, in the Amazonas Theater, occurred the lecture of our distinguished colleague, Mr. H. C. Pearson. As we had previously announced, the conference turned upon 'The Planting of *Hevea* in the Orient,' and 94 views were exhibited of landscapes in Ceylon and Malaya of *Hevea* plantations, scenes of Oriental life, and so on. In his first speech Mr. Pearson expressed his regret at not knowing the Portuguese language, as he would have been delighted to speak directly to the people of Manáos, by whom he had been so well received. The lecture was well attended and the explanations given with the illustrations were followed with great attention. Our distinguished colleague, Mr. J. A. Mendes, of *A Provincia do Para*, proved an excellent interpreter.

"The second lecture of our esteemed colleague, Mr. H. C. Pearson, takes place today at the Amazonas Theater, at 9 p. m. The lecture will relate to 'The Manufacture of Rubber Goods in the United States.' For this lecture the Commercial Association will distribute only the 'frizas' and part of the boxes. The lecture will be illustrated. The remainder of the tickets will be given by the Association to the public."

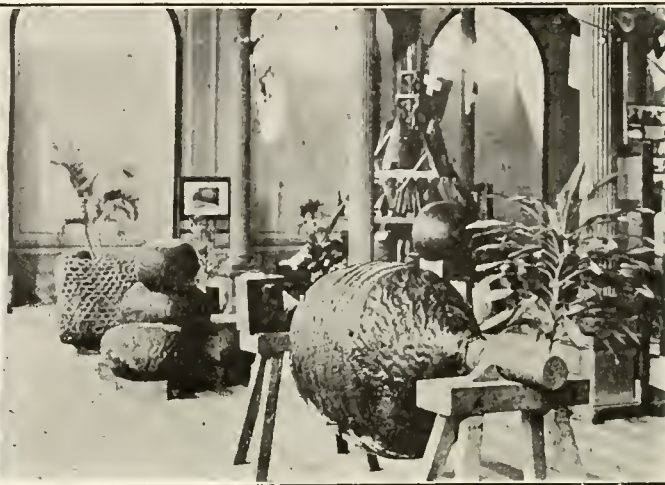
NOTES FROM CORRESPONDENTS.

AN interesting incident connected with the Congress was the planting of rubber trees in one of the beautiful parks of Manáos—in the Matriz Garden, to the right of and facing the Cathedral. The planting was accompanied by appropriate ceremonies, the Governor planting the first, President Scholz the second, the Editor of THE INDIA RUBBER WORLD the third, Dr. Huber of the Pará museum the fourth, and so on until twenty-six were set out. These were seedlings, one meter tall, from seeds brought by Governor Bittencourt from Ayapuá, on the Purús.

The Editor of THE INDIA RUBBER WORLD, on arriving at Manáos, was met by a committee from the Commercial Association, with the announcement that he was to be the guest of that body during his stay, and, the choice being left to him of a stopping place, he chose the home of Mr. F. H. Sanford, manager of A. H. Alden & Co., Limited, much to the envy of the



Danir's patented Fumero. On the right is an earthen pot for smoking rubber.



Rio Negro Rubber - Ball of 700 kilograms; probably from *Hevea Guayensis*.

other delegates. The Association placed a motor car at Mr. Pearson's disposal, and arranged launch trips to nearby rubber estates, visits to the new experiment station at Bosque, and a formal call from the Governor, who is much interested in rubber planting.

A luncheon given to the Editor of THE INDIA RUBBER WORLD by President Scholz at the Restaurante Français was attended by several leading delegates of the Congress, the Mayor of Manáos, and members of the rubber trade.

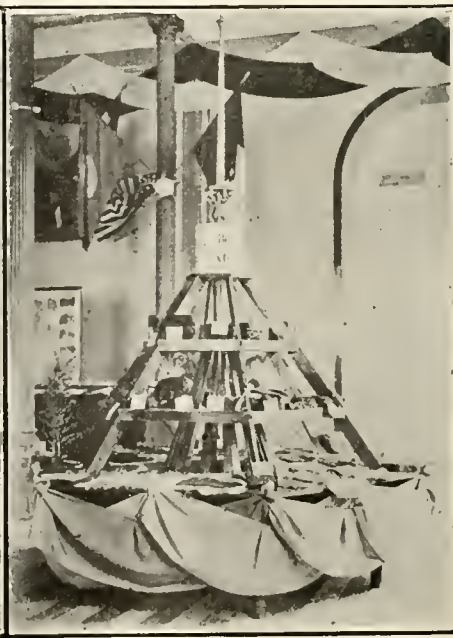
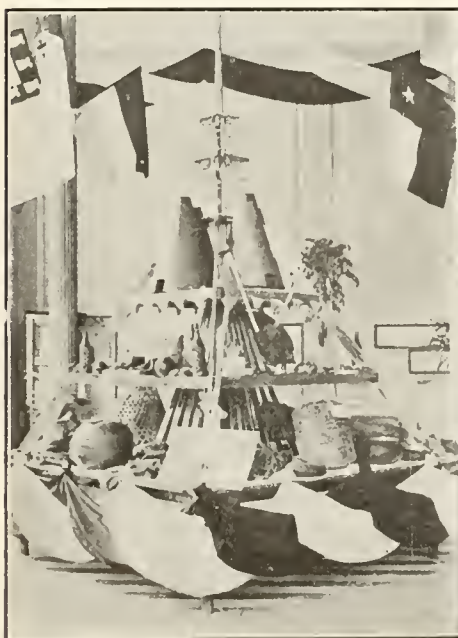
On the morning of his departure down the Amazon a number of delegates, business men and journalists gathered on the pier to wish him *bon voyage* and to impart to him the vote of thanks passed by the Congress for his services in helping to make it a success.

Mr. Pearson, on leaving Manáos, presented to Dr. Huber, for the Museu Goeldi, two complete sets of lantern slides, one showing rubber planting in the Far East, and the other exteriors of the great American rubber factories, together with typical views showing processes of rubber manufacture in the United States.

A GOOD RUBBER EXHIBITION.

THE Exposição de Borracha (rubber exhibition) held in connection with the Congress, in the great ball on the ground floor of the State library, was opened formally on the morning of February 23, in the presence of Governor Bittencourt, music being supplied by a military band. The hall, in itself attractive, was full of tastefully arranged samples of different kinds of rubber, and objects connected with rubber production. There was embraced a collection of books and journals devoted to india-rubber; the walls were decorated with maps of Amazonian rivers and rubber producing districts in Ceylon and Malaya; and there were photographs of *seringaes* and rubber plantations illustrating, among other things, processes of preparing rubber.

In the collections of rubber in the center of the hall were samples of rubber from the various rivers of the Amazon, from Ceylon, Malay peninsula, Java, Borneo, Mozambique, the Congo, Sumatra, Soudan, Gambia, Massai, and Angola. Six qualities of india-rubber were exhibited by the chamber of commerce of Loreto, in Peru, including samples from the rivers Napo, Alto



[From left to right.] I. Curios and Varied Exhibits. On the upper shelf are sheet iron smoking cones now used in the place of earthen smoking cones. Used in smoking Para rubber. II. Montiero Da Costa's

rubber prepared like Ceylon (Madeira River). III. Ceylon and Other Foreign Rubbers.

Photos by G. Huebner & Amaral.

VIEWS FROM THE RUBBER EXHIBITION AT MANAOS.

Marañon, Ucayali, and Putumayo, besides a new rubber—"white caucho"—from Moniti river.

One stand was occupied by a collection of beautiful specimens of rubber prepared by different processes—coagulation by means of acetic acid, lemon juice, and so on, plain and smoked—in the *seriñgal* "Santa Maria," owned by Colonel Raymundo Monteiro, on the Marmellos river, an affluent of the Madeira. There were specimens on this stand fully equal in appearance to the best Ceylon rubber, thus demonstrating the possibility of adopting on the Amazon the methods successfully practiced in the Orient.

Speaking of the Orient, the collection of implements employed in the preparation of rubber in that part of the world embraced the *faca* (sheath knife) invented by Dr. J. Huber, director of the Goeldi Museum at Pará, and regarded by many as the best tapping tool for *Hevea* yet produced.

As usual in Amazon exhibits the most showy part of the exhibit were the great "pelles" of rubber from different *seringaes*, and piles of "sernamby," caucho, and other varieties. One of the best exhibits in this line was that of Rio Negro rubber, some 16 varieties, by Messrs. J. G. Arango & Co. The Peruvian Amazon Co. also had a stand profusely adorned with photographs of Indian tribes and so on.

A word of mention should also be made of the exhibits of rubber shoes, rubber covered bags, and the like, made by upriver *seringueiros*, and representing the most primitive form of the rubber industry. These articles are vulcanized by the very simple process of mixing sulphur and gunpowder with the latex of either *Hevea* or caucho, and then exposing to the sun's rays.

A conspicuous exhibit was the machine for smoking rubber invented by Mr. Manoel Vianna Coutinho, and the patent on which belongs to the firm of Daniu & Mello, of Para. This has been illustrated in detail in THE INDIA RUBBER WORLD [September 1, 1904—page 413].

The exhibitors, as a rule, were not named on the labels on the rubber displays, except in the case of that from Peru, which was in the name of the chamber of commerce at Iquitos. The descriptions of these exhibits, printed in Portuguese, cannot in every case be identified with designations of rubber grades common in the world's markets. Thus the designation of the exhibits from Tonkin (French Indo China)—"Soudan niggers" and "Borracha vermelha Londres"—would require some explanation in either England or the United States. The official description of the foreign rubber exhibits follows:

- | | |
|--------------------------------------|--------------------------------|
| <i>Department of Loreto (Peru):</i> | Folhas marron clara de Sumatra |
| Rabos de Putumayo. | Tiras de Rambong. |
| Caucho branco (Rio Maniti). | <i>Borneo:</i> |
| Caucho branco (Rio Napo). | II Borracha de Borneo. |
| Borracha fina (Alto Maranon). | III Borracha de Borneo. |
| Borracha fina (Rio Ucayale). | <i>Congo:</i> |
| <i>Ceylon:</i> | Kasai vermelho. |
| Folhas unidas de borracha. | Lamoni vermelho. |
| Tiras de curly. | Kasai preto. |
| Crepe claro. | Massai claro de niggers. |
| Crepe claro transparente. | Borracha de Gambie. |
| Laminas de borracha marron claro. | Lopori. |
| Crepe claro. | Congo Wamba vermelha. |
| Crepe medium. | Lago Leopoldo II. |
| Crepe escuro. | <i>Mosambique:</i> |
| <i>Malay Peninsula:</i> | Borracha deboise. |
| Folhas nao defumadas de Vallambrosa. | Borracha feita com madeira. |
| Crepe aladium. | <i>Tonkin:</i> |
| Folhas direitas de singer chob. | Soudan niggers. |
| Crepe rambong de Sumatra. | Borracha vermelha Londres. |
| Folhas defumadas de Vallambrosa. | |

THE RUBBER MERCHANTS' DINNER.

A VERY high compliment to the Editor of THE INDIA RUBBER WORLD was the banquet tendered by the merchants of Pará (Belem is the official name of the city), on his return from the Congress at Manáos. It was given at the Hotel da Paz, on the evening of March 2, in a room decorated with the national colors of Brazil and the United States. Placed about the room

were tropical plants, including *Hevea Brasiliensis*. The tables bore floral decorations.

Senhor José Simão da Costa, the director in Brazil of the Alves Braga Rubber Estates and Trading Co., Limited, acted as toastmaster. His speech is reproduced here, together with the response by Mr. Pearson. Other speakers were the American and British consuls, and the representative of *A Provincia do Pará*.

SENHOR DA COSTA'S ADDRESS.

MR. PEARSON—GENTLEMEN: The rubber merchants of the city thought it their duty to show you their appreciation for all you have done to further the interests of the rubber industry, to offer you the banquet at which we are now entertaining you.

We trust that, from all you have seen and heard during your stay in the Amazon region, you will be able to form an exact opinion as to what the future of wild rubber is likely to be, when it is known that this industry is conducted on purely systematic commercial lines, and not in a hazardous way as many people believe.



FRONT OF THE MENU.

We are all alive to the fact that these responsible for the rising rubber industry in the east seem determined to make it a commercial success, and we are indebted to them for the stimulus which their competition has brought to our shores.

History repeats itself every day that goes by, and what has happened before, in many other industries, will happen in rubber. The advent of electricity caused many well informed men to prophesy the absolute supplanting of gas as a street illuminant, but gas is as highly appreciated today as it ever was, and gas companies were never better off, financially speaking.

The discovery of Marconi caused many people to believe that wireless telegraphy would completely do away with all submarine cables, but these are being now built with every assurance of remaining a permanent and sound investment in the future.

As with gas and electricity, so will it be with wireless telegraphy and submarine cables. They will have distinct uses to fill, and will go on progressing for the benefit of humanity, side by side, without injury, and rather helping each other to meet the needs of modern civilization.

So will it be in the rubber industry. There is room for all the rubber that may be produced in the East, without injury to all the wild rubber of

the Amazon, for each of these products have absolutely distinct applications.

Nature has endowed the wild product with physical properties that cultivated rubber does not possess, so say the highest scientific authorities on the subject, and so leading manufacturers affirm. This being so we have every reason to look forward to the future of wild rubber with every confidence, and we have no doubt that the government of Brazil will eventually face the problem of cultivating rubber and solve it satisfactorily.

If the historical precedents of nations can count for anything, in estimating their future capabilities, then we are justified in hoping that the great problem of intensive agriculture will be masterfully and thoroughly solved in Brazil.

The history of the evolution of the Brazilian nation differs in many respects from that of most of her contemporaries. The severance of the then colony of Brazil from Portugal, and the founding of the Brazilian nation was done amidst the most friendly accord on both sides of the Atlantic.

The freedom from slavery was carried out by a stroke of the imperial pen, under showers of palms and flowers. The fall of the empire and the proclamation of the republic was done without any bloodshed. The coffee valorization scheme is an accomplished fact. We anticipate the payment of the first installment of our funding loan, whilst government measures were effective in giving the country a stable rate of exchange for the past few years.

When a nation can show the world such achievements, it may be depended upon to cope with any such problems as rubber planting.

Mr. Pearson, in the name of the committee appointed to offer you this banquet, and for myself, I beg to propose your health, and to wish you not only every prosperity you deserve, but also that the impressions you take from our shores will be pleasant and lasting. Your health!

MR. PEARSON'S RESPONSE.

MR. CHAIRMAN AND GENTLEMEN: Visiting Pará for the second time is very much like a pleasant home coming. Indeed, as I contemplate those gathered at this board, the British consul at one end, the Yankee consul at the other, and between the many old and new friends here gathered, I find myself regretting the necessary brevity of this stay, and am beginning to plan a third visit and that in the near future.

Pará is certainly a beautiful city; not only that, it is an exceedingly comfortable one. I have suffered more from the heat of July in New York city than here. I have seen more mosquitoes in many places in the States than here, and in many American cities there are more flies, and infinitely more dirt. In appearance this is not an American city, except perhaps in two particulars. Your rapidly running trolley cars remind me of home. Then, too, the black cloud that so often hangs over your city is suggestive of Pittsburg, except that your cloud discharges rain, cleaning the city daily, while ours, being a smoke cloud, has the opposite effect. Pará is not like New York, Chicago, or any other North American city. It is like a miniature Paris set in the midst of a tropical Eden.

But it is not alone of the beauties of your city I would speak. Placed at the entrance of the greatest waterway in the world, a river that no engineering skill could dam or bridge, a river which with its affluents drains thousands of square miles of the most fertile portion of the earth, it has a vast possible commercial significance and importance. This is particularly true today, for this country stands upon the threshold of an enormous industrial development. Whether or not those present live up to their opportunity will make little difference. The world demands rubber and scores of other staples that this country can produce better than any other, and what the world wants it gets.

The United States of America and the United States of Brazil are twin republics joined by a broad elastic band that cannot be severed. The more you produce the greater grow our industries; the more we manufacture the richer you become. I am looking forward to the day when from Matto Grosso to the Guianas, from Santarem to Salinas, the state of Pará will be one great plantation, much of it in rubber. I give you as a toast, "The Crude Rubber Industry of Pará, and Its Representatives Here and Elsewhere."

COMMITTEE APPOINTED TO OFFER MR. PEARSON A BANQUET.

Antonio José de Pinho, President.
Gustavo Gruner, Vice President.
Antonio Rodrigues Alves, Treasurer.
Joaquim G. Gonçalves Vianna.
Luiz Danin Lobo.
Arthur Pires Teixeira.
José Simão da Costa, Secretary.

PROMOTERS OF THE FEAST.

Gruner & Co.	Leite & Co., Inc.
Alves Braga Rub. Estates and Trad. Co.	Velhote Silva & Co.
Adelbert H. Alden, Ltd.	Braga Sobrinho
Mello & Co.	Souza Guimarães & Co.
Gordon & Co.	Barbosa & Tocantins

R. Suarez & Co.	Freire Castro & Co.
E. Pinto Alves & Co.	A. F. de Souza & Co.
Pires Teixeira & Co.	Bensimon & Coriat
Booth & Co.	Souza Filho & Co.
B. A. Antunes & Co.	Ismael Hall & Co.
Mello Frotas & Co.	Silva Cunha & Co.
Thome de Vilhena & Co.	Rocha Silva & Co.
Isaac J. Roffé & Co.	G. A. Miranda Filho

OTHER PERSONS INVITED AND WHO ATTENDED.

Dr. Lucio de Freitas Amaral, director Banco do Pará.
Dr. Fabiana Alves, director Banco do Brazil.
Mr. George H. Pickerell, American consul.
Mr. Ambrose Pogson, British consul.
Major Raymundo Moraes, *A Provincia do Pará*.
Miguel P. Shelley, *O Journal*.

DINER.	
VINS:	
<i>Madere</i>	Potage creme de Vollaile
	Hors d'Oeuvres varies
<i>Piesporter</i>	Merlan a la Fecampoise
	Filet a la Rossini
<i>Chatcaux Margaux</i>	Dindonneau a la Bresilienne
<i>Pommard</i>	Arperges sauce Mousseline
	Glace Creme Panache
<i>Champagne</i>	Puding Diplomate
	Fruits Divers, Confiture
	<i>Cafe Liqueurs</i>

It will be evident from this summary of the recent proceedings on the Amazon that much of interest to the rubber trade as a whole was said, and it is certain that the leaders in Brazilian trade will follow their congress with definite action in the matter of improving conditions, and bringing the production and shipment of rubber to a basis conforming more to modern conditions. Enterprise is not lacking in the Amazon valley; vast natural wealth exists there, and many individual fortunes have been made by the trade methods which in some other parts of the world have been regarded as unprogressive. One reason why so little change has been made in that region was that until recently Amazon rubber was without competition.



THE AVENIDA REPUBLICA, PARÁ.

[At the right is shown the Hotel da Paz, at which was given the dinner to Mr. Pearson.]

Mincing Lane and the Rubber Share Market.*

WHEN the boom in rubber shares began Mincing Lane saw its opportunity and took it. Produce brokers were not wholly inexperienced in the business of buying and selling shares for clients. For many years some of the principal tea houses have dealt in shares of tea companies. Their operations were never very numerous, but they have served as an example in the evolution of the rubber market. As soon as rubber flotations began some of the rubber houses found that their connection with producers, consumers and the rubber world in general made it convenient for them to act as intermediaries between buyers and sellers, not only of the produce but of shares in the producing companies also. As the boom has grown their business in shares has grown with it. The brokers most prominently concerned now have regular share departments in their offices, which have become of as much importance to them as their business in rubber itself.

When a number of dealers in one article gather together to buy and sell from each other a market is established, and some organization soon grows up to regulate the course of dealing upon it. The rubber share brokers of Mincing Lane have constructed such an organization to serve their needs, or rather, an organization has grown up itself out of their customary business methods. A little local stock exchange has come into existence. Its nature and conditions are of some general interest, because they show how a stock market is conducted which has no historical or legal ties, and is free to carry on business as it pleases.

The local habitation of the Mincing Lane market is in a corner of the Commercial Sale Rooms. It meets twice a day, morn-

ing and afternoon, for half an hour or so, and it is frequented by those brokers who have a rubber share department as a regular branch of their business. An association has been formed, the Mincing Lane Tea and Rubber Share Brokers' Association, which has some seven or eight members, but time has not yet been found to give it any rules. The procedure of the market is adapted from that of a "call" in a produce market. Each broker on the market takes his turn in reading over the list of shares and yesterday's prices. If anyone present has dealt since the last call at a price different from that read he corrects the price accordingly. Dealings in each share take place as its name is read out, and if they result in any rise or fall the new price is recorded. When the call is finished there is some miscellaneous dealing, and the gathering is over till the next time. The greater part of the business of the market is, of course, transacted not at the "calls," but from office to office during the day. The "call" serves only to provide an opportunity of balancing transactions, of executing commissions for which time or opportunity has failed, and of making up an official price list as the basis of future transactions.

The chief difference between such methods of business and those of the Stock Exchange is that Mincing Lane has no jobbers. Dealing takes place straight from broker to broker. There is no one whose business it is to make a price either way, and to take anything he is given. When a broker opens negotiations at the call he begins "Anything in so-and-so?" but if there is no immediate response he proceeds at once to declare whether he is a buyer or seller and at what price. The whole working of the market depends, therefore, on the knowledge of the broker as

*From London Economist, March 5, 1910.



IN THE RUBBER MARKET, AT THE LONDON STOCK EXCHANGE, DURING THE GREAT RUSH FOR SHARES.
[Reduced from a two-page sketch by S. Begg in *The Illustrated London News* of March 5.]

to where he can find a buyer or a seller in respect of any commission which he has to execute. It would seem that under these conditions, if the market is to be maintained, brokers must be prepared at times to step into the shoes of a jobber, and if there are more buyers than sellers, or sellers than buyers, to carry shares themselves. No doubt a certain amount of business of this sort is done by brokers. But those best acquainted with the market say that their business has been for the most part direct commission business. Although it has no jobbers of its own to undertake any business which may be offered, Mincing Lane has close relations with the Stock Exchange, and can avail itself of the services of the regular jobbers in case of need. There is no organized co-operation between the two markets, but connections have been established between the principal Mincing Lane houses and broking firms on the Stock Exchange. If a Mincing Lane broker cannot find a buyer or seller in his own market he can execute his commission with jobbers on the Stock Exchange through the inside broker, with whom he is connected, as intermediary. Conversely the inside broker may find it convenient to execute a commission on the Mincing Lane market through his friends there, nor is there any rule of the Stock Exchange to prevent him from doing so, provided that the firm with which he is connected does not advertise.

Thus each market assists and supplements the other, nor can either be said at present to be predominant. But the general result of the relations between the two centers must be that the residual business of Mincing Lane tends to pass over, and its orders to be balanced through jobbers on the Stock Exchange. The connection between the two may in some cases have been closer still. It is not impossible that the method of working through a salaried broker may have enabled some regular jobbers to act practically as jobbers on the Mincing Lane market, making net prices to the Mincing Lane brokers. But that method of conducting business, if it has ever existed, will be put an end to by the new Stock Exchange rule against working for salary.

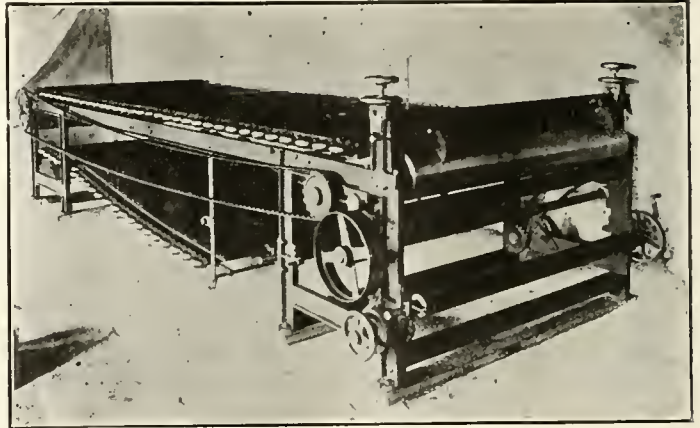
It would seem that one or other of the two markets must in the long run fall into a subordinate position. At the outset of the movement the Stock Exchange was slow in providing facilities for the new business. Mincing Lane was allowed to get a start, and it has taken good advantage of it, developing a large connection on the basis of its established relations with all sorts and conditions of men interested in rubber. At the present moment it probably gets as much if not more business than the Stock Exchange. But it is to the Stock Exchange that the outside public tends to give its custom, and the spread of the boom among the world at large has brought business increasingly to Throgmorton street. Another important influence which will tend to bring business back to the Stock Exchange is the greater financial facilities which it possesses in comparison with its rival. Dealings in rubber shares are at present for the most part ready-money transactions for a single account. But as the market steadies, speculators and others will increasingly require to carry over, and Mincing Lane has neither the credit facilities nor the organization necessary to enable it to transact this class of business. Already its dependence on the Stock Exchange and its jobbing facilities is probably greater than appears upon the surface; greater indeed than is realized by the market itself.

We may be inclined to guess that in the long run the center of gravity will become fixed in the Stock Exchange, and that the Mincing Lane share brokers will remain interested in the business as feeders of the regular market only. Just so did the South African boom begin in Hatton Garden, but the market grew and the public came in, business was gradually and automatically drained away to the Stock Exchange.

JAVA.—Exports of crude rubber from Java for the first ten months of 1909 amounted to 162,913 kilograms, compared with 28,108 kilograms for the same months of 1908—the increase doubtless being due to the larger production of plantations.

A NEW RUBBER SPREADER.

THIS illustration shows one of the latest designs in spreading machines. It is intended for putting on a thin coating of rubber. The cloth to be coated is wound on a wooden roll carried by a shaft provided with an adjustable friction, for holding back the cloth to give a proper tension. The cloth passes up and over a rubber covered roll, above which is located the spreading knife, so mounted that it can be raised or lowered to fit different thicknesses of cloth. After being coated, the cloth passes over steam coils and around a drum at the extreme end of the machine and is wound on a wooden roll placed



RUBBER SPREADING MACHINE R-6B

underneath. The drive for the wind-up roll is arranged with a friction device which can be adjusted by a hand wheel while the machine is running. A countershaft is furnished with the machine, which has pulleys for both straight and crossed belts so that the machine can be reversed and the cloth run back as occasion requires.

The machine shown is for handling cloth of any width up to 60 inches. It is made by the New England Butt Co. (Providence, Rhode Island).

"AMERICAN SELF CONSCIOUSNESS."

[FROM THE "GUMMI-ZEITUNG," BERLIN.]

AN article in *The India Rubber World* entitled "The Country of Today" [February 1, 1910—page 159], proves that Americans are thoroughly conscious of the importance of their country as a producer of rubber goods. A passage from this article reads as follows:

The growth of the rubber industry in the United States alone guarantees the future of rubber culture in whatever part of the world it is pursued under proper conditions. It assures the continued profits of rubber production on the Amazon, which long will be a necessity, even in the face of the success of plantations of rubber elsewhere. The stability of crude rubber prices and of the prices of rubber goods is being brought about by such American corporations as one which recently was able to borrow \$20,000,000 for its operations, through the sale of "notes" to the best financial institutions in New York. The beneficial effects [Questioned by the *Gummi-Zeitung*.] of such conditions will be felt ultimately by the smallest rubber factory in America, and by the large and small concerns in every other country in which rubber goods are made.

Although the above statements show a rather high degree of self consciousness, those who have had occasion to observe the development of the American rubber industry during the past 10 or 15 years, will understand this display of assurance.

THE Aero Club, formed in England in 1901, is to be known in future as the Royal Aero Club of the United Kingdom, the king having granted the necessary permission.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED FEBRUARY 1, 1910.

- N**O. 947,826. Spring tire. [The springs are provided with rubber caps.] R. J. Lackner, New York city.
- 947,834. Tire armor. [A connected series of metal plates.] C. H. Maddox, Canton, Mo.
- 947,859. Galoch, gum boot, and other rubber footwear. [Comprises a leather toe piece.] D. Smith and F. W. Smith, Christchurch, New Zealand.
- 948,064. Process of making tire shoes. F. A. Seiberling and W. C. State, Akron, Ohio; Smith assignor to Seiberling.
- 948,138. Supplemental rim for [pneumatic tired] wheels. J. L. Hecht, assignor to G. W. French, N. French, and J. L. Hecht, a firm, all of Davenport, Iowa.
- 948,193. Pneumatic tire for vehicles. [With armored tread.] C. E. Titus, Springfield, Mass.
- 948,267. Wheel rim or felly for pneumatic or solid tires. J. B. Bradshaw, Manchester, England.

ISSUED FEBRUARY 8, 1910.

- 948,389. Tire for wheels of vehicles. [Tread consists of a plurality of hollow studs of elastic material.] J. Cairns, Willenhall, South Staffs, England.
- 948,401. Machine for cutting rubber rings. W. P. McGeouch, Somerville, Mass.
- 948,701. Pneumatic tire. [Comprising a plurality of segments.] J. G. A. Kitchen, Lancaster, and I. H. Storey, Ambleside, England.
- 948,797. Overshoe. J. Smith, Ivoryton, Conn.
- 948,807. Tire pump for motor vehicles. M. L. Bastian, assignor to Olney Automobile Co., Ltd., all of Philadelphia.
- 948,845. Manufacture of filling or stuffing material. [The material referred to on other pages of this issue as "Pneumatic."] R. J. Caldwell, New Southgate, and F. Pfeumer, London, England.
- 948,903. Pneumatic tire. W. Odell, Tarrytown, N. Y.

ISSUED FEBRUARY 15, 1910.

- 949,001. Resilient tire. E. B. Mérioux, Paris, France.
- 949,060. Vehicle tire. [With studded tread.] W. J. Courtney, New York city.
- 949,154. Vulcanizer for repairing rubber tires, etc. V. H. Meyer, Cleveland, Ohio.
- 949,375. Vehicle tire. W. A. Köneman, Cudahy, Wis.
- 949,472. Pneumatic tire. W. M. Harley, assignor to J. Weerts, both of St. Louis.
- 949,561. Tire tool. S. Alley, Westminster, London, England.
- 949,572. Tire protector. F. P. Hayes, Brooklyn, assignor to Auto Armor Co., New York City.
- 949,636. Vehicle wheel. J. C. Rutherford, assignor to Iron Tire Pneumatic Co., all of New York city.

Trade Mark.

- 45,695. Kokomo Rubber Co., Kokomo, Ind. The word *Gridiron*. For rubber tires.

ISSUED FEBRUARY 22, 1910.

- 949,754. Pneumatic heel for boots and shoes. J. S. Busky, New York city.
- 949,888. Rubber tire for vehicles. [Pneumatic.] R. J. Evans, Franklin, Pa.
- 949,903. Spring tire. L. F. Kenney, Avondale, Ala., assignor of one-third to O. E. Heath.
- 949,947. Pneumatic tire and the like. [The invention relates to air tubes.] W. J. Thorold, London, England.
- 950,172. Tire repair device. J. C. Herman, Chicago.
- 950,416. Wheel tire. A. G. Thomson, assignor of one-half to A. Sutton, both of San Francisco.
- 950,417. Tire armor. *Same*.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the application, which in the case of these listed below was in 1908.

*Denotes Patents for American Inventions.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, FEBRUARY 2, 1910.]

- 21,250 (1908). Wheel with two tire carrying rims side by side. H. Brown, Morley, Leeds.
- 21,287 (1908). Two part detachable rim for tires. W. Höschen, Vluyn, Germany.
- 21,363 (1908). Inflatable rudder for aerial machines. W. E. Evans, London. (Motorluftschiff-Studienges, Berlin.)
- 21,441 (1908). Separation of caoutchouc from latex by electrical means. T. Cockerill, Colombo, Ceylon.
- 21,541 (1908). Wheel with two or more rims side by side for rubber tires. T. M. Davies, Llanelly.
- 21,545 (1909). Solid rubber tire with rubber rings interposed between the same and the rim flanges, the gripping surfaces of the tire and flanges being serrated. F. Wiebard, Hanover, Germany.

- 21,663 (1908). Pneumatic tire or tire cover formed over vulcanized india-rubber without fabric insertion. A. T. Collier, St. Albans.
- 21,673 (1908). Pneumatic tire with protective band of leather sections held together with metal plates. J. C. S. Hedderick, Liverpool.
- 21,710 (1908). Pneumatic tire, the interior of which consists of a series of balls which may be inflated separately or simultaneously through a connecting tube. T. D. Harries, and W. A. Hollier, Aberystwith.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, FEBRUARY 9, 1910.]

- 21,819 (1908). Non skid device for twin tires. J. R. Hamilton and A. E. Broadberry, Cheshunt, Hertfordshire.
- 22,040 (1908). Puncture proof band for tires. W. Hill, Birmingham, and J. P. Wilks, Uttoxeter.
- 22,047 (1908). Driving belt of fabric treated with a solution of rubber, balata, or the like. E. Poole, Kearsley, Lancashire.
- 22,051 (1908). Attachment of non skid covers to pneumatic tires. C. S. and J. A. Challiner, Manchester.
- 22,067 (1908). Spring wheel with solid rubber tire. A. T. Reid and A. Rieke, Glasgow.
- 22,100 (1908). Device for inflating motor tires while in motion. F. A. Deneuert, Kyabram, Victoria, Australia.
- 22,187 (1908). Creeping non skid thread for pneumatic tires. B. H. Sills and F. E. Page, Toronto, Canada.
- *22,206 (1908). Spring wheel with elastic cushions within springy steel bands. L. Plum, Chicago.
- 22,266 (1908). Elastic tire composed of an ordinary cover filled with composition of gutta-percha, feathers, etc. E. Kempshall, London.
- 22,267 (1908). Golf ball having a core of gutta-percha or other plastic material, mixed with the vanes of feathers, etc. E. Kempshall, London.
- 22,289 (1908). Rubber heel in which is embedded a frame of "metal or other material harder and cheaper than rubber," without affecting the resilience of the article. C. Forrest, Romiley, Cheshire.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, FEBRUARY 16, 1910.]

- 22,564 (1908). Elastic tire formed of elements—which may be stamped from old pneumatic covers—placed against each other around the rim and held in position by wires threaded to the elements. L. Gauchrand, Lyons, France.
- 22,579 (1908). Wheel comprising two coney disks and a pneumatic tire. J. Knight, Liverpool.
- 22,606 (1908). Apparatus for detecting tire punctures. A. L. Hathaway, London.
- 22,638 (1908). Self inflating tire. J. H. Everett, Thornton Heath, and two others.
- 22,649 (1908). Two part detachable rim for united tires. R. H. Lane, London.
- 22,668 (1908). Wheel with two rims or tires side by side. W. A. Harper, Glasgow.
- 22,698 (1908). Pneumatic tire with detachable tread band of rubber having inextensible metal wires at the edges. W. I. G. Lewis, Tamworth, and T. West, Glasgote, Warwickshire.
- 22,704 (1908). Sectional detachable rims for elastic tires. J. W. Hall and C. Baynes, London.
- 22,739 (1908). Tire consisting of an inflatable metal casing open at the periphery and closed in by an india-rubber cover held by detachable metal rim. A. Duni, Cava del Tirreni, Italy.
- 22,790 (1908). Device for indicating the deflation of a pneumatic tire. W. T. Watson, Didsbury, Lancashire.
- 22,893 (1908). Apparatus provided with a rasping cylinder for powdering waste rubber. T. Gare, New Brighton, Cheshire.
- 22,897 (1908). Vulcanizing flask for dentists' use. R. Sutcliffe, Stretford, Lancashire.
- 23,033 (1908). Device for preventing side slip in motor cars. H. A. Palmer, Kettering, Northamptonshire.
- 23,059 (1908). Rim for pneumatic tire. C. A. Bradshaw, Manchester, and three others.
- 23,077 (1908). Lever for detaching pneumatic tires. R. White, Hinckley.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, FEBRUARY 23, 1910.]

- 23,105 (1908). Disk wheel with solid rubber tire. R. T. Smith, Warrington.
- 23,107 (1908). Pressure gage for tire inflaters, and the like. H. Turner, Sheffield.
- *23,177 (1908). Case for spare tires. P. Evans, Philadelphia, Pennsylvania.
- 23,246 (1908). Tire composed of rubber tread blocks, with means for their attachment to the rim. J. R. Hamilton and A. E. Broadberry, Cheshunt, Hertfordshire.
- 23,264 (1908). Elastic composition for filling tires or cushions, or for use as a substitute for rubber. Made by dissolving colloids in glycerine and adding salicylic acid, tannin, Hetamethylenetetramine, and "lysoform." E. C. R. Marks, London. (A. Schaar, Hamburg, Germany.)
- 23,567 (1908). Detachable rim for pneumatic tires. E. Owen, Llandudno, Wales.
- 23,627 (1908). Rubber reclaiming process. Comminuted waste rubber, after treatment with alkali to remove free sulphur, is subjected to a temperature of 212° to 248° Fahr., and to high pressure, such as 1,000 pounds per square inch. R. Hutchinson, Glasgow, and three others.
- 23,630 (1908). A tire in which a rubber cover encloses a core grooved to form helical air spaces. T. W. and R. R. Moore, Manchester.
- 23,685 (1908). Pneumatic tire in which a flat spring metal band is enclosed between the air tube and cover. H. Pfeiffer, London.

- 23,748 (1908). Pneumatic tire comprising an air tube between which and the tread is a smaller tube filled with fine sand. G. A. Bennett, Goodmayes, Essex, and J. A. Smith, London.
- 23,751 (1908). Pneumatic tire comprising two air tubes in one cover. D. Marshall, Cheltenham.

THE FRENCH REPUBLIC.

PATENTS ISSUED (with Dates of Application).

- 494,562 (July 1, 1909). J. Saint-Pé. Method of applying a grooved rubber rim having a heel in a single piece, to any kind of a shoe, by hand or machine sewing.
- 494,679 (June 9). Wolfarth & Zimmermann. Compressed air cushion; shock absorber for cycles, baby carriages and other vehicles.
- 495,518 (July 28). A. R. Bangs. Tire capable of being automatically inflated and applicable to automobiles and other vehicles.
- 495,739 (Aug. 4). C. A. Parsons. Process and apparatus for the manufacture of electrical conductors.
- 495,678 (Aug. 3). Van Oosterzei. Process for the regeneration of rubber.
- 495,711 (July 23). Puntschart and Alscheck. Process for the manufacture of an elastic material.
- 495,843 (Nov. 24, 1908). Auberge. Heel for shoes for elastic tires.
- 491,814 (Aug. 9, 1909). T. Sloper. Improvement in pneumatic tires and apparatus for giving it effect.
- 491,900 (Aug. 11). J. H. Brooker. Protector for tires.
- 491,964 (March 9). L. Lege. Elastic tire.
- 496,021 (July 31). L. Liais. Improvement in tires of rubber and analogous substances.
- 496,029 (Aug. 6). Salzmann et Cie. Tissue for use between tire envelope and wheel rim.
- 496,203 (Aug. 18). A. Ascheri. Removable tread for pneumatic tire.
- 496,241 (Aug. 19). J. P. L. Hebrard. Tire protector.
- 496,610 (Aug. 30). R. Rondeau. Method of attaching elastic tires to wheels.
- 496,611 (Aug. 31). A. L. Carroll. Removable tire protector.
- 496,686 (Sept. 1). Cie. Generale d'Electricite. Substitute for resins and natural gums.
- 496,648 (Aug. 30). R. Guer, Vielmon, Moine, and Prévot. Revolving heel.
- 496,728 (Sept. 2). Peinartin, Pulm et Cie. Process of manufacturing waterproof shoes.
- 496,893 (Sept. 9). J. Mauger. Method of strengthening pneumatic tires.
- 496,903 (Sept. 10). E. Russell and Bishop. Improvement in tire protectors.
- 496,906 (Sept. 10). L. Hugot. Envelope for air chamber for bicycles.
- 496,912 (Dec. 17, 1908). J. Blanc and S. Blanc. Pneumatic tire cover.
- 497,041 (Sept. 16, 1909). A. Horsch et Cie. Tire protector for winter use.
- 497,000 (Sept. 14). R. Hutchison. Process for regenerating rubber.
- 497,026 (Sept. 11). P. Sausse. Process for the extraction of rubber and resins.
- 497,074 (Sept. 17). H. W. Johnson. Process for the purification and refining of gums.

[NOTE.—Printed copies of specifications of French patents can be obtained from R. Robet, Ingenieur-Conseil, 16 avenue de Villier, Paris, at 50 cents each, postpaid.]

THE RUBBER TRADE AT TRENTON

BY A RESIDENT CORRESPONDENT.

THE Home Rubber Co. report an increase in business for the first three months of this year of 25 per cent. over the same period of last year, and that all departments are affected by the increase. The installation of an automobile tire wrapping machine will give them an increase in the output of that department, and establish another milestone in their growth in tire manufacturing.

The Empire Rubber Manufacturing Co. will soon occupy their new plant, 60x90 feet, which will be used exclusively for the manufacture of tires. They have recently opened branches in Kansas City and Indianapolis. They report that their "Non-nerbestos" steam hose, which is of asbestos and rubber construction, patented some time ago, has met with much favor.

The Acme Rubber Manufacturing Co. report business thus far this year far in excess of any previous year in their history. They state that the present high price of raw rubber has not yet manifested itself in the number and size of orders received. All departments are busy, and they have contracts for all the tires they will produce this season.

The Thermoid Rubber Co. report excellent trade conditions. They have opened an office in Philadelphia, with Messrs. Spencer & Dando as their representatives, for the sale of their automobile goods. They are installing a general electric power equipment with the idea eventually of operating the plant electrically throughout. They have made recently some conveyor belts of

unusual dimensions, up to 50 inches wide, 8 plies, and weighing about 7,000 pounds.

The Essex Rubber Co., manufacturers of specialties for the mechanical and other branches of the rubber trade—and particularly for the shoe manufacturing trade—report a busy season. Their fiscal year just closed shows twice the volume of business of last year. They have added lately to their premises a fine three-story brick and steel building, in which is installed a complete machine shop, at the disposal of such of the company's customers as may require special molds or dies. Both the domestic and export business of the company are responding to the increased business of the country. Mr. C. H. Oakley, president and general manager of the company, has had an unusually wide experience in the rubber manufacture.

The United and Globe Rubber Manufacturing Cos. feel decidedly optimistic, and report sufficient contracts to carry them far into the future.

The Whithead Brothers Rubber Manufacturing Co. report very satisfactory conditions from the selling standpoint. They state the present prices of rubber have not in any way curtailed the demand for their goods.

The Joseph Stokes Rubber Co. are understood to have all the business they can handle, in both hard rubber and cotton hose departments.

The Mercer Rubber Co. have opened an office in Pittsburg, indicating that they are widening the scope of their operations in the pursuit of trade.

The Luzerne Rubber Co. have outgrown their existing premises. The addition to their plant announced in the February issue of THE INDIA RUBBER WORLD is being completed as rapidly as possible. One of the features of the improvement of their plant will be a machine shop, with an equipment that will make them independent in so far as machine work and repairs are concerned.

The Vulcanized Rubber Co. have all the business that they can take care of conveniently, but report that a continuance of the high prices of rubber is stimulating interest in celluloid and other insulating materials.

The Hamilton Rubber Manufacturing Co., through their agent, Mr. W. L. Blodgett, say that they are well satisfied with the present volume of business.

John E. Thropp's Sons Co. have been compelled to add largely to their equipment, to satisfy the demands made on them for molds for the rubber trade. They report working night and day, and are behind with orders.

General C. Edward Murray, treasurer of the Empire Rubber Manufacturing Co., returned recently from a brief vacation in Florida.

Mr. W. H. Sayen, Jr., treasurer of the Mercer Rubber Co., was married on March 31 to Miss Edith Conyers, daughter of Mrs. James Adams Conyers, at Hamilton, Bermuda. His brother, Frederick Sayen, secretary of the company, was best man. The bridegroom was vice-president of the class of 1905 at Princeton University, and the chairman of the class memorial fund. He is an enthusiastic cricketer, and it was while abroad with a cricket team that he met Miss Conyers in Bermuda.

The Raymond Rubber Co., manufacturers of reclaimed rubber, report that they have a satisfactory share of business.

L. Albert & Son, dealers in waste rubber, report scarcity in some stocks. Shoes are now coming in in large quantities, which can also be said of carriage and automobile tires. It is hinted that stocks are being withheld from the market by the smaller gatherers awaiting high prices.

THERE WERE 21,000 *Hevea* rubber plants in the nurseries of the British Guiana botanic gardens at the beginning of this year, ready for distribution during February. The price asked was \$3.75 per 100, or \$35 per thousand—the estimated cost of production. Besides, 30,000 seeds had been ordered.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

THESE have been following so quickly upon each other's heels that a busy man has no time to digest the prospectuses. In the financial column of a leading daily paper investors are advised to limit their dealings to companies which have well known names on the board—that is, names known in association with successful plantations. But in "boom" times, when so many are trying to "get in," people who have not followed the matter during the last few years do not know one name from another, and there is very little time available for study or for going about to ask for advice. With regard to the point of well known names, it is rather a matter for question whether a man can successfully direct innumerable companies; there must be some limit to his time and capacity.

RUBBER PLANTING COMPANIES.

Among the most recent flotations wild rubber propositions have been prominent. The history of wild rubber companies generally is not very exhilarating to read; something or other has always seemed to militate against their success. At the present time, however, there is this to be said for new issues of this class: they are already producing rubber, while many of the new plantation companies will do very little in this way until three or four years have elapsed and then, according to general expectations, prices will have fallen considerably.

One of the most recent wild rubber companies is the Agileté Lagos Rubber Estates, Limited, of Southern Nigeria, capitalized at £100,000. The rubber is mainly *Funtumia elastica*, though there are also *Landolphia* vines and "root rubber." A good deal is made in the prospectus of the fact that about 30 tons of *Funtumia* rubber from the Mabira Forest (Uganda) Rubber Co. has been sold at about 8 shillings per pound. This seems a high price, but what I have seen of it is certainly good quality compared with what came from Lagos about 25 years ago, at the commencement of its exploitation. Of course, the rise in price of the Uganda product apart from current market quotations is accounted for to a considerable extent by its freedom from impurities or what is the same thing to it, low loss on washing compared with the coast product of former days. I should think it doubtful whether the new company can produce anything as good from the forest, at any rate until the native methods, as is the case in the Mabira forest, are under technical control.

Another more or less wild rubber company is the Henriquez Southern Rubber Estates, Limited, of Panama, in which there is also a large acreage of plantation ready for tapping. Estimates are based on the price of 6 shillings per pound against the current price of 8s. 6d. per pound. I do not notice, however, in the prospectus any reference to the species of rubber tree. The price 8s. 6d. surely refers to Pará rubber, while the indigenous rubber mentioned in the prospectus is surely *Castilloa*, which is not quite the same thing.

The Manbesa Rubber Plantations, Limited, with a capital of £135,000, are located in German East Africa, and are highly thought of, it appears, by Herr Durnberg, the German colonial minister. Here the Ceará rubber is the principal product and this can be produced and delivered in London at 1s. 6d. per pound. The present selling price is 4s. 3d. and the prospectus estimates it at 2s. 6d. in 1914. This is not too conservative an estimate compared with the figure mentioned for Pará.

A TOPIC of interest which may be said to have caused a reaction in the trade is the taking over of the Liverpool Rubber Co., Limited, by Messrs. Charles Macintosh & Co., Limited. At the date of writing (March 1), the purchase is not an absolutely accomplished fact, as, although the purchase is

arranged, it has yet to be confirmed by an extraordinary general meeting of the Liverpool Rubber Co. There is little doubt, however, about the thing going through, and the shares of the Liverpool company, which have been for some time at a considerable discount, have recently had a sharp rise. Specialties of the Liverpool company have been elastic thread and rubber footwear, the latter being a branch not hitherto taken up by Macintosh & Co. Previous works taken over by Macintosh & Co. are the New Eccles Rubber Works, Limited; Broadhurst & Co., and Pickard's cable works, of Derby.

THIS new industrial rubber concern is certainly launched under good auspices, as the Dunlop company are going to market the product and Messrs. Harland & Wolff, the eminent shipbuilding firm of Belfast, are going to manufacture it at

PNEUMATIC (1910) LIMITED.

their Southampton works. We may take it that these firms have not associated themselves with the company without making careful investigations. The main object is to produce a material of a spongy nature to take the place of the inner tube in pneumatic tires, though a large field is also claimed for the product in upholstery and as a substitute for leather, and the like. Patents seem to have been taken out practically all over the world, though no details of the patent were given in the prospectus except in so far as reference was made to the use of compressed air. [Our correspondent, writing in an earlier issue—April 1, 1908, page 221—said of Pneumatic: "It is composed of gelatine and glycerine, but has compressed air blown into it to form a spongy material in which the air is retained in the cavities.—THE EDITOR.] It will be remembered that there are several existing patented products, such as "elastes," purporting to effect the same end, but it cannot be said that any great degree of success has rewarded the patentees; for one thing I understand that the increase of weight has proved a disadvantage. Pneumatic is the invention of an Austrian, Herr Robert Pfeumer, and though I have not yet seen any of it I take it to be a modification of ordinary rubber sponge.

With regard to rubber sponge, which is now being made by several firms, after having been for so long a monopoly of the Russian-American India-Rubber Co., of St. Petersburg, I note a recent patent of Emile Poizot, of France, in which the use of ammonia gas is claimed. I should have thought that this reagent was hardly patentable for the purpose at this time of day. Laarman's patent of 1909 seems to come near Pneumatic, as the solution of rubber has nitrogen gas forced into it under pressure and the product is filled into tires.

"THAT terrible word," as I once heard Mr. Haldane, the minister for war call it, at a mining institution dinner. Mr. Haldane's brother, Dr. J. S. Haldane,

ANKYLOSTOMIASIS.

F.R.S., is, I may say, the great British authority on the "hookworm" disease, having made a special study of it for the Home office when it was introduced into Cornwall and the Transvaal gold mines a few years ago. It is only in connection with these localities and the colliery districts of Westphalia that I have been familiar with the name, and I was rather surprised to see in THE INDIA RUBBER WORLD [February 1, 1910—page 162] that the disease has become a curse in the southern United States and that its ravages may be apprehended in the rubber districts of Ceylon and Malaya. I don't propose to discuss an unsavory matter at length, and shall merely say that if cleanliness takes the place of dirty habits in any locality there is little to fear as to the ravages of this disease. [The annual report of The Planters' Association of Ceylon for 1909, says: "The prevalence of this

ANOTHER WORKS ABSORPTION.

disease amongst immigrant coolies greatly affects the health and efficiency of our labor force"; and the importance of good sanitation is urged in the report upon all employers of labor.—THE EDITOR.]

THE fourteenth show of the Manchester and District Motor Trades Association was held in the City Hall, February 18-26.

**TIRES AT THE
MANCHESTER
MOTOR SHOW.**

The venue is a new one contiguous to Deansgate, where so many of the motor and tire companies have their show rooms. In many of these establishments the electric light was kept on until 10 P. M. for the benefit of visitors to the show, and in some cases the firms advertised that they were not exhibiting at the show, but that visitors could call and use their goods on the way. In the hall one missed a good many tire exhibitions of former years, such as the North British, Moseley's and Dunlop. Quite the most imposing stand was that of the Polack Tyre and Rubber Co., Limited, of Thuringia and London. In addition to the well known tires, large diameter flexible metallic tubing was prominent; also, fire brigade hose of various kinds. Their new oil proof jointing, called "granit," was to be had in small pieces gratis. The Polack "Surprise" solid tires for commercial vehicles are now supplied for vehicles up to 12 tons, the same being the case with the "Hercules" tire shown by the Dook-Swain Tire Co., and the Challiner tire prominent on the stand of the Shrewsbury & Challiner Tyre Co., Limited. This degree of strength is considerably above what one saw in these shows only a few years ago. No wonder the demand for rubber is increasing with tires 11 inches in cross section. Messrs. Charles Macintosh & Co., Limited, made a special feature at their stand of their new patent tire protector, which is stated to save 33½ per cent. of one's tire bill. The protector takes the form of a supplementary canvas tube, with a circumferential split forming an open overlapping joint. This tube is placed between the inner tube and the outer cover, its effect being to very greatly minimize the ordinary disastrous results of a cut or burst in the cover. At the Shrewsbury & Challiner stand was exhibited the "R. R. II." wheel, which is guaranteed as an absolutely non-puncturable pneumatic wheel. The adage "Wheels within wheels" is quoted in this case with truthfulness, for the invention consists, put in the briefest possible manner, of a pneumatic tired wheel within a solid tired wheel. The wheel looks rather cumbersome, and no doubt it is somewhat expensive, but it has been proved on the road that the combination of the advantages peculiar to pneumatic and solid tires give exceedingly satisfactory results.

As I am reporting a Manchester show it will not be out of place to refer somewhat at length to the further exhibits of the Shrewsbury & Challiner Tyre Co., Limited, whose headquarters are at Ardwick green, Manchester. They had a complete range of their patent "Giant" and "World" tires, suitable for all classes of vehicles weighing from 10 cwt. to 12 tons. The "World" tire is characterized by having a double wearing tread on a single foundation, which form has a decided advantage over the case of two separate tires on one wheel, where any separate strain borne by one of the treads is transmitted to the foundation and may easily give rise to a fracture. The foundation of the "World" tire being double that of a single tire, it follows that any such strains are more evenly distributed. The firm's patent detachable rim for solid tires was also in evidence; this, I understand, having proved specially valuable for foreign service, as it disperses with the use of a hydraulic press, thus enabling the fitting to be done by an ordinary workman. In a new type of steel wheel which was exhibited, the girders are of II section with welded joints, comparative lightness combined with strength being prominent features. A full range of pneumatic tires was to be seen, comprising plain, steel studded, square and cross-grooved types, and the motorist, whatever his idiosyncrasies, could hardly fail to satisfy his fancy.

THE article on this subject in the February INDIA RUBBER

WORLD (page 701) is of more than ordinary interest. The marketing of the small rubber content of Pontianak gum (gutta-jelutong), as known to commerce heretofore, has been proposed several times in England, and in at least one case plant on a large scale has been erected for the purpose of extracting the resin by volatile solvents. This venture, however, was not a financial success, both from the quality of rubber produced and on account of the loss of the solvent, a good deal of which escaped the condensing plant. Then, of course, the raw Pontianak had to be bought at British prices, with varying contents of water, some of it losing 70 per cent. in washing, though with the best only 30 per cent. On the dry material I have found the rubber to run from 18 to 25 per cent. Possibly improved methods of collection and coagulation may yield a product of higher rubber content, thus minimizing the work of resin removal which I presume is the process to be carried out, though no details on the point are given in the article. The rubber is certainly of good enough quality, and there will be no difficulty about a market for it. It only remains to be seen whether the new American company operating in Borneo can control the working cost so as to make the venture a success. Of course, this might be possible at present rubber prices, but difficult of achievement if a considerable fall took place. I take it that this is the case with Mexican guayule, which seems to be going on all right now, but which was difficult to deal with at the time of the last slump in rubber. The *Dyera* rubber is now on offer to British rubber manufacturers, and samples I have seen are satisfactory enough to all outward appearances. Some little hindrance to business has, however, I understand, arisen owing to the different ideas as to price prevailing between buyer and seller, and it is possible that the price at present being asked for the rubber will be somewhat reduced in order to facilitate business. I don't know what designation for the new rubber will be adopted uniformly by the trade. "Extracted rubber" is the name by which it seems to be known to our manufacturers.

EDITORIAL COMMENT.

OUR correspondent evidently has overlooked the detail outlined already in these pages that whatever rubber content may exist naturally in the latex of *Dyera costulata* has been well-nigh neutralized by the general employment, in the native practice, of kerosene as a coagulant, and that upon the employment of new agents is based the hope of the new company of being able to market Pontianak gum at very many times the hitherto current price of 5 or 6 cents a pound. The new method of coagulation remains a secret, but the fact that the ablest chemists in America, and capitalists of the highest standing, have given their approval to the new undertaking, at Gocbilt, Sarawak—where two years ago only jungle land existed—seems to justify the prominence that has been given to the subject by this journal. As to guayule rubber, to which our correspondent alludes, its merit was appreciated by American manufacturers at least 30 years before the material appeared to an important extent in this market. It was only when a \$30,000,000 company took in hand the production of guayule rubber that it came into general use. Profiting by this experience the promoters of the new Malaysian rubber enterprise have not entered the field without ample financial resources. Of course it remains to be seen what results will follow the new enterprise in Borneo. And, by the way, it remains for time to fix a permanent designation of the new rubber. It is safe to predict, however, that the producers will not favor "Extracted rubber," since all real rubber is "extracted" from trees.

THE government rubber plantations in Burma, at Mergui, 1,500 acres in extent, is reported to be paying its way, and is expected to make a handsome profit later on. Among the difficulties of rubber growing in Burma, it is reported that deer are in the habit of drinking the latex when they can get at it.

Some Rubber Interests in Europe.

PROSPERITY OF THE INDUSTRY IN GERMANY.

THE Continental Caoutchouc- und Guttapercha-Compagnie, of Hanover, were again in a position to distribute a dividend of 40 per cent. This favorable result has been attained in spite of the extreme high prices for raw materials which prevailed during a great part of the year. The call for the recent annual meeting stated that a motion would be voted upon to increase the capital of the company—already 6,000,000 marks—by 3,000,000 marks [= \$714,000].

Owing to the satisfactory business for the last book year the Hannoversche Gummi-Kamm Compagnie found themselves in a position to declare a dividend of 25 per cent., against 22 per cent. in the preceding year and 21 per cent. for the year 1907.

The dividends of Hannoversche Aktien- Gummiwaren-Fabrik are 6 per cent. on the preferred stock (the same as last year) and 6 per cent. on the ordinary, against 4 per cent. last year. The share issue is 250,000 marks preferred and 1,100,000 marks ordinary.

The dividend of Vereinigten Berlin-Frankfurter Gummiwaren-Fabriken, of Gross Lichterfelde, is 9 per cent. for the last business year, compared with 7 per cent. for the year preceding.

The firm of C. Müller—Gummiwaren-Fabrik, A.-G., in Berlin, report a dividend of 9 per cent., against 8 per cent. last year.

RIVALS IN THE BALLOON FABRIC INDUSTRY.

THE pending proposals for the reform of the French tariff schedules involve an increase of the duty on rubber fabrics for balloons, for instance, on which heretofore 200 francs per kilogram [= 18 cents per pound] have been paid, are in future to be liable to a duty of double this amount. The Berlin *Gummi-Zeitung* comments:

"The reason for this increase in duty became apparent at the last session of the [French] chamber of deputies. In reply to an inquiry of Deputy Benazet, who asked why the ministry of war has purchased the fabric for a balloon envelope from a German concern, the representative of the government stated that the fabric in question had not as yet been manufactured by any French concern, but that there was reason to expect that it would be possible to obtain it in the near future from French manufacturers. It is evident, therefore, that French concerns have recently been taking up the manufacture of balloon fabrics, and that they now want to protect themselves against the importation of German makes. It would be exceedingly desirable to see Germany succeed in preventing, if possible, this injury to her balloon fabric industry. For this purpose it would be necessary for the interested parties and the competent authorities to take adequate measures."

RUBBERIZED LEATHER IN BELGIUM.

THE Société Franco-Belge de Tannage des Cuirs au Caoutchouc (Franco-Belgian Rubber Tanned Leather Co.) has been organized at Brussels with a capital of 2,200,000 francs [= \$424,600]. This is participated in by the Rubber Tanned Leather Co., Limited, registered in London last year with a capital of £250,000 [= \$1,216,625]. An account of the processes and business involved appeared in THE INDIA RUBBER WORLD July 1, 1909 (page 356). The invention upon which the whole is based was brought to public notice first through the Rubberized Leather Co., Limited, of Melbourne, Australia.

SAMSON LEATHER TIRE COMPANY BANKRUPT.

THE French company, Pneumatiques-Cuir Samson, by a judgment of the commercial court of the Seine, was declared to be in a state of bankruptcy. The decree accorded to the company the benefits of judicial liquidation, and named a provisional assignee. This company's leather tread pneumatic tires had a considerable

vogue a few years ago. The trade in America was conducted by the Samson Leather Tire Co., who were exhibitors at the leading automobile shows.

TO UTILIZE THE EPINAT PROCESSES.

THE Société des anonyme des Caoutchoucs Comprimés Epinat (Epinat Processes Pressed Rubber Co.) is being formed at Nevers, France, with offices at 4, Faubourg de Lyon—the location of Monsieur Jean Epinat, described as a manufacturer and who contributes to the company his patents and processes. The object is stated to be the manufacture, purchase, sale and repairing of rubber goods of all kinds. The capital is 136,000 francs [= \$25,090].

NORTH BRITISH RUBBER PROFITS.

THE accounts for the past business year of the North British Rubber Co., Limited, show a balance at credit of profit and loss, after writing off depreciation, of £53,471 19s. 4d., which, with the balance from 1908, makes the amount disposable £65,685 19s. 10d. In addition to the fixed dividend of 5 per cent. on preferred shares the directors proposed a dividend of 5 per cent. on the ordinary shares, making a total of £23,750 for dividends. The debenture interest was £12,750, and, after making a liberal reserve, the carry over is £23,431 4s. 8d., against £12,204 0s. 6d. from the preceding year. During the later half of the year the company's business was affected unfavorably by the unprecedented high price of crude rubber, and it is feared that this may have a prejudicial effect on the coming year's working.

THE "SILVERTOWN" COMPANY WIN AT LAW.

AN action in the King's Bench division, in London, during the past month, was that of Ethelburga Syndicate, Limited, v. India-Rubber, Gutta-Percha, and Telegraph Works Co., Limited, for damages for alleged breach of contract. The alleged contract was for the building and laying of a cable between Colombia and Jamaica [see THE INDIA RUBBER WORLD, March 1, 1908—page 182]. The defense was that while negotiations were entered into, there was never a concluded bargain between the parties. His Lordship (Justice Lawrence) decided that there was no evidence to go to the jury, and judgment would be for the defendants. Counsel for plaintiffs intimated that the case would be taken to the court of appeal.

HUTCHINSON'S SIXTY YEARS OLD.

THE important French company, Etablissements Hutchinson, incorporated as Compagnie Nationale du Caoutchouc Souple, founded in 1850, are celebrating this year their sixtieth anniversary. The house was founded by Hiram M. Hutchinson, who had been interested in the industry in the United States, in view of the then large exports of American footwear to Europe, and was the first of the rubber factories established abroad by American interests. The Hutchinson company are the leading manufacturers of rubber footwear in France, besides which they have worked up an important business in tires. They have also a large factory in Germany, and sales bureaus in London and other leading capitals in Europe.

SYNTHETIC RUBBER IN COURT.

ONE of the most recent proposals for the making of synthetic rubber was aired in the London chancery court through an action by Mr. Alfred Suart against Mr. Matthew Sinclair Stevenson, Dr. Edwin J. Richardson, and the Consolidated Rubber Co., Limited. The Consolidated company was planned for the working of the Heinemann process of making synthetic rubber, in which the defendants Stevenson and Richardson were interested. The basis of the action by Suart was his allegation that he had undertaken to procure capital for the enterprise, under an agreement entitling him to commissions. The agreement was dis-

puted, but the judgment of the court was in favor of the plaintiff for £402 10s. in cash and 4,750 shares, besides which the defendants were to pay costs. In response to an inquiry by his lordship as to the value of shares of the Consolidated Rubber Co., Limited, at the time of the hearing, a witness said he was told that they had sold at about 1s. 6d. and 2 shillings.

GREAT BRITAIN.

At the forthcoming Aero and Motor Boat Exhibition at Olympia, London, the North British Rubber Co., Limited, who were the first manufacturers of British aeroplane and balloon cloth, will exhibit the following lines of products under the "North British" label: Aeroplane fabrics, balloon fabrics, pneumatic tires for aeroplane wheels, garments for aeronauts, and motor boat clothing.

A meeting of the shareholders of Okonite, Limited, was to be held in London on March 14 to hear an account of the winding up by the liquidator, Mr. T. W. Osborne.

The directors of Telegraph Construction and Maintenance Co., Limited, have declared dividends for 1909 amounting to 17½ per cent. The total for 1908 was 15 per cent.

Manchester exports classed as india-rubber goods, according to the United States consul, amounted during February last to £6,730 4s. 2d. in value, against £2,682 2s. 8d. for February, 1909. The balata and other belting included was of the declared value of £1,376 4s. 2d., against nothing in February, 1909.

The directors of the Stepney Spare Wheel, Limited, have declared an interim dividend at the rate of 20 per cent. per annum for the first half of the current business year.

W. T. Henley's Telegraph Works Co., Limited (London), have been awarded a contract for supplying and installing about 183 miles of electric wires and cables for lighting the city of Nanking, China, in competition with numerous German and other foreign firms.

GERMANY.

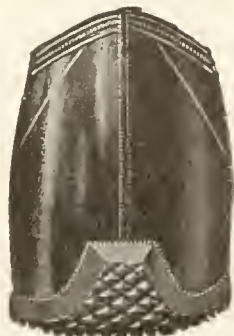
HERR BRUNO LINDEMANN has become director of the Deutsche "Prowodnik" Import Gesellschaft, formed recently in Berlin for the sale of the products of the Prowodnik factory of Riga, Russia. Herr Lindemann was until recently the Berlin representative of Hannoversche Gummi-Kamm Compagnie, A.-G.

ITALY.

MESSRS. PIRELLI & Co., of Milan, have recently laid a cable between Italy and the island of Sardinia, under a contract which provides for its maintenance by them for five years. The new cable is protected against the ravages of the teredo by the use brass tape armoring.

THE "KICKOFF."

THE illustration relates to the "Kickoff," first used by the Hood Rubber Co. (Boston), on their "Hood brand" self-acting shoes instead of the spur. It proved, however such a



success during the past season that the company are now using it on all their "Hood brand" styles, with a few exceptions. The Kickoff is referred to as preventing a short fit, and giving extra service just where it is needed.

LARGE DREDGING HOSE.

WHAT is said to be the largest piece of rubber hose yet manufactured is illustrated on this page. Its inside diameter is 29 inches; outside diameter, 33 inches. The hard service demanded of dredging hose is due to the fact that the sand and mud of the rivers and harbors naturally gravitate toward the lower places, particularly the channels, which require dredging at frequent intervals. When, as is generally the case, this movement is assisted by tidal action, the channels soon become too shallow for large vessels, and the giant steam suction dredge is then employed as the most economical means of restoring depth.

The centrifugal pumps in one of these dredgers must be equal to removing a 40 per cent. solution of sand and water, which, by the use of a pipe line, may be deposited on near-by marshes, reclaiming them for commercial use, and making up at least a part of the large expense involved in dredging. These pipe lines are made up of lengths of iron piping, mounted on pontoons, the lengths being connected by rubber tubing, the flexibility of



A LARGE SECTION OF DREDGING HOSE.

which permits the rise and fall of the sections made necessary by the tides. Of greatest importance, though, is the suction hose with which such a dredge must be equipped.

The hose here described was made as follows: A cold rolled steel rod an inch in diameter was formed into a spiral coil. Sheet rubber was then applied by hand so as to encase this coil and its interstices, it being intended that any slight imperfection in one layer would be offset by the next layer applied. This formed a tube or lining, such as would best withstand the action of the sand and other material which, being drawn rapidly through by thousands of tons, would otherwise soon destroy the hose by abrasure or cutting.

The completion of the hose resulted from the application of alternate layers of specially constructed duck and rubber, until the requisite strength had been obtained. A cover of gum was then put on to protect the hose from the action of the water from the outside, which otherwise would in time produce disintegration. The whole section was then vulcanized. This hose was made by the Combination Rubber Manufacturing Co., at Bloomfield, New Jersey, who, it is understood, have received orders for more hose of the same kind.

THE yield of the Mabira Forest (Uganda) Rubber Co., Limited, who are collecting *Funtumia* rubber, was reported for the nine months ending September 30, 1909, at 161,864 pints of latex, which averaged one pound of dry rubber to 2½ pints of latex. Atmospheric conditions and other conditions are stated to have slightly affected the number of pints necessary for one pint of rubber. The weight of rubber indicated is 64,746 pounds.

The Profits of Rubber Culture.

ONE HUNDRED PER CENT. FOR "CEYLON PLANTERS."

WHILE the last issue of THE INDIA RUBBER WORLD was on press it was not known in America that in the offices of Messrs. Cumberbatch & Co., Ambawattee House, Slave Island, Colombo, the directors of the Ceylon Planters' Rubber Syndicate, Limited, were drinking, in champagne, the health of the rubber planting enterprise in general, and of the Ceylon Planters' in particular, in celebration of their first 100 per cent. dividend on a year's trading. The news came a little later through a representative of the editor of the New York *Herald*, who had had a cable from Colombo, but wanted a guarantee of the accuracy of the figures. The *Herald* printed the news on the ground that THE INDIA RUBBER WORLD, "the official organ of the india-rubber trade," considered the cable "warranted by facts" existing in the rubber cultural interest.

The first fact in the case, as now known, is that the Hon. Mr. J. N. Campbell, chairman of the Ceylon Planters' Rubber Syndicate, Limited, on the date of their annual meeting, proposed the motion of the directors to declare the 100 per cent. dividend, and that the shareholders, on hearing the accounts read, voted to support the motion. Not only this, but the chairman pointed to the prospect of the dividend for the ensuing year reaching 170 per cent., on a "conservative estimate." All of which brought forth no comment from the Ceylon press; they have become prepared for extraordinary dividends from actual plantations producing actual rubber.

The Ceylon Planters' Rubber Syndicate, Limited, was formed in 1899, with 250,000 rupees [= \$81,108.32] capital, now fully paid. The company have 884 acres, in the Klang district, Federated Malay States, of which at latest reports 616 acres were planted to *Hevea* rubber, about one-half being now 8 years old. The rubber crop realized in 1906 was 9,561 pounds. In 1907 45,581 pounds were gathered, and a dividend of 15 per cent. was paid. The 1908 crop was 66,476 pounds, and the dividend 28 per cent. There were also small crops of coffee and cocoanuts. The rubber estimate for 1909 was 85,000 pounds, and the actual yield 100,437 pounds. The rubber crop for the current year is estimated at 145,000 pounds, at the lowest calculation, the greater part of which has been sold forward at 4 rupees [= \$1.28] per pound, and upon this result is based the prediction of a 170 per cent. dividend.

The dividend of 100 per cent., amounting to about \$81,000, is equal to 8 per cent. on more than \$1,000,000. On such earning capacity there doubtless are promoters who would not think of offering the company to the public for less than \$10,000,000, or £2,000,000 sterling.

The shares of this company are not traded in on the London Stock Exchange. Not even in the Ceylon stock market are any transactions in Ceylon Planters' rubber shares reported. Holders of them won't sell. They are not speculative shares. The latest recorded quotation, so far as known to us, was 5,050 rupees for 500 rupee shares. The share unit in future, by the way, will be 10 rupees.

KALUTARA CO., LIMITED—RESULTS.

At the fourteenth annual meeting (Colombo, February 8) of Kalutara Co., Limited, figures were presented which permit of the following comparison, regarding crops realized and some other details:

	Tea (lbs).	Rubber (lbs).	Profit	Dividends.
1905.....	395,275	1,398	Rs. 23,177	3%
1906.....	336,065	8,126	25,538	5%
1907.....	354,073	14,646	75,943	15%
1908.....	319,536	28,002	85,003	15%
1909.....	296,436	52,631	207,758	38%

The declining product of tea is attributed to the continued

growth of the rubber interplanted with it. It is stated that the last year's profit equalled 45 per cent. on the capital invested, but only 38 per cent. will be distributed in dividends. The figures under "Profit" above include balance brought forward in each year. It is stated that the oldest rubber trees on the estate, of which there are about 1,000, yielded 6 pounds on an average. The 500-rupee shares of the company were traded in recently at Colombo at 1,600 rupees.

RUBBER PLANTING IN CHIAPAS (MEXICO).

TO THE EDITOR OF THE INDIA RUBBER WORLD: I wish to express to you the appreciation which we feel toward you in reference to the articles in the February and March issues of your valuable paper, under the heading of "Castilloa Rubber in Chiapas (Mexico)," by Mr. J. L. Hermessen.

Articles of this character do great good to people like ourselves, who are attempting the cultivation of this wonderful product in our particular section of the country. Noticing in both articles the reference to our particular property, known as "La Aurora," the number of acres under cultivation accredited to us being less than they actually are, I feel that you will be glad to have information more up to date. We have at present 625 acres planted to rubber, all of which is growing perfectly, and gives every promise of being all that we could anticipate. Our planting is as follows: 200,000 one year old; 40,000 three years old; and 10,000 three to seven years old. We expect to do a large amount of clearing and planting during the next year. We anticipate great things in the future from this choice locality in the production of the *Castilloa elastica*. Yours very truly,

W. R. HEACOCK,

Treasurer Chiapas Land and Stock Co., Plantation, "La Aurora," Los Angeles, California, March 9, 1910.

PLANTING ON "RIO MICHOL" (MEXICO).

TO THE EDITOR OF THE INDIA RUBBER WORLD: I have been very much interested in the articles appearing in recent issues of your journal referring to the conditions on the rubber plantations of southern Mexico. I have read also the attack in the *American Magazine*. I am not acquainted with the one rubber plantation described in the latter publication, and cannot say that all the statements are untrue, but I will say that if even part of them are true it is the exception and not the general rule as to rubber plantations. I know something of that southern country. I have traveled the Usumacinta, Grijalva, and Tulija rivers; I have covered the distance between Monte Cristo and Salto de Agua by way of Palenque on horseback, time and again. I have visited more than a score of rubber plantations, and have failed to find on any of them conditions as pictured in the magazine referred to.

Take our own plantation—Rio Michol Plantation Co.—which is typical of the country. We secure our own labor and do not employ a labor agent. Thus the laborer gets every dollar that is charged against him. He is not compelled to buy from the company store unless he sees fit, but can often purchase an article there cheaper than he can in the towns. Men, women and children are not huddled together in a pen at night under lock and key, but each family has its own home to enter and leave at will. When a laborer has worked out his indebtedness and returns to his home town he is in as good health as the day he set foot on the plantation. And to show you he is well pleased with his life there he almost invariably wants to borrow more money before going home, promising to return in a month or two, or whenever we need him, and he keeps his promise.

The Rio Michol Rubber Plantation Co. (San Francisco, Cali-

ifornia) have a little over 6,000 acres of land. They have between 125,000 and 150,000 trees growing on the property, ranging from two to eight years old, and covering some 750 acres. They began their tapping last year, when they shipped 1,002 pounds of dry rubber. The resident manager, Mr. L. L. Kochenderfer, accidentally spilled a can of rubber milk last November, and in that accident discovered a new process of separation with which he is now experimenting. He believes he can separate the rubber from the milk in 30 minutes with absolutely no coagulant, and get a perfectly hard rubber with absolutely no stickiness. I hope to report to you further on this later.

Elyria, Ohio, March 14, 1910.

H. J. HAMILTON.

UTAH PLANTERS IN MEXICO.

THE Utah-Mexican Rubber Co. (Salt Lake City, Utah) have about 5,000 acres planted to rubber in the state of Tabasco, Mexico. The rubber now ranges in age from two to six years. THE INDIA RUBBER WORLD is advised that Mr. Noble Warrum, general manager of the company, is now on the plantation, preparing to tap the six-year-old trees. There are about 300 workmen, with their families, on the property. The company recently purchased 5,000 acres of adjoining land, with an idea of planting it to bananas.

RUBBER PLANTING NOTES.

THE Paris edition of the *New York Herald*, supported mainly by American readers, in common with most of the leading European newspapers, is devoting much space to the progress of rubber culture in the Far East, and especially to the British rubber craze.

Three rubber plantations in the Federated Malay States are mentioned as having been in the market six years ago at £150,000, without a buyer. They are now regarded as worth £6,000,000.

L. Bonaparte Wyse, a French owner of rubber plantations in the Far East, is quoted by the Paris edition of the *New York Herald* as of the opinion that 15 or 20 per cent. of the plantations now being formed will never become productive.

An official of The Castillea Rubber Plantation Co. (Portland, Oregon), advises THE INDIA RUBBER WORLD regarding their planting operations in Mexico: "Our company has cleared and planted 1,500 acres of rubber in the last two years, and has already cleared 500 acres more which are now drying under the hot sun, and will be burned over in April or early May, and will be planted not later than June, with 200 trees to the acre."

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

THE past month has been a repetition of big hopes and small results. Favorable as conditions may seem, yet this is not only not the active time of the year, but it is not an active dull season. The rubber business is not different from any other line of industry, and the same fate is common to all—good prospects and quiet business. One and all the rubber establishments state that there is very little to call good trade just now, although they are all planning on a very good season to come. There were nearly three weeks of the past month in which the rain ceased entirely and for a while it looked as though all of the forecasts about prosperous years were coming to naught. There was a great cry from the southern and central portions of the state on account of the threatened drought, and immediately business began to suffer. Fortunately during the past week the rains began again and the crops are saved. It is so long in the season now that there is little to fear as to further dry spells. In fact this week, the feeling is so improved that merchants are holding out once more the argument that San Francisco and the coast is at last on the verge of a most prosperous year. There is plenty of money to invest, but investors have not as yet

shown much confidence and put too many strings on their loans.

The Crandley Rubber and Supply Co. are a new company formed and incorporated in this city to enter upon an independent career in the rubber business. W. J. Crandley is the president and manager, Roy Hand, vice-president, and E. M. Crandley, secretary. Mr. William J. Crandley was formerly the active manager for the Plant Rubber and Supply Co. and is well and favorably known through the entire coast territory as an efficient and well informed rubber man. Roy Hand was formerly with the Callaghan Boiler Compound Co. E. M. Crandley was not heretofore engaged in this line of business. The new firm has leased a store at No. 41 California street, near to the water front and very convenient to the principal downtown stores of the wholesalers.

Squires & Byrne, dealers in rubber hose belting and packing, formerly located at No. 52 Steuart street, have moved to very much larger and more convenient quarters at No. 565 Mission street, where they have fitted up two stories and basement of a building 85 x 40 feet in dimensions. Several considerations had a share in the moving, although the principal one is that this firm's business has increased to such dimensions that their quarters on Steuart street could no longer accommodate them, and although their lease there had not yet expired they found it necessary to move. Their move was decided upon prior to their securing the agency for the Seamless Rubber Co. (New York and New Haven), but this acquisition will be much more conveniently handled in the new store. Another very important move which this progressive firm just made was the purchase of all the stock and lines of the Sterling Rubber Co.

Mr. A. F. Libis, the general auditor of The B. F. Goodrich Co., has been paying San Francisco a visit. Speaking of his opinion relative to tire conditions he said that although the price of tires was now unreasonably high, he believes they will undoubtedly be reduced before the output for next season is put on the market.

H. C. Norton, manager for the American Rubber Manufacturing Co., whose factory and salesrooms are at Emeryville, near Oakland, reports a very active business. This firm has been working overtime of late to get up with orders.

R. J. McNeilly, with the Barton Packing and Rubber Co., is now in Los Angeles looking after business for the firm in that locality. Mr. McNeilly is the sales manager for the company. They report the packing business as being very good.

William J. Gorham, of the Gorham Rubber Co., came back from Seattle, spent one day in San Francisco and then went on down to Los Angeles. There is not enough excitement here in the business line to detain him long, and he finds it most congenial to keep moving.

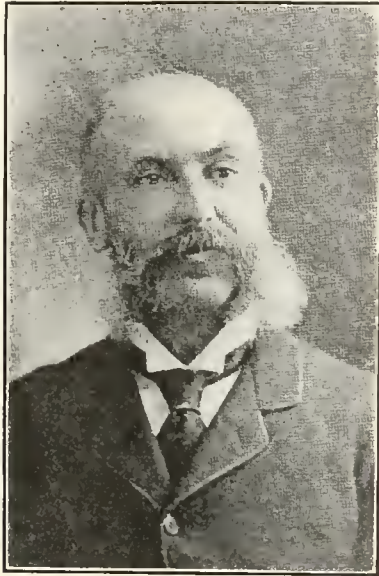
THE "CARPRINGCO" TIRES.

IN an age of machine-made products anything hand made, as a rule, carries a premium price; but like all rules, plus exceptions, this one has its exception in "Carpringco," which is an entirely hand made tire, yet is being marketed at standard prices. The New Jersey Car Spring and Rubber Co. manufacture this tire, and in an interview one of the company's officials stated:

"Last May when we started the manufacture of "Carpringco," our initial output was modest indeed, in view of the several excellent makes and at really low prices already on the market. But we felt so certain that our process would produce a tire as near perfection as is possible, that we did not hesitate to enter into the field of tire manufacture, and our confidence was fully justified, for we are now finding it necessary to run our tire factory to the fullest capacity in order to meet the increasing demands." In addition to tires, the Car Spring company are making a full line of casings and inner tubes.

THE OBITUARY RECORD.

JAMES HUGGINS, who died of apoplexy at his home, No. 11 Clifton place, Brooklyn, New York, on February 19, had long been active in the rubber footwear trade. He was born in Ireland November 21, 1848, and removed to Brooklyn at an early age with his parents. For years he was at the head of the New York shoe jobbing house of James Huggins & Co., and after the retirement of that firm from the trade he was at the head of the rubber department of jobbing houses. At the end he was connected with J. E. Bates & Co., No. 202 Church street,



THE LATE JAMES HUGGINS.

[From *Masonic Standard*, New York.]

New York. Mr. Huggins long had been prominent in Masonic circles. Funeral services were held in the Brooklyn Masonic Temple and were largely attended. The Cathedral quartette sang. The interment was at Greenwood cemetery, Brooklyn. Mr. Huggins is survived by a widow.

* * *

JOHN J. FIELDS, the founder of the New Jersey Car Spring and Rubber Co. (Jersey City, New Jersey), died on March 27 at his country home, Schooleys Mountain, New Jersey, after several months of illness, in his eighty-ninth year. Mr. Fields retired from active business several years ago, and was succeeded by his son, John J. Fields, Jr., in the presidency of the company named. THE INDIA RUBBER WORLD regrets that there was not time before going to press this month for a more adequate announcement of this sad event.

* * *

THOMAS J. SKINNER, who for a number of years was treasurer of the Stoughton Rubber Co. (Stoughton, Massachusetts), from which office he resigned about two years ago on account of ill health, died early in the month from an attack of apoplexy. He was one of the organizers of the Wakefield Saving Bank and served as its president. Later he was elected first president of Wakefield Coöperative Bank. Mr. Skinner was born in 1844, and was a civil war veteran. He is survived by two daughters (both married) and a son.

* * *

CHARLES CUSHMAN, superintendent of several departments at the factory of the National India Rubber Co. (Bristol, Rhode Island), died at his home on March 14, after an illness of several months, in his fifty-sixth year. Mr. Cushman, after going

through the public schools at Havana, Ohio—where he was born September 12, 1845—became employed in the factory of the Cleveland Rubber Co., after which he was for several years with the Chicago works of the Mechanical Rubber Co., and later for eight years general superintendent of the New York Belting and Packing Co., Limited. He went next to Manchester, England, where he remained for four years with David Moseley & Sons, Limited, rubber manufacturers. From Moseley's he came to the National factory. Mr. Cushman is survived by a widow, a daughter, and two sons, one of the latter being connected with the Moseley factory, and the other assistant superintendent of the National India Rubber Co.

* * *

GEORGE H. ALLING, president of the Royal Rubber Co. (Akron, Ohio), was killed accidentally in the factory on March 24. No one else was present at the time. When last seen alive Mr. Alling was on a step ladder near a rapidly moving shaft. It is supposed that his clothing was caught on the shaft and that he was whirled to death before he could call for help.

PNEUMATIC TIRES ECONOMICAL.

THE effect of the equipment of track sulkies with pneumatic tires in increasing trotting speeds has been noted more than once in these pages. Recently a very practical suggestion regarding the effect of pneumatics upon the sulkies themselves has been made by Mr. Fred W. Wright, agent in New York for a leading make of sulkies.

He said that before the advent of the pneumatic tires it was generally understood and believed among builders of track vehicles that McMurray & Fisher turned out more than a thousand sulkies a year. With five or six other prominent builders all doing a flourishing business, the number built and sold was then very large. In those days drivers rarely used a sulky more than one year, and very often they used up several in a single season, a few broken spokes, a slightly sprung axle or any other mishap usually serving to condemn the vehicle for racing.

Asked for an estimate of the number of track sulkies now sold in a year, Mr. Wright said:

"I doubt whether all the builders in the United States today find a market for more than 700 sulkies annually. The reason is that the modern pneumatic sulky is almost indestructible. Put a new pair of wheels on an old frame and you have, to all intents and purposes, a new sulky. I saw trainers last year using pneumatics that were built in 1893, and they may keep on using them for years to come."

The effect of the pneumatic tires on sulkies and sulky building has its counterpart in the effect of rubber tires on pleasure vehicles of all kinds, says the *New York Herald*. Operating as shock absorbers they have prolonged the life of the fashionable carriage beyond all calculation and have practically killed the repair business which before their introduction was one of the most profitable branches of carriage building.

AN INDIA-RUBBER BANK.

A REPORT from Paris states that a prominent group of French English, Belgian, and Dutch capitalists has taken the initiative for the organization of a special bank, whose business is to be exclusively confined to the establishing of new rubber plantations, participation in those already in existence, and the advancing of funds to plantation companies. The new company, which is to be known as the *Syndicat des Plantations d'extrême Orient* (Syndicate of Plantations in the Far East), will have its main office in The Hague, with branch offices in Batavia, Singapore, Delhi, and Meray. The provisional capital stock is to be 2,000,000 francs [= \$386,000], divided into 40 shares of 50,000 francs each.

News of the American Rubber Trade.

RUBBER GOODS—ANNUAL MEETING.

THE annual meeting of stockholders of the Rubber Goods Manufacturing Co., for the election of directors and the transaction of any other business which may properly be brought before the meeting, will be held at the principal office of the company, No. 15 Exchange place, Jersey City, New Jersey, on Thursday, April 14, 1910, at 12 o'clock noon. The transfer books will not be closed, but the New Jersey corporation law will not allow to be voted at said meeting any share of stock which shall have been transferred after March 25, 1910.

GETTING READY FOR THE CENSUS.

THE President of the United States issued on March 15 the customary proclamation in respect of the thirteenth decennial census, to be taken this year, beginning on April 15, and calling upon the people to cooperate with the employés of the census bureau with a view to making this great and necessary public undertaking a success.

STANDARD UNDERGROUND CABLE—CAPITAL INCREASED.

THE Standard Underground Cable Co. (Pittsburgh, Pennsylvania) have increased their capital from \$2,800,000 to \$3,500,000, by the declaration of a stock dividend of 25 per cent. Books closed on March 16 and reopened on March 23. The capital was increased from \$2,000,000 about three years ago. In addition to the regular 3½ per cent. dividend in January last, an extra 3 per cent. was declared, and a 14 per cent. special dividend. The stock has been quoted recently around \$3.20.

BOSTON YARN CO.—NEW SALES ALLIANCE.

THE Boston Yarn Co., with former headquarters at No. 346 Broadway, New York, have recently formed a sales alliance with the J. Spencer Turner Co. and the United States Cotton Duck Corporation, at No. 86 Worth street. The Boston Yarn Co. will retain their corporate identity; the management of the mills will remain unchanged, and the sales management will continue under the direction of Mr. R. P. M. Eagles, well known in the rubber trade. Mr. M. C. Taylor, formerly treasurer of the Boston Yarn Co., has been elected vice-president of the J. Spencer Turner Co. and of the United States Cotton Duck Corporation. This alliance will prove a valuable acquisition to the J. Spencer Turner Co., as it enables them to offer certain completing lines of fine ducks which they did not previously handle, and will undoubtedly tend to facilitate the sales operations of both companies.

NEW FOOTWEAR FACTORY AT GRANBY.

THE Miner Rubber Co., Limited (Granby, Quebec), are operating their new factory, which has been described already in THE INDIA RUBBER WORLD. Their capacity is referred to as 20,000 pairs of footwear per day. The product is marketed under two brands, "Miner" and "Shefford."

In the same connection may be mentioned the Walpole Rubber Co., Limited, also at Granby, who have begun the active production of heels.

CHICAGO RUBBER CLOTHING CO.

At the recent annual meeting of the Chicago Rubber Clothing Co. (Racine, Wisconsin), the following were elected directors: Charles H. Lee, Mrs. E. V. Laughton, David G. Jaynes, George C. Bryant, F. M. Knapp, and James Murphy. These directors elected the following officers: Charles H. Lee, president; Mrs. E. V. Laughton, treasurer; and George G. Bryant, secretary. This company, under the management of Mr. Bryant, has greatly extended its facilities, and lately has ordered an additional single end spreader for proofing up to 63 inch materials, and a geared double calender wide enough to double fabrics

of the same width. In addition to a general line of very attractive rubber clothing, including fabrics of practically every type and color, they are making an interesting line of specialties, such as bathing caps, fishermen's hats, toilet cases, and a variety of other very effective novelties.

JAMES BOYD & BROTHER—CHANGE OF LOCATION.

THE firm of James Boyd & Brother, Inc., so long connected with the rubber goods and fire equipment trade in Philadelphia, are now located at No. 1519 North American building. They had previously been located for twenty-five years at No. 14 North Fourth street. This business is descended from that of James Boyd & Sons, established in 1819 and dissolved in 1886, after which the present firm came into existence, first as a partnership and latterly as a corporation.

NEW HOUSE IN WASTE RUBBER.

THE firm of Oskar Konary, waste rubber merchants, Berlin, have opened a branch office in New York, at Nos. 16-18 Exchange place, under the management of Mr. Max Pflug.

A NEW RUBBER RECLAIMING PLANT.

THE Monatiquot Rubber Works Co., incorporated October 21, 1909, have begun the manufacture of reclaimed rubber, for which purpose the company was formed. The location of the factory is at South Braintree, Massachusetts—on the Monatiquot river, about 12 miles from Boston. Robert Cowen Harlow, president of the company, is a nephew of the late Robert Cowen, of the Boston Woven Hose and Rubber Co., and Mr. Harlow himself was for several years connected with the Woven Hose company, particularly in their reclaiming branch. James H. Stedman is treasurer of the company. Their head-office is at No. 555 Atlantic avenue, Boston.

THE SEASON OF INVENTORY.

NOTICES are posted at the factory of the National India Rubber Co. (Bristol, Rhode Island), of a shut-down beginning March 31, work to resume on Monday, April 18. This is the usual time of the year for taking inventory and making repairs in rubber footwear factories, the business year in that industry ending with the month of March.

The two factories of the Woonsocket Rubber Co. are closed for inventory and repairs, work to be resumed on Monday, April 11.

The usual annual shut-down at the factory of the Goodyear's India Rubber Glove Manufacturing Co. (Naugatuck, Connecticut) began on March 22, two days earlier than had been intended, on account of the breaking of the main shaft. The management were planning to replace this shaft during the season of repairs. Work is to be resumed on April 4.

TRADE NEWS NOTES.

THE forty-fourth regular quarterly dividend of 1¾ per cent. on the preferred shares of the Rubber Goods Manufacturing Co. was payable on March 15.

At a special meeting of the common council of Butler, New Jersey, announcement was made of the receipt of a check for a handsome amount from the American Hard Rubber Co., one of whose factories is located in that town, to be expended for the improvement of the town's fire apparatus.

A newspaper report is that since January 1 something like 3,500 men have been added to the working forces of the rubber tire factories of Akron, Ohio.

William H. Scheel (No. 159 Maiden Lane, New York) sends a monthly reminder to the trade interested in rubber factory supplies, in the shape of a neat little calendar for the month.

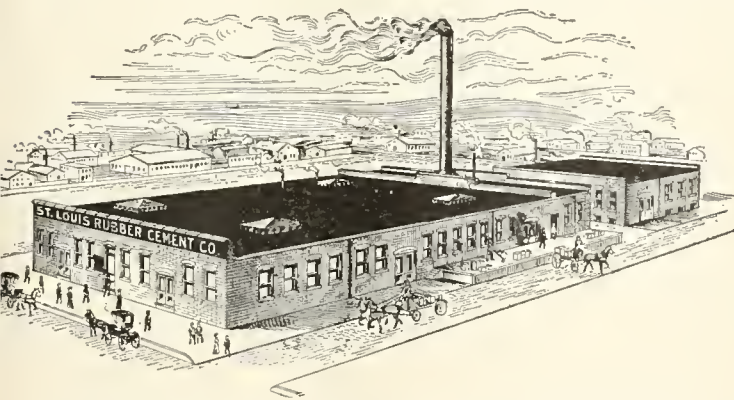
THE LATEST TIRE PATENT DECISION.

THE decision in favor of the plaintiff in the suit of The Single Tube Bicycle and Automobile Tire Co. v. Continental Rubber Works (Erie, Pennsylvania), in the United States circuit court for the western district of Pennsylvania, in the matter of the alleged infringement of the Tillinghast patent, No. 497,971, was appealed from, with the result that the circuit court of appeals has confirmed the decision of the lower court that the Tillinghast patent was not anticipated, is valid, and has been infringed. The decision in the circuit court was written by Judge Buffington, and is reported in 174 Fed. Rep., 50.

The Continental Rubber Works have entered into a license agreement for the balance of the life of the patent, which covers the standard type of single tube tires in the United States.

ST. LOUIS CEMENT SPREADING.

THE St. Louis Rubber Cement Manufacturing Co. (St. Louis) have acquired the Blick-Williams Co.'s insulating and tire tape business, in addition to their recent purchase of the National Rubber and Chemical Co., of Indianapolis. They are



equipped with the most modern tape making machines, including washers, spreaders, and calenders, and are turning out a complete line of shoe and rubber manufactures cements, as well as insulating and tire tapes, and are, in fact, equipped to supply anything included in this general class of goods.

MR. DE LISSER MAKES A CHANGE.

ANNOUNCEMENT was made at the Boston automobile show that Horace De Lisser, the well known president and general manager of the Ajax-Grieb Rubber Co., makers of the "Ajax" tires, made famous by their guarantee of 5,000 miles, has been elected to the vice-presidency with entire charge over the sales, of the new United States Motor Co., in which the Maxwell-Briscoe Motor Co. and the Columbia Motor Car Co. are already known as members. The new \$16,000,000 corporation considers itself fortunate in being able to induce such a man to join its executive organization, which is destined to be the strongest in the motor car industry of the world. In accepting the new honors Mr. De Lisser has found it advisable to resign from active connection with the Ajax-Grieb Rubber Co., which he created and whose great growth in the period of four years has been due entirely to the quality of its products and the shrewd, farsighted business administration he has given it. Mr. De Lisser is to be succeeded by William G. Grieb, formerly vice-president, and before the organization of the Ajax-Grieb Rubber Co., president of the Grieb Rubber Co. Mr. De Lisser became identified with the rubber business in 1894, when he conducted a large bicycle tire factory in England, which was later sold to a London syndicate headed by Ellis Parr, the banker. In disposing of this business Mr. De Lisser agreed to remain out of the rubber manufacturing for a term of five years. He then turned his attention to the American agency of the famous Worcestershire sauce, and made that table condiment known from Atlantic to Pacific. At the expiration of the five-year agreement to remain out of the rubber

trade he became identified with the International Rubber Co., of Milltown, New Jersey, remaining with this organization until the formation of the Ajax-Grieb Rubber Co. two years later. The wide experience of Mr. De Lisser in the management and sales department of his different business enterprises especially fits him for the new duties with the United States Motor Co.

RUBBER FACTORY INSURANCE.

At the annual meeting of the Rubber Manufacturers' Mutual Insurance Co., at Boston, on January 26, the financial statement presented showed a slight decrease in the amount at risk on December 31, 1909, as compared with the preceding year. The company's surplus, however, and the assets applicable to payment of losses both show a substantial increase. No change was made in the board of directors, and the officers were reelected. Mr. F. W. Moses was succeeded in the office of assistant secretary and assistant treasurer by Mr. W. B. Brophy. The statement furnished embraces the following details:

ASSETS.	
Bonds at market value.....	\$371,410.00
Cash in bank and office	48,977.82
Premiums in process of collection.....	13,441.52
Accrued interest	5,882.07
Total	\$439,711.41
LIABILITIES.	
Unadjusted losses	\$3,856.65
Expenses accrued	311.09
Taxes accrued, not due	7,108.91
Unearned premiums	228,931.06
Surplus	\$199,503.70
Amount at risk December 31, 1909.....	\$52,132,052.00
Premiums in force thereon	457,862.12
Premiums received during the year	459,507.28
Interest received during the year	16,628.50
Total income for the year	476,135.78
Losses incurred in 1909	23,998.28
Amount of deposit premium returned to policy holders	383,552.53
Average percentage of deposit premium returned in 1909	81.04%
Percentage of premium returned January 1, 1910..	85%
Cash assets available for payment of losses.....	\$428,434.76
Assessment liability	2,289,310.60
Total available for payment of losses.....	\$2,717,745.36

The report is fuller than hitherto in that it gives a list of the company's bond holdings at market value at the close of the fiscal year.

TRADE NEWS NOTES.

THE Empire Tire Co. (Trenton, New Jersey), have opened a branch in Indianapolis, Indiana, at No. 208 North Delaware street, under the management of Charles Weiland. This is the first direct branch opened in Indianapolis by a tire manufacturing company.

The Fairfield Rubber Co. (Fairfield, Connecticut) have contracted for an additional building, one story, 30 x 50 feet, to be used as a "spreader" room.

The Sanders Duck and Rubber Co. (St. Louis), for many years located at No. 807 Washington avenue, have arranged for the occupancy of new premises at Twelfth street and Washington avenue. The lease is for eight years, at a price which has not been made public but is understood to be \$8,000 per year.

Mr. William H. Mayo has been admitted to the long established Boston firm of W. F. Mayo & Co., wholesale rubber footwear dealers, Nos. 197-203 Congress street, Boston. He is a son of William F. Mayo, senior member of the firm, and a brother of George Hanover Mayo, the second member. Mr. W. H. Mayo has been in the store of the firm for several years, during which he has become familiar with the business.

NEW INCORPORATIONS.

ESSEX Rubber Co., March 1, 1910, under the laws of New Jersey; capital authorized, \$100,000. Incorporators: Clifford H. Oakley, Arthur E. Moon, William O. Anderson, and Arthur J. Anderson. Mr. Oakley has been manufacturing rubber specialties under this firm name for the past three years, and, since July, 1908, at the present location, May and Beak streets, Trenton, New Jersey.

F. W. Savage Rubber Co., February 21, 1910, under the laws of Maine; capital, \$360,000. Incorporators: Elton M. Thompson, C. F. Tenant, and William H. Gulliver, all of Portland, Maine.

Matador Tire and Vulcanizing Co., February 25, 1910, under the laws of Illinois; capital, \$60,000. Incorporators: Lambert G. Smith, Charles C. Griswald, and James R. Findlater. Location: No. 1400 Michigan avenue, Chicago.

Removable Tire Co., March 9, 1910, under the laws of Ohio; capital, \$10,000. Incorporators: J. H. Wolford, C. M. Krouse, J. E. Pierce, Ralph Walford, and Charles N. Stuckey. Location: Cedarville, Ohio.

J. W. Wood Elastic Web Co., March 3, 1910, under the laws of Massachusetts; capital, \$50,000. Incorporators and directors: George E. Belcher (president), John William Wood (treasurer and general manager), and Thomas Haydock (superintendent). Succeeds to business of Chelsea Braiding Co., at Stoughton, Massachusetts.

Cincinnati Rubberless Traction Wheel Co., March 3, 1910, under the laws of Ohio; capital \$10,000. Incorporators: Frank L. Mulholland, Art Atwood, Arthur H. Bandon, Robert J. Coulter, and E. R. Torgler. To manufacture a resilient wheel without rubber, patented by Newton Campbell, of Cleves, Ohio. Location, Toledo, Ohio.

The Banner Rubber Stamp and Seal Co., March 14, 1910, under the laws of Missouri; capital \$5,000, fully paid. Incorporators: R. H. Bischoff, Theodore W. Kisker, and Alexander Light, all of St. Louis.

EXPANSION OF THE NEW JERSEY CAR SPRING COMPANY.

THE Chicago branch of the New Jersey Car Spring and Rubber Co. has been moved to a new and more spacious office and salesrooms at No. 173 Randolph street, where will be carried a complete stock of the company's various lines of mechanical rubber goods, as well as the new "Carpringee" automobile tire in all sizes, insuring prompt shipments throughout the West. This office is under the management of Mr. C. G. Race, assisted by an increased staff of salesmen. Mr. J. A. Hull, as manager of the company's fire hose department for the West, has also made his headquarters at the same address.

To further facilitate the distribution of their products, the Car Spring company have established offices at St. Louis, Omaha, and in the Franklin building, at Philadelphia, the latter having been put in charge of Mr. Joseph S. Fireng, Jr. They are very shortly to open a branch in Boston, under the management of Mr. Frank V. Stewart. Mr. Stewart has had a business career which has given him a wide acquaintance in the rubber trade, especially in the East, he having been connected formerly for many years with a prominent rubber house.

The New Jersey Car Spring and Rubber Co., whose main offices and works are at Jersey City, New Jersey, was established in 1858.

AN ELECTRIC TIME SYSTEM.

THERE has long existed a need of a reliable and complete electric time system in large rubber mills, the satisfying of which seems to have been accomplished by the Standard Electric Time Co., as illustrated by their Catalogue No. 32. The most interesting feature of this system is their time stamp, electrically operated and controlled by a master clock, insuring uniformity of time throughout the plant, and eliminating all questions as to correctness and the difference of time as recorded by the clocks in the different departments, as is the case with the old system.

MR. GILBERT GOES TO THE PACIFIC COAST.

WILLIAM H. GILBERT, who had been treasurer of L. Candee & Co. (New Haven, Connecticut) since July 1, 1908, was lately appointed treasurer and manager of the Pacific Coast Rubber Co., with headquarters at Seattle, Washington. The Pacific Coast company, incorporated under the laws of Washington state, August 24, 1900, have organized an extensive list of retail stores in the leading coast towns, which stores have become a part of the distributing system of the United States Rubber Co., who are in control also of the rubber footwear factory of L. Candee & Co.

Mr. Gilbert began his connection with the trade 21 years ago as receiving clerk at the Millville factory of the Woonsocket Rubber Co. For some time he was assistant general manager of the Joseph Banigan Rubber Co., in addition to which he for several years audited the books of the branch offices of the United States Rubber Co., throughout the country.

H. Stuart Hotchkiss, since August, 1908, vice-president of L. Candee & Co., has been elected treasurer also. W. D. Walker, who recently joined the forces of the Candee company, has been elected to the new office of assistant treasurer. He is a brother-in-law of John J. Watson, Jr., of the United States Rubber Co.

TYER RUBBER CO.'S ANNUAL.

AT THE recent annual meeting of shareholders of the Tyer Rubber Co. (Andover, Massachusetts) the following were elected directors: John H. Flint, F. H. Jones, F. W. Thomas, E. G. Savery, F. T. Carlton, H. H. Noyes, H. G. Fiske, and N. F. Flint. Frederick H. Jones was reelected president and John H. Flint treasurer.

RUBBER CLUB OF AMERICA.

THE annual meeting of the Rubber Club of America (formerly the New England Rubber Club) will be held in Boston on Monday, April 18.

TRADE NEWS NOTES.

THE Rubber Products Co. (Barberton, Ohio) have been making marked progress of late. A new boiler house for the installation of new Stirling boilers with a capacity of 600 h. p. is in progress of construction.

The Falls Rubber Co., with headquarters at Akron and a factory at Cuyhoga Falls, Ohio, have increased their capital stock from \$75,000 to \$200,000. They are manufacturing automobile and bicycle tires, with orders booked ahead for several months, and also horseshoe pads.

The Hagstrom Brothers Manufacturing Co., Inc. (Lindsborg, Kansas), issue a 1910 calendar, the ornamental feature of which is the head of an Indian girl reproduced from an oil painting; attention is called in the margin to their blow out patch for tires.

The Firestone Tire and Rubber Co., Akron, Ohio, have opened a branch in San Francisco, at No. 442 Van Ness avenue, in addition to their two direct branches in Los Angeles and Seattle, and their agency in Portland, Oregon. They have thus four establishments on the Pacific coast for the distribution of their tires and rims. Two new general distributing agencies of the Firestone company are the Fort Wayne Vulcanizing Works, at Fort Wayne, Indiana, and the Burwell-Smith Auto Supply Co., at Oklahoma City, Oklahoma.

The Crocker Rubber Co. have removed their store in Brockton, Massachusetts—one of the nine stores in different cities controlled by the Crocker syndicate—from No. 139 Main street, which position they have occupied for seven years, to No. 227 Main street. The new store was opened on March 19.

E. F. Norton & Co., dealers in scrap rubber in Chicago, have combined their general offices and warehouse at one address, Nos. 718-720 South Canal street, where they will be in a better position both to handle shipments consigned to them and to fill orders.

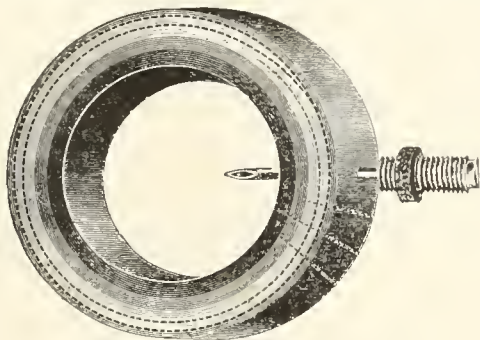
The Fisk Rubber Co. (Chicopee Falls, Massachusetts), have leased for 20 years a five-story building to be erected on Boylston street, next to the corner of Fairfield street, Boston.

THE TRENTON RUBBER INDUSTRY.

"The Rubber Industry of Trenton, New Jersey," is the title of a "booklet" in a series which the Trenton (New Jersey) *Evening Times* is publishing under the heading "Great Industries." Trenton long has been a center of importance in the rubber industry, but latterly the growth of this interest there has been especially marked. It is stated in this booklet that in ten years the annual output of the business has increased more than 60 per cent. The author of this booklet is Mr. Frank Thompson, of the staff of the newspaper named. He has with much pains outlined the history of the rubber industry in Trenton from its beginning, mentioning not only the various companies by name, but most of the persons who have contributed to their growth and success.

WALPOLE TO MAKE RUBBER TIRES.

The business of the Valveless Inner Tube Co., organized recently in New York for the sale in America of an automobile tire of French origin—"La Sans Valve"—has been acquired by the Walpole Rubber Co. (Walpole, Massachusetts), who, it is



SECTION OF "SANS VALVE" TIRE.

understood, intend engaging in its manufacture on a large scale. In noticing the exhibit of this tire at the French Automobile Show in Paris, THE INDIA RUBBER WORLD (February 1, 1909—page 179) spoke of it as a novelty there, "though its basic principle was employed years ago in tire making in the United States. . . . it is a hose pipe cycle tire, the inner part of which is a layer of unvulcanized rubber. Air is admitted by puncturing the tire, with the idea that when the inflator is withdrawn the puncture will heal at once, thus retaining the air." The tire has since been developed for use on automobiles.

THE HARD RUBBER INDUSTRY AT SEYMOUR.

ONE of the leading industrial enterprises of Seymour, Connecticut, is that of H. P. & E. Day, Inc., who recently have increased their plant to an important extent after having brought up their capital stock last year from \$40,000 to \$200,000. The company named are the manufacturers of special lines of pencils and penholders, and of hard rubber goods generally. In addition to the goods marketed under their own name, the firm mentioned manufacture one of the most widely used lines of fountain pen holders known to the world, under the name of the patentee. The hard rubber industry at Seymour originated sixty-seven years ago through the agency of the late Austin G. Day, who, after having obtained a license under Nelson Good-year's hard rubber patent to use the same in the manufacture of stationers' articles, in 1858 obtained a patent for an improved process in the preparation of hard rubber. Mr. Day at first had his hard rubber compounded at the factory of the Beacon Dam Co., at Beacon Falls, Connecticut. He was the first in America to treat successfully Assam rubber for factory use, and it is a legend in the trade that in a single year the Boston Belting Co. paid him enough in royalties on Assam rubber to pay for the building of a factory of his own at Seymour. In 1867 Austin G. Day patented his "Kerite" compound, and in 1872 he built an insulated wire factory at Seymour, out of which has grown an important business in the electrical industry. These enterprises

were apart from the hard rubber business mentioned at the beginning of this article. The business in 1872 came into the control of Henry P. Day and Edmund Day, brothers of the late Austin G. Day. The business was continued as a copartnership until December 31, 1901, when it became an incorporation under the laws of Connecticut. H. P. Day is president, Edmund Day treasurer, and Walter Randall secretary.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for five weeks, ending March 26:

COMMON STOCK, \$25,000,000.
[The treasury of a subsidiary company holds \$1,344,000.]

Last Dividend, April 30, 1900—1%.					
Week February	26	Sales	5,700 shares	High 45 ³ / ₄	Low 43 ¹ / ₂
Week March	5	Sales	3,900 shares	High 45 ³ / ₄	Low 43 ¹ / ₂
Week March	12	Sales	13,000 shares	High 48 ³ / ₄	Low 44 ¹ / ₂
Week March	19	Sales	4,800 shares	High 47	Low 44
Week March	26	Sales	1,900 shares	High 45 ¹ / ₄	Low 44

For the year—High, 52¹/₂, Jan. 3; Low, 35, Feb. 7.
Last year—High, 57³/₈; Low, 27.

FIRST PREFERRED STOCK, \$39,824,400.
Last Dividend, Jan. 31, 1910—2%.

Week February	26	Sales	2,000 shares	High 114 ³ / ₄	Low 113
Week March	5	Sales	2,700 shares	High 115 ⁷ / ₈	Low 114 ³ / ₈
Week March	12	Sales	3,100 shares	High 116 ¹ / ₂	Low 115 ¹ / ₄
Week March	19	Sales	1,030 shares	High 115 ⁷ / ₈	Low 114 ³ / ₈
Week March	26	Sales	710 shares	High 115 ¹ / ₂	Low 114 ³ / ₄

For the year—High, 116¹/₂, Jan. 10; Low, 108, Feb. 7.
Last year—High, 123¹/₂; Low, 98.

SECOND PREFERRED STOCK, \$9,965,000.
Last Dividend, Jan. 31, 1910—1¹/₂%.

Week February	26	Sales	.... shares	High	Low
Week March	5	Sales	500 shares	High 80 ⁷ / ₈	Low 80
Week March	12	Sales	1,600 shares	High 81 ¹ / ₂	Low 80 ¹ / ₂
Week March	19	Sales	425 shares	High 81	Low 80
Week March	26	Sales	175 shares	High 80	Low 80

For the year—High, 84, Jan. 3; Low, 76, Feb. 7.
Last year—High, 89¹/₂; Low, 67¹/₂.

SIX PER CENT. TRUST GOLD BONDS, \$19,500,000.

Week February	26	Sales	103 bonds	High 103 ¹ / ₂	Low 103
Week March	5	Sales	146 bonds	High 103 ³ / ₄	Low 102 ³ / ₄
Week March	12	Sales	207 bonds	High 103 ⁷ / ₈	Low 103 ¹ / ₄
Week March	19	Sales	166 bonds	High 103 ⁵ / ₈	Low 102 ⁷ / ₈
Week March	26	Sales	62 bonds	High 103 ³ / ₈	Low 103 ¹ / ₈

For the year—High, 104¹/₂, Jan. 15; Low, 102³/₄, March 5.
Last year—High, 106; Low, 102¹/₄.

LESS SEA ISLAND COTTON THIS YEAR.

THE net receipts at Savannah from September 1 to March 24 were 49,458 bales, against 49,690 bales last year. The crop in sight at all ports on March 24 was 88,525 bales, against 88,958 bales last year. John Malloch & Co. (Savannah), report stocks on March 24, 1910, and at corresponding previous dates, as follows:

	1908.	1909.	1910.
Savannah	7,861	11,392	4,701
Charleston	2,455	1,224	417
Total	10,316	12,616	5,118

RUBBER FACTORY SUPPLIES.

WILLIAM H. SCHEEL, of New York, calls attention to the fact that he is now carrying in store regularly chloride of sulphur and tetrachloride of carbon, carefully packed in small and large lots, to meet different demands from the trade. This house now carries no less than 20 different grades of rubber substitute—white, brown, and black—and is prepared to make prompt shipments.

SENECA RUBBER CO. (BUFFALO).

THE Seneca Rubber Co., organized recently at Buffalo, New York, and since March 1 located at No. 912 Main street, are manufacturers' agents in that territory for G & J tires, and for tire accessories in general. Roswell Park, Jr., is president and treasurer, and William O. Cramp is vice-president and secretary. The latter was manager of the tire agency formerly maintained by the G & J company in Buffalo.

GROWTH OF THE FIRESTONE TIRE AND RUBBER CO.

THE capital of the Firestone Tire and Rubber Co. (Akron, Ohio), has been increased from \$500,000 to \$4,000,000, and out of the new issue of stock dividend of 700 per cent. will be declared. The Firestone company was incorporated originally under the laws of West Virginia. This company will be dissolved and a charter for a new company by the same name has been obtained under the laws of Ohio. Plans have been made for a very large additional factory, work on which will be begun at once.

MORE CAPITAL IN SWINEHART TIRES.

AT a special meeting of the shareholders of Swinehart Tire and Rubber Co. (Akron, Ohio) during March it was voted to increase the capital from \$200,000 to \$400,000. Only \$100,000 of the new stock will be issued at once. It is the intention of the company in the near future to build an important addition to their factory.

PERSONAL MENTION.

MR. PAUL MORTON, president of the Equitable Life Assurance Society of New York, has been elected vice-president of the Pan American Railroad Co., and is now in Mexico on a tour of inspection of its line. The Pan American is now in operation from a point on the National Tehuantepec railway to the Guatemalan border transerving the rubber country of Chiapas described recently in THE INDIA RUBBER WORLD by Mr. J. L. Hermessen. The president of the Pan American is the Hon. David E. Thomson, lately United States ambassador to Mexico. This, by the way, is not the only interest which Mr. Morton has in Mexico. At least he is chairman of the board of directors of the Intercontinental Rubber Co., a concern interested so largely in guayule rubber.

Mr. Bertram G. Work, president of The B. F. Goodrich Co. (Akron, Ohio), accompanied by Mrs. Work, was a passenger on the *Kaiserin Auguste*, which sailed from New York for Hamburg on March 5.

Mr. Frank A. Seiberling, president of the Goodyear Tire and Rubber Co. (Akron, Ohio) accompanied by Mrs. Seiberling and their son, was recently a voyager to the Amazon valley, whence comes the rubber used in the tires of this important company.

Colonel George T. Perkins, long president of The B. F. Goodrich Co. (Akron, Ohio) and still on its board, has been making an extended stay at the Potter Country Club, at Santa Barbara, California, in the management of which his brother, D. T. Perkins, is interested. Colonel Perkins has been mentioned in newspaper dispatches of the past month as being much interested as a witness of the polo games at Santa Barbara.

Mr. David S. Collins, president of the Oxford Tripoli Co., Limited (New York), sailed on March 30 for England, in which country fossil flour is becoming popular among rubber manufacturers. This sale has increased very much of late, also in the United States.

On March 16 occurred the wedding of Mr. Alpheus Webster Smith and Miss Emily May, daughter of Mr. Lewis May, of Chicago. Mr. Smith is the western manager of the Goodyear's India-Rubber Glove Manufacturing Co., with headquarters in Chicago. Mr. Smith has started on a western trip to extend over four months, and it is serving also as a wedding journey. In August Mr. and Mrs. Smith will start for a visit to Europe.

The annual meeting of the stockholders of the Gutta Percha and Rubber Manufacturing Co. will be held at the office of the company, Nos. 126-128 Duane street, New York, on April 6, at 12 o'clock noon, for the purpose of electing directors and inspectors of election for the ensuing year.

Review of the Crude Rubber Market.

THE market for crude rubber has been in a decidedly unsettled condition during the month, and there is no basis for predicting the next outcome. Quotations at New York are based rather upon prices cabled from Europe and from primary markets than upon actual transactions locally. It is true that rubber has changed hands during the month at prices far higher than were ever known in the past. Of course manufacturers in the present condition of the market are not purchasing beyond their absolute requirements. Arrivals of Pará sorts thus far are but little larger than usual, the increase being infinitesimal as compared with the increased demand for rubber in the tire industry. Plantation rubber is being offered at the London auctions at the rate of about 200 tons a fortnight, but even this does not relieve the situation, particularly as there is no increased output from any other source. As this paper goes to press a London price is cabled of 11s. 4d. [= \$2.76] for Pará Upriver fine. It is difficult to make quotations in the present state of the market, but the figures below represent the result of careful efforts in the best informed circles.

THE LATEST QUOTATIONS.

Following are the quotations at New York for Pará grades, one year ago, one month ago, and March 31, the current date:

PARA.	Apr. 1, '10.	Mar. 1, '10.	Mar. 31.
Islands, fine, new.....	119 @ 120	199@ 200	252@253
Islands, fine, old.....	121 @ 122	201@ 202	none here
Upriver, fine, new.....	122 @ 123	212@ 213	270@271
Upriver, fine, old.....	125 @ 126	214@ 215	272@273
Islands, coarse, new.....	57 @ 58	80@ 90	105@106
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	94 @ 95	128@ 129	172@173
Upriver, coarse, old.....	none here	129@ 130	174@175
Cameté	63½@ 64	97@ 98	130@131
Caucho (Peruvian), ball...	83 @ 84	130@ 131	174@175

Caucho (Peruvian), sheet..	73 @ 74	101@102	135@136
Ceylon, fine, sheet.....	129 @ 130	230@ 231	260@ 261

AFRICAN.

Lopori, ball, prime.....	108@ 109	152@ 153	204@ 205
Lopori, strip, prime.....	none here	none here	none here
Aruwimi	94@ 95	none here	none here
Upper Congo, ball, red.....	96@ 100	133@ 134	170@ 171
Ikelemba	none here	none here	none here
Sierra Leone, 1st quality.....	95@ 96	135@ 136	170@ 171
Massai, red	95@ 96	136@ 137	171@ 172
Soudan niggers	85@ 86	none here	none here
Cameroon, ball	64@ 65	94@ 95	112@ 114
Benguela	59@ 60	88@ 89	none here
Madagascar, pinky	80@ 90	110@ 112	125@ 126
Accra, flake	20@ 21	30@ 31	34@ 35

CENTRALS.

Esmeralda, sausage	80@ 81	117@ 118	152@ 153
Guayaquil, strip	70@ 71	none here	120@ 121
Nicaragua, scrap	78@ 80	116@ 117	152@ 153
Panama	62@ 63	none here	none here
Mexican, scrap	none here	115@ 116	151@ 152
Mexican, slab	57@ 58	none here	none here
Mangabeira, sheet	52@ 53	85@ 86	none here
Guayule	30@ 31	75@ 76	99@ 100

EAST INDIAN.

Assam	92@ 93	100@ 101	none here
Pontianak .....	..@ 5	6¾@ 7	8¼@ 8½
Borneo	35@ 45	none here	none here

Late Pará cables quote:

	Per Kilo.	Per Kilo.
Islands, fine	12\$500	Upriver, fine
Islands, coarse	4\$800	Upriver, coarse
		Exchange

Latest Manáos advices:

Upriver, fine	15\$100	Exchange
Upriver, coarse	9\$600	

Statistics of Para Rubber (Excluding Caucho).

NEW YORK.		Total	Total	Total
Fine and Medium.	Coarse.	1910.	1909.	1908.
Stocks, January 31... tons	190	42 =	232	235
Arrivals, February.....	1440	559 =	2005	1754
Aggregating	1636	601 =	2237	1989
Deliveries, February.....	1479	572 =	2051	1355
Stocks, February 28....	157	20 =	186	385

	PARA.			ENGLAND.		
	1910.	1909.	1908.	1910.	1909.	1908.
Stocks, January 31... tons	1170	1075	1245	345	180	850
Arrivals, February.....	3660	3930	4250	1215	1105	1870
Aggregating	4830	5005	5495	1560	1345	2720
Deliveries, February.....	4365	3295	4130	1050	925	1355
Stocks, February 28....	465	1710	1365	510	420	1355
World's visible supply, February 28... tons	4,221	4,675	5,089			
Pará receipts, July 1 to February 28.....	23,130	22,340	21,195			
Pará receipts of caucho, same dates.....	3,910	4,000	3,295			
Afloat from Pará to United States, Feb. 28	1,980	2,000	657			
Afloat from Pará to Europe, February 28	1,170	1,420	1,950			

African Rubbers.

NEW YORK STOCKS (IN TONS).			
February 1, 1909.....	157	September 1, 1909.....	123
March 1.....	200	October 1.....	67
April 1.....	178	November 1.....	134
May 1.....	268	December 1.....	134
June 1.....	156	January 1, 1910.....	228
July 1.....	268	February 1.....	134
August 1.....	130	March 1.....	161

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for carload lots, per pound—show a decline since last month, particularly in shoes:

Old rubber boots and shoes—domestic..	8½@	8¾
Old rubber boots and shoes—foreign...	8¾@	8½
Pneumatic bicycle tires.....	7½@	7¾
Automobile tires	7½@	7¾
Solid rubber wagon and carriage tires..	9¼@	9¾
White trimmed rubber	10	@ 11
Heavy black rubber	6¼@	6½
Air brake hose	5	@ 5¼
Garden hose	2¾@	3
Fire and large hose	3¼@	3¾
Matting	1¾@	1¾

NEW YORK RUBBER PRICES FOR JANUARY (NEW RUBBER).

	1910.	1909.	1908.
Upriver, fine	1.78@	1.87	1.20@
Upriver, coarse	1.11@	1.15	.90@
Islands, fine	1.67@	1.81	1.13@
Islands, coarse .....	.71@	.75	.55@
Cameta .....	.79@	.85	.62@

NEW YORK RUBBER PRICES FOR FEBRUARY (NEW RUBBER).

	1910.	1909.	1908.
Upriver, fine	1.87@	2.10	1.20@
Upriver, coarse	1.15@	1.28	.91@
Islands, fine	1.81@	2.04	1.15@
Islands, coarse .....	.75@	.89	.57@
Cameta .....	.85@	.98	.62@

IMPORTS FROM PARÁ AT NEW YORK.

[The Figures Indicate Weight in Pounds.]

FEB. 23.—By the steamer <i>Javary</i> , from Iquitos:					
IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
Edmund Reeks & Co.....	23,400	.....	8,600	1,500 =	33,500
C. Ahrenfeldt & Sons.....	6,000	.....	.....	9,000 =	15,000
A. T. Morse & Co.....	7,800	.....	.....	..... =	7,800
TOTAL	37,200	.....	8,600	10,500 =	56,300
MARCH 4.—By the steamer <i>Clement</i> , from Manáos and Pará:					
Poel & Arnold.....	517,600	68,300	271,200	324,800 =	1,211,900
General Rubber Co.....	524,600	93,200	148,700	22,100 =	788,600
A. T. Morse & Co.....	118,500	43,300	146,000	42,700 =	350,500
New York Commercial Co.	65,200	15,200	24,600	32,300 =	137,300
Lawrence Johnson & Co...	55,600	10,400	125,400	..... =	101,400
C. P. dos Santos.....	44,300	10,400	26,200	..... =	80,900
Henderson & Korn.....	27,300	11,500	21,200	5,900 =	65,900
Hagemeyer & Brunn.....	15,700	.....	35,000	..... =	50,700
Edmund Reeks & Co.....	.....	.....	24,400	..... =	24,400
William E. Peck & Co.....	1,100	.....	1,300	..... =	2,400
TOTAL	1,369,900	282,300	824,000	427,800 =	2,904,000
MARCH 7.—By the steamer <i>Justin</i> , from Manáos and Pará:					
Poel & Arnold.....	168,000	92,500	87,200	22,200 =	369,900
General Rubber Co.....	250,000	43,400	97,700	7,700 =	398,800
New York Commercial Co.	76,800	29,000	15,200	58,700 =	179,700
A. T. Morse & Co.....	65,700	3,600	81,200	3,300 =	153,800
Hagemeyer & Brunn.....	35,800	6,100	.....	..... =	41,900
William E. Peck & Co.....	26,900	6,200	3,200	..... =	36,300
TOTAL	623,200	180,800	284,500	91,900 =	1,180,400
MARCH 10.—By the steamer <i>Guajara</i> , from Pará:					
Henderson & Korn.....	18,600	.....	83,800	..... =	102,400
A. T. Morse & Co.....	40,300	3,900	21,100	..... =	65,300
Poel & Arnold.....	.....	.....	11,200	25,800 =	37,000
Edmund Reeks & Co.....	3,000	.....	36,300	..... =	39,300
William E. Peck & Co.....	.....	.....	29,000	..... =	29,000
Lawrence Johnson & Co...	.....	.....	23,800	..... =	23,800
Hagemeyer & Brunn.....	6,800	.....	8,600	..... =	15,400
TOTAL	69,300	3,900	213,800	25,800 =	312,800
MARCH 16.—By the steamer <i>Gregory</i> , from Manáos and Pará:					
General Rubber Co.....	159,200	25,100	25,000	800 =	211,000
Poel & Arnold.....	177,800	34,400	21,700	60,800 =	294,700
Hagemeyer & Brunn.....	11,400	.....	23,800	..... =	35,200
New York Commercial Co.	9,600	4,300	11,000	4,200 =	29,700
Edmund Reeks & Co.....	6,400	.....	9,200	7,700 =	23,300
Lawrence Johnson & Co...	.....	.....	25,100	..... =	25,100
Henderson & Korn.....	16,800	5,000	.....	..... =	21,800
A. T. Morse & Co.....	1,100	.....	13,200	700 =	15,000
TOTAL	382,300	68,800	130,500	74,200 =	655,800

PARA RUBBER VIA EUROPE.

POUNDS.		MARCH 2.—By the <i>Laurentic</i> = Liverpool:	
NEW YORK COM. CO. (FINE)...	115,000		
GENERAL RUBBER CO. (FINE)...	65,000		
RAW PRODUCTS CO. (FINE)...	9,000		
LIVESY & CO. (COARSE)...	9,000		
POEL & ARNOLD (CAUCHO)...	56,000	254,000	
POUNDS.		MARCH 5.—By the <i>Lincoln</i> = Hamburg:	
GENERAL RUBBER CO. (FINE)...	11,000		
GENERAL RUBBER CO. (COARSE)...	35,000	46,000	
POUNDS.		MARCH 8.—By the <i>Vaderland</i> = Antwerp:	
A. D. HITCH & CO. (FINE).....	13,500		
POUNDS.		MARCH 12.—By the <i>Campania</i> = Liverpool:	
LIVESY & CO. (FINE).....	10,000		
LIVESY & CO. (COARSE).....	7,000	17,000	
POUNDS.		MARCH 14.—By the <i>Baltic</i> = Liverpool:	
NEW YORK COM. CO. (FINE)...	145,000		
GENERAL RUBBER CO. (FINE)...	50,000		
GENERAL RUBBER CO. (COARSE)...	22,500	223,500	
POUNDS.		MARCH 14.—By the <i>Minnewaska</i> = London:	
POEL & ARNOLD (FINE).....	7,000		
POUNDS.		MARCH 15.—By the <i>Indian</i> = Liverpool:	
NEW YORK COM. CO. (FINE)...	70,000		
GENERAL RUBBER CO. (FINE)...	67,000		
ROBINSON & CO. (FINE).....	11,500		
RAW PRODUCTS CO. (FINE)...	11,500	160,000	
POUNDS.		FEB. 21.—By the <i>Walderee</i> = Hamburg:	
POEL & ARNOLD (FINE).....	15,000		
POUNDS.		FEB. 23.—By the <i>Augusta</i> = Hamburg:	
NEW YORK COM. CO. (FINE)...	10,000		
NEW YORK COM. CO. (COARSE)...	27,000		
POEL & ARNOLD (COARSE).....	7,000	44,000	
POUNDS.		FEB. 25.—By the <i>Philadelphia</i> = London:	
POEL & ARNOLD (COARSE).....	15,000		
POUNDS.		MARCH 1.—By the <i>Colon</i> = Mollendo:	
W. R. GRACE & CO. (FINE)...	8,000		
W. R. GRACE & CO. (CAUCHO)...	5,000	13,000	
POUNDS.		MARCH 2.—By the <i>Cymric</i> = Liverpool:	
NEW YORK COM. CO. (FINE)...	225,000		
LIVESY & CO. (COARSE).....	11,000		
ROBINSON & CO. (FINE).....	22,500		
A. D. HITCH & CO. (FINE)...	7,000	265,500	
POUNDS.		MARCH 4.—By the <i>Adriatic</i> = London:	
POEL & ARNOLD (FINE).....	15,000		
Geo. A. Alden & Co. (Coarse)	5,000	20,000	

OTHER NEW YORK ARRIVALS.

CENTRALS.

[*This sign, in connection with imports of Centrals, denotes Guayule rubber.]

POUNDS.		FEB. 21.—By the <i>Byron</i> = Bahia:	
A. HIRSCH & CO.....	28,000		
POEL & ARNOLD.....	25,000		
J. H. ROSSBACH & BROS.....	15,000		
NEW YORK COMMERCIAL CO.....	13,500	81,500	
POUNDS.		FEB. 19.—By the <i>El Paso</i> = Galveston:	
CONTINENTAL-MEXICAN RUBBER CO.....		*135,000	
POUNDS.		FEB. 21.—By the <i>Allianza</i> = Colon:	
ISAAC BRANDON & BROS.....	20,000		
G. AM SINCK & CO.....	8,000		
A. ROSENTHAL & SONS.....	5,500		
HENRY MANN & CO.....	5,500		
J. SAMBRADA & CO.....	4,000		
ANDEAN TRADING CO.....	3,000		
NEW YORK COMMERCIAL CO.....	3,000		
PIZA, NEPHEWS & CO.....	3,000		
DUMAREST BROS. & CO.....	2,000		
WESSELS-KULENKAMPFF CO.....	2,500		
DELIMA CORTISSOZ & CO.....	1,000		
ROLDAN & VAN SICKLE.....	1,000		
EGGERS & HEINLEIN.....	1,000		
MECKE & CO.....	1,500	61,000	
POUNDS.		FEB. 21.—By the <i>Seguranca</i> = Tampico:	
ED. MAURER	*90,000		
POEL & ARNOLD	*30,000		
NEW YORK COMMERCIAL CO.....	*33,000	*153,000	

FEB. 21.—By <i>El Dia</i> =Galveston:	
Continental-Mexican Rubber Co.....	*145,000
FEB. 21.—By the <i>Walderssec</i> =Hamburg:	
George A. Alden & Co.....	*6,500
FEB. 21.—By the <i>Alleghany</i> =Colombia:	
Kunhardt & Co.....	5,000
A. Held.....	4,000
Maitland, Coppel & Co.....	2,000
Caballero & Blanco.....	1,000
Delima Cortissoz & Co.....	1,000
	13,000
FEB. 23.—By the <i>Victoria</i> =Hamburg:	
George A. Alden & Co.....	5,000
FEB. 23.—By the <i>Joachim</i> =Colon:	
G. Amsinck & Co.....	4,000
New York Commercial Co.....	2,500
A. Santos & Co.....	1,000
Isaac Brandon & Bros.....	1,500
	9,000
FEB. 23.—By <i>El Rio</i> =Galveston:	
Cont.-Mexican Rubber Co.....	*65,000
C. T. Wilson & Co.....	*20,000
	*85,000
FEB. 24.—By the <i>Proteus</i> =New Orleans:	
A. T. Morse & Co.....	2,500
Manhattan Rubber Mfg. Co..	1,000
	3,500
FEB. 26.—By the <i>Esperanza</i> =Frontera:	
Harburger & Stack.....	5,500
E. U. Tibbals & Co.....	5,000
H. Marquardt & Co.....	3,500
Poel & Arnold.....	2,500
A. Dumont & Co.....	1,500
Isaac Kubie & Co.....	1,000
Mexican Products Co.....	1,000
	20,000
FEB. 28.—By the <i>Sigismund</i> =Bogota:	
A. Held.....	7,000
Isaac Brandon & Bros.....	2,000
	9,000
FEB. 28.—By <i>El Sud</i> =Galveston:	
Continental-Mexican Rubber Co.....	*135,000
MARCH 1.—By the <i>Colon</i> =Colon:	
G. Amsinck & Co.....	8,000
Mecke & Co.....	4,000
Markt & Struller Co.....	1,000
	13,000
MARCH 2.—By the <i>Cymric</i> =Liverpool:	
Poel & Arnold.....	45,000
MARCH 2.—By the <i>Hugin</i> =Tampico:	
Ed. Maurer.....	*150,000
New York Commercial Co.....	*140,000
Poel & Arnold.....	*45,000
Isaac Kubie & Co.....	*40,000
	*375,000
MARCH 3.—By the <i>Tagus</i> =Colombia:	
Maitland, Coppel & Co.....	7,000
A. Held.....	7,000
R. del Castillo.....	4,000
A. M. Capen's Sons.....	3,000
Pablo Calvet & Co.....	2,000
Isaac Brandon & Bros.....	1,500
G. Amsinck & Co.....	1,500
J. Sambrada & Co.....	1,000
Graham, Hinkley & Co.....	1,000
	28,000
MARCH 4.—By the <i>Finland</i> =Antwerp:	
Poel & Arnold.....	*45,000
MARCH 4.—By <i>El Cid</i> =New Orleans:	
A. T. Morse & Co.....	8,000
Robinson & Co.....	3,000
A. Rosenthal & Sons.....	2,500
G. Amsinck & Co.....	2,000
W. R. Grace & Co.....	1,500
Wessels, Kulenkampff & Co.....	1,000
Eggers & Heinlein.....	1,000
	19,000
MARCH 4.—By the <i>Mexico</i> =Frontera:	
Harburger & Stack.....	4,000
E. U. Tibbals Co.....	3,500
General Export Co.....	3,500
W. L. Hadleigh.....	2,000
	13,000
MARCH 5.—By <i>El Dorado</i> =Galveston:	
Cont.-Mexican Rubber Co.....	*78,000
C. T. Wilson & Co.....	*13,000
E. S. Churchill.....	*5,000
	*96,000
MARCH 5.—By the <i>Lincoln</i> =Hamburg:	
George A. Alden & Co.....	*4,500
MARCH 7.—By the <i>Justin</i> =Ceara:	
J. H. Roszbach & Bros.....	7,000
MARCH 7.—By the <i>Altai</i> =Colombia:	
Maitland, Coppel & Co.....	10,000
Kunhardt & Co.....	4,500
Mecke & Co.....	2,500
Isaac Brandon & Bros.....	1,000
Delima, Cortissoz & Co.....	1,000
	19,000
MARCH 7.—By the <i>Vigilanca</i> =Tampico:	
Ed. Maurer.....	*67,000
New York Commercial Co.....	*67,000
Poel & Arnold.....	*35,000
	*169,000
MARCH 7.—By the <i>Advance</i> =Colon:	
Piza, Nephews & Co.....	11,000
Isaac Brandon & Bros.....	6,000
George A. Alden & Co.....	3,500
Fidanque Bros. & Co.....	3,500

Henry Mann & Co.....	3,000
Wessels-Kulenkampff Co.....	3,000
Delima Cortissoz & Co.....	1,500
New York Commercial Co.....	1,500
G. Amsinck & Co.....	1,000
H. Marquardt & Co.....	1,000
J. J. Julia & Co.....	1,000
	36,000
MARCH 9.—By the <i>Prins August</i> =Colon:	
G. Amsinck & Co.....	5,000
R. G. Barthold.....	1,500
Isaac Brandon & Bros.....	1,500
	8,000
MARCH 10.—By the <i>Voltaire</i> =Bahia:	
Poel & Arnold.....	35,000
J. H. Roszbach & Bros.....	33,000
New York Commercial Co.....	11,000
A. D. Hitch & Co.....	11,000
A. Hirsch & Co.....	8,000
	98,000
MARCH 11.—By the <i>Matanzas</i> =Tampico:	
Ed. Maurer.....	*70,000
Poel & Arnold.....	40,000
New York Commercial Co.....	33,000
For London.....	13,500
	156,500
MARCH 12.—By the <i>Moro Castle</i> =Mexico:	
Harburger & Stack.....	9,000
E. Steiger & Co.....	7,000
E. U. Tibbals & Co.....	6,000
George A. Alden & Co.....	5,500
A. Dumont & Co.....	2,500
General Export Co.....	1,000
H. Marquardt & Co.....	1,500
	32,500
MARCH 12.—By <i>El Paso</i> =Galveston:	
Continental-Mexican Rubber Co.....	*65,000
MARCH 12.—By the <i>Grant</i> =Hamburg:	
George A. Alden & Co.....	13,500
New York Commercial Co.....	*11,000
	24,500
MARCH 12.—By the <i>Compania</i> =Liverpool:	
George A. Alden & Co.....	5,000
MARCH 14.—By <i>El Rio</i> =Galveston:	
Cont.-Mexican Rubber Co.....	*65,000
C. T. Wilson & Co.....	*15,000
	*80,000
MARCH 14.—By the <i>Panama</i> =Colon:	
G. Amsinck & Co.....	12,000
Isaac Brandon & Bros.....	9,000
American Trading Co.....	4,000
Andean Trading Co.....	3,500
Mecke & Co.....	2,500
J. H. Roszbach & Bros.....	1,500
Caballero & Blanco.....	1,500
Suzarte & Whitney.....	1,500
Dumarest Bros. & Co.....	1,000
Eggers & Heinlein.....	1,500
	38,000
MARCH 14.—By the <i>Baltic</i> =Liverpool:	
Rubber Trading Co.....	7,000
MARCH 15.—By the <i>Zeeiland</i> =Antwerp:	
Ed. Maurer.....	*15,000
MARCH 16.—By the <i>Sarnia</i> =Greytown:	
G. Amsinck & Co.....	4,500
Suzarte & Whitney.....	1,500
Isaac Brandon & Bros.....	1,500
Roldan & Van Sickle.....	1,500
Graham, Hinkley & Co.....	1,000
Pablo Calvet & Co.....	1,000
	11,000
MARCH 16.—By <i>El Monte</i> =Galveston:	
Cont.-Mexican Rubber Co.....	*315,000
C. T. Wilson & Co.....	*22,500
	*337,500
MARCH 17.—By the <i>Oruba</i> =Bogota:	
Maitland, Coppel & Co.....	5,500
MARCH 17.—By the <i>Brazos</i> =Galveston:	
Poel & Arnold.....	*15,000
MARCH 18.—By the <i>Merida</i> =Mexico:	
H. Marquardt & Co.....	5,000
Harburger & Stack.....	1,000
	6,000
MARCH 18.—By <i>El Mar</i> =New Orleans:	
A. Rosenthal & Sons.....	4,000
A. T. Morse & Co.....	3,500
Robinson & Co.....	1,500
T. N. Morgan Co.....	1,500
A. N. Rotholz.....	1,000
	11,500
MARCH 10.—By the <i>Allianca</i> =Colon:	
Piza, Nephews & Co.....	6,000
J. Sambrada & Co.....	5,500
G. Amsinck & Co.....	5,000
Fidanque Bros. & Co.....	4,000
Henry Mann & Co.....	3,500
A. Rosenthal & Sons.....	3,500
Isaac Brandon & Bros.....	2,500
Roldan & Van Sickle.....	1,500
A. M. Capen's Sons.....	1,500
	34,000
MARCH 21.—By the <i>Seguranca</i> =Tampico:	
Ed. Maurer.....	*135,000
New York Commercial Co.....	*35,000
For Hamburg.....	5,000
	*175,000
MARCH 21.—By the <i>Alleghany</i> =Colombia:	
Kunhardt & Co.....	6,000
Maitland, Coppel & Co.....	3,500

R. del Castillo.....	3,000
A. Held.....	1,000
	13,500
MARCH 21.—By the <i>Tennyson</i> =Bahia:	
J. H. Roszbach & Bros.....	22,500
A. Hirsch & Co.....	5,000
	27,500
MARCH 22.—By the <i>Comus</i> =New Orleans:	
Manhattan Rubber Mfg. Co..	2,000
G. Amsinck & Co.....	1,000
	3,000
AFRICAN.	
POUNDS.	
FEB. 18.—By the <i>Pennsylvania</i> =Hamburg:	
General Rubber Co.....	17,000
George A. Alden & Co.....	20,000
A. T. Morse & Co.....	19,000
Poel & Arnold.....	13,500
Rubber Trading Co.....	9,000
Livesey & Co.....	6,500
Robert Badenhop.....	1,800
	86,800
FEB. 19.—By the <i>Louisa</i> =Lisbon:	
Poel & Arnold.....	35,000
FEB. 21.—By the <i>Walderssec</i> =Hamburg:	
Poel & Arnold.....	67,000
A. T. Morse & Co.....	45,000
George A. Alden & Co.....	20,000
General Rubber Co.....	20,000
Robert Badenhop.....	13,800
Rubber Trading Co.....	7,000
W. L. Gough Co.....	7,000
	179,800
FEB. 23.—By the <i>Victoria</i> =Hamburg:	
General Rubber Co.....	37,000
Rubber Trading Co.....	25,000
George A. Alden & Co.....	22,500
W. L. Gough Co.....	7,000
Robert Badenhop.....	22,200
Poel & Arnold.....	4,500
	116,200
FEB. 24.—By the <i>Kroonland</i> =Antwerp:	
A. T. Morse & Co.....	67,000
Poel & Arnold.....	45,000
	112,000
FEB. 25.—By the <i>Bretagne</i> =Havre:	
C. P. dos Santos.....	2,500
MARCH 1.—By the <i>Moncenio</i> =Lisbon:	
Poel & Arnold.....	25,000
MARCH 2.—By the <i>Cymric</i> =Liverpool:	
George A. Alden & Co.....	70,000
A. T. Morse & Co.....	50,000
Poel & Arnold.....	80,000
Robinson & Co.....	22,500
Livesey & Co.....	2,500
	225,000
MARCH 2.—By the <i>Berlin</i> =Genoa:	
W. L. Gough Co.....	8,000
MARCH 2.—By the <i>Laurentic</i> =Liverpool:	
Poel & Arnold.....	45,000
Livesey & Co.....	9,000
A. T. Morse & Co.....	8,000
George A. Alden & Co.....	5,500
W. L. Gough Co.....	7,000
	74,500
MARCH 3.—By the <i>Chicago</i> =Havre:	
A. T. Morse & Co.....	13,500
MARCH 4.—By the <i>Finland</i> =Antwerp:	
A. T. Morse & Co.....	18,000
W. H. Stiles.....	11,000
W. L. Gough Co.....	5,500
	34,500
MARCH 5.—By the <i>Adriatic</i> =London:	
Poel & Arnold.....	55,000
George A. Alden & Co.....	45,000
Livesey & Co.....	11,000
	111,000
MARCH 5.—By the <i>Lincoln</i> =Hamburg:	
George A. Alden & Co.....	11,500
Poel & Arnold.....	11,000
W. L. Gough Co.....	8,000
A. T. Morse & Co.....	5,000
Rubber Trading Co.....	5,000
	40,500
MARCH 8.—By the <i>Minnctonka</i> =London:	
George A. Alden & Co.....	11,000
MARCH 8.—By the <i>Vaderland</i> =Antwerp:	
A. T. Morse & Co.....	55,000
Poel & Arnold.....	48,000
George A. Alden & Co.....	25,000
H. A. Gould Co.....	5,000
	133,000
MARCH 10.—By the <i>Belford</i> =Lisbon:	
General Rubber Co.....	115,000
W. L. Gough Co.....	11,000
	126,000
MARCH 10.—By the <i>Hudson</i> =Bordeaux:	
C. P. dos Santos.....	11,000
MARCH 11.—By the <i>President Grant</i> =Hamburg:	
A. T. Morse & Co.....	110,000
W. L. Gough Co.....	11,000
Livesey & Co.....	7,000
Rubber Trading Co.....	11,000
Robert Badenhop.....	2,200
Poel & Arnold.....	7,000
George A. Alden & Co.....	7,000
	155,200

MARCH 12.—By the <i>Campania</i> =Liverpool:	
George A. Alden & Co.....	22,500
MARCH 14.—By the <i>Baltic</i> =Liverpool:	
George A. Alden & Co.....	125,000
Poel & Arnold.....	100,000
A. T. Morse & Co.....	34,000
Robinson & Co.....	34,000
General Rubber Co.....	5,500
W. L. Gough Co.....	2,500
	301,000
MARCH 14.—By the <i>Amerika</i> =Hamburg:	
A. T. Morse & Co.....	34,000
Poel & Arnold.....	33,000
Rubber Trading Co.....	9,000
General Rubber Co.....	7,000
	83,000
MARCH 14.—By the <i>Minnewaska</i> =London:	
Poel & Arnold.....	30,000
George A. Alden & Co.....	22,500
Livesey & Co.....	7,000
	59,500
MARCH 15.—By the <i>Indian</i> =Liverpool:	
George A. Alden & Co.....	60,000
A. T. Morse & Co.....	65,000
Poel & Arnold.....	55,000
W. L. Gough Co.....	11,000
Rubber Import Co.....	4,500
	195,500
MARCH 15.—By the <i>Zeeland</i> =Antwerp:	
Rubber Trading Co.....	22,500
A. T. Morse & Co.....	11,000
	33,500
MARCH 16.—By the <i>Gothland</i> =Antwerp:	
Poel & Arnold.....	45,000
H. A. Gould Co.....	5,000
	50,000
MARCH 16.—By the <i>Oceanic</i> =London:	
Poel & Arnold.....	125,000
MARCH 17.—By the <i>Leititia</i> =Lisbon:	
Poel & Arnold.....	67,000
MARCH 21.—By the <i>Lapland</i> =Antwerp:	
A. T. Morse & Co.....	80,000
Poel & Arnold.....	35,000
W. L. Gough Co.....	5,000
	120,000

EAST INDIAN.

[*Denotes plantation rubber.]

FEB. 18.—By the <i>Pennsylvania</i> =Hamburg:	
A. T. Morse & Co.....	22,500
FEB. 21.—By the <i>Wyneric</i> =Singapore:	
Heabler & Co.....	22,000
George A. Alden & Co.....	11,000
Otto Isenstein & Co.....	11,000
Poel & Arnold.....	11,000
	55,000
FEB. 25.—By the <i>Philadelphia</i> =London:	
Poel & Arnold.....	*115,000
New York Commercial Co.....	*50,000
	*165,000
FEB. 26.—By the <i>Indramayo</i> =Singapore:	
W. L. Gough Co.....	15,000
Heabler & Co.....	11,500
Otto Isenstein & Co.....	7,000
Malaysian Rubber Co.....	*14,000
	47,500
MARCH 2.—By the <i>Cymric</i> =Liverpool:	
A. T. Morse & Co.....	*11,000
MARCH 2.—By the <i>Mesaba</i> =London:	
General Rubber Co.....	*11,000
Robinson & Co.....	*7,000
	*18,000
MARCH 2.—By the <i>Shimosa</i> =Singapore:	
Heabler & Co.....	22,500
Otto Isenstein & Co.....	22,500
George A. Alden & Co.....	11,000
Poel & Arnold.....	11,000
W. L. Gough Co.....	7,000
	74,000

MARCH 3.—By the <i>Axenfels</i> =Colombo:	
New York Commercial Co....	*25,000
A. T. Morse & Co.....	*22,500
	*47,500
MARCH 5.—By the <i>Adriatic</i> =London:	
Poel & Arnold.....	*115,000
New York Commercial Co....	*60,000
Poel & Arnold.....	9,000
George A. Alden & Co.....	5,000
	189,000
MARCH 5.—By the <i>President Lincoln</i> =Hamburg:	
Rubber Trading Co.....	5,000
Robert Badenhop.....	5,100
	10,100
MARCH 7.—By the <i>Tannefels</i> =Colombo:	
A. T. Morse & Co.....	*20,000
New York Commercial Co....	*11,000
	*31,000
MARCH 8.—By the <i>Vaderland</i> =Antwerp:	
Poel & Arnold.....	*56,000
New York Commercial Co....	*5,000
	*61,000
MARCH 8.—By the <i>Minnetonka</i> =London:	
New York Commercial Co....	*30,000
General Rubber Co.....	*13,500
A. T. Morse & Co.....	*13,500
Robinson & Co.....	*11,000
	*68,000
MARCH 10.—By the <i>St. Louis</i> =London:	
Poel & Arnold.....	*15,000
MARCH 11.—By the <i>Grant</i> =Hamburg:	
George A. Alden & Co.....	30,000
Rubber Trading Co.....	2,500
	32,500
MARCH 14.—By the <i>Baltic</i> =Liverpool:	
A. T. Morse & Co.....	*22,500
Livesey & Co.....	5,000
	27,500
MARCH 14.—By the <i>Minnewaska</i> =London:	
Poel & Arnold.....	*45,000
New York Commercial Co....	*7,000
A. T. Morse & Co.....	11,000
Poel & Arnold.....	11,000
	74,000
MARCH 16.—By the <i>Oceanic</i> =London:	
Poel & Arnold.....	*55,000
MARCH 18.—By the <i>Wray Castle</i> =Singapore:	
W. L. Gough Co.....	22,500
Heabler & Co.....	33,500
Poel & Arnold.....	17,000
Robinson & Co.....	9,000
Malaysian Rubber Co.....	*10,000
	92,000
MARCH 19.—By the <i>Rotenfels</i> =Colombo:	
A. T. Morse & Co.....	*25,000
New York Commercial Co....	*15,000
	*40,000
MARCH 21.—By the <i>Minneapolis</i> =London:	
Poel & Arnold.....	*22,500
Robinson & Co.....	*9,000
New York Commercial Co....	*11,000
	*42,000
MARCH 21.—By the <i>Vandana</i> =Singapore:	
Malaysian Rubber Co.....	*8,000

GUTTA-PERCHA.

MARCH 1.—By the <i>Shimosa</i> =Singapore:	
Poel & Arnold.....	225,000
George A. Alden & Co.....	125,000
W. L. Gough Co.....	300,000
Heabler & Co.....	900,000
L. Littlejohn & Co.....	325,000
D. A. Shaw & Co.....	150,000
	2,025,000
MARCH 18.—By the <i>Wray Castle</i> =Singapore:	
W. L. Gough Co.....	250,000
Poel & Arnold.....	250,000
George A. Alden & Co.....	450,000
L. Littlejohn & Co.....	450,000
Heabler & Co.....	700,000
D. A. Shaw & Co.....	110,000
	2,210,000
GUTTA-PERCHA. POUNDS.	
FEB. 18.—By the <i>Pennsylvania</i> =Hamburg:	
E. Oppenheim.....	11,500
FEB. 23.—By the <i>Victoria</i> =Hamburg:	
E. Oppenheim.....	20,000
MARCH 2.—By the <i>Shimosa</i> =Singapore:	
Heabler & Co.....	15,000
MARCH 18.—By the <i>Wray Castle</i> =Singapore:	
Heabler & Co.....	11,500
BALATA.	
FEB. 23.—By the <i>Suriname</i> =Demerara:	
George A. Alden & Co.....	2,500
Ed. Maurer.....	2,500
Frame & Co.....	1,000
	6,000
MARCH 15.—By the <i>Saramaca</i> =Trinidad:	
J. A. Pauli & Co.....	2,000
George A. Alden & Co.....	1,500
Gillespie Bros. & Co.....	1,000
	4,500
MARCH 11.—By the <i>President Grant</i> =Hamburg:	
W. L. Gough Co.....	5,500

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—FEBRUARY.

Imports:	Pounds.	Value.
India-rubber.....	9,413,594	\$10,332,444
Balata.....	55,063	23,329
Gutta-percha.....	35,408	16,269
Gutta-jelutong (Pontianak).....	3,369,109	152,588
Total.....	12,873,174	\$10,524,630
Exports:		
India-rubber.....	170,801	\$194,433
Gutta-percha.....	26,052	2,901
Reclaimed rubber.....	52,016	5,377
Rubber scrap, imported... ..	1,278,038	\$94,777

BOSTON ARRIVALS.

	POUNDS.
FEB. 3.—By the <i>Izernia</i> =Liverpool:	
Poel & Arnold (Africans).....	56,000
FEB. 9.—By the <i>Belgravia</i> =Hamburg:	
J. E. O'Dell (Africans).....	4,500
FEB. 15.—By the <i>Winfredau</i> =Liverpool:	
Rubber Trading Co. (Africans).....	15,000
FEB. 17.—By the <i>Sachem</i> =Liverpool:	
Poel & Arnold (Africans).....	16,500
FEB. 14.—By the <i>Wyneric</i> =Singapore:	
Various importers (Jelutong, etc.).....	760,000
FEB. 21.—By the <i>Indramayo</i> =Singapore:	
Various importers (Jelutong, etc.).....	725,000

PARA EXPORTS OF INDIA-RUBBER, JANUARY, 1910 (In KILOGRAMS).

EXPORTERS.	EUROPE.				TOTAL.	Fine.	NEW YORK.			TOTAL.	
	Fine.	Medium.	Coarse.	Caucho.			Medium.	Coarse.	Caucho.		
Gruner & Co.....	77,022	4,449	78,892	49,453	209,816	150,794	40,787	95,856	24,457	311,894	521,710
E. Pinto Alves & Co.....	111,888	8,021	10,669	9,704	140,282	24,310	3,910	144,220	.....	172,440	312,722
Adelbert H. Alden, Ltd.....	24,650	4,250	51,480	6,135	86,515	27,298	9,040	44,341	27,241	107,920	194,435
J. Marques & Co.....	24,140	2,380	26,730	.....	53,250	60,180	8,330	60,450	.....	728,960	182,210
R. O. Ahlers & Co.....	59,844	.....	8,549	22,100	90,493	9,908	.....	1,619	43,014	54,541	145,034
Gordon & Co.....	28,831	2,941	9,036	23,466	64,274	14,960	1,020	33,330	175	49,485	113,759
De Lagotellerie & Co.....	4,930	170	3,960	.....	9,060	67,660	8,670	24,420	.....	100,750	109,810
R. Suarez & Co.....	53,316	.....	8,749	46,667	108,732	.....	.....	.....	.....	.....	108,732
Scholz, Hartje & Co.....	47,297	6,172	2,366	17,070	72,905	850	.....	9,240	.....	10,090	82,995
Pires Teixeira & Co.....	5,100	.....	5,940	.....	11,040	17,500	.....	22,440	.....	39,950	50,990
Alves Braga Rubber Estates and Trading Co.....	24,425	4,590	3,163	.....	32,178	.....	.....	.....	.....	.....	32,178
Sundries.....	1,020	170	1,980	.....	3,120	2,720	680	5,280	.....	8,680	11,850
Itacoatiara direct.....	8,219	1,752	6,175	795	16,941	.....	.....	.....	.....	.....	16,941
Manaos direct.....	541,374	48,845	75,788	257,196	923,203	1,141,753	251,612	381,618	381,994	2,072,977	2,996,180
Iquitos direct.....	107,578	7,609	46,596	132,642	294,425	22,208	1,294	9,103	7,263	39,868	334,293
Total.....	1,119,634	91,349	340,073	565,228	2,116,284	1,540,151	325,343	831,917	400,144	3,097,555	5,213,839



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Antwerp.

At the monthly inscription on March 17 selling was characterized by a heavy advance in prices, but as contrasted with the results of previous sales, it was the Congo varieties this time which showed the strongest proportional advance. In fact, the rise made by them to-day is figured at 3.07 francs, or 22.87 per cent., while plantation caoutchouc scored an average rise of 3.63 francs, or 14.95 per cent. The market was very buoyant throughout the day and everything was snapped up. The offering comprised 207,642 kilograms of Congo sorts and 51,121 kilograms of other sorts, including a number of lots of plantation sorts. Only 95 kilograms remained unsold. Among the prices realized were—

Upper Congo, Lomami.....	francs 21.00
Congo, Kasai, block.....	20.92½
Upper Congo, ordinary.....	19.00
Congo, Wamba Kindinga.....	20.52½
Upper Congo, Equateur.....	20.92½
Congo, Kantanga.....	20.67½
Straits, Crepe No. 1.....	20.22=30.05
Sumatra, Smoked sheet.....	20.20=29.40
Java, Pamaneokan.....	18.02=18.50

Quotations for guayule are 9@9.50 francs per kilogram [≈about 78.8@83.16 cents per pound].

L. & W. Van de Velde report: "European buyers have operated largely at these sales, America showing less disposition to follow the violent movement. Business by private contract in medium grades has been important of late, and stocks in second hands appear to be small at present. The next sales here will be held April 28, for which about 450 tons are declared. The stock in first hands is about 445 tons."

RUBBER ARRIVALS FROM THE CONGO.

FEBRUARY 1. —By the steamer <i>Leopoldville</i> :		
Bunge & Co.....	(Société Générale Africaine) kilos	39,500
Do.....	(Comptoir Commercial Congolais)	41,300
Do.....	(Société Abir)	3,400
Do.....	(Société Anversoise)	2,200
Do.....	(Chemins de fer Grands Lacs)	3,700
Do.....	(Comité Special Katanga)	2,400
Société Coloniale Anversoise.....	(Belge du Haut Congo)	10,300
Do.....	(Cie. du Kasai)	60,700
Do.....		2,900
Do.....	(Cie. du Lomani)	16,700
Société Equatoriale Congolaise.....		450
Société Générale de Commerce.....	(Alimaienne)	1,300
L. & W. Van de Velde.....		3,000
Cassart & Henrion.....		700 338,550

FEBRUARY 21. —By the steamer <i>Bruxellesville</i> :		
Bunge & Co.....	(Société Générale Africaine) kilos	125,500
Do.....	(Société Abir)	2,600
Do.....	(Comptoir Commercial Congolais)	9,000
Do.....	(Comité Special Katanga)	6,300
Do.....	(Chemins de fer Grands Lacs)	8,900
Société Coloniale Anversoise.....	(Belge du Haut Congo)	1,700
Do.....	(Cie. du Lomani)	18,100
L. & W. Van de Velde.....		112,000
Charles Dethier.....	(American Congo Co.)	2,500
Société Générale de Commerce.....	(Alimaienne)	1,500 288,100

MARCH 14. —By the steamer <i>Albertville</i> :		
Bunge & Co.....	(Société Générale Africaine) kilos	93,700
Do.....	(Chemins de fer Grands Lacs)	4,400
Do.....	(Société Abir)	1,400
Do.....	(Comité Special Katanga)	1,400
Do.....	(Comptoir Commercial Congolais)	2,500
Do.....	(Cie. du Kasai)	72,000
Société Coloniale Anversoise.....	(Belge du Haut Congo)	200
L. & W. Van de Velde.....		3,000 178,600

RUBBER STATISTICS FOR FEBRUARY.

	1910.	1909.	1908.	1907.	1906.
Stocks, Jan. 31.....	kilos 482,162	597,777	1,260,009	618,650	618,695
Arrivals in February.....	514,624	300,011	277,443	598,332	414,899
Congo sorts.....	454,116	184,360	255,000	549,863	338,905
Other sorts.....	60,508	115,651	22,443	48,469	75,994
Aggregating.....	996,786	897,788	1,537,452	1,216,982	933,594
Sales in February.....	480,252	566,355	630,348	613,121	318,906
Stocks, February 28.....	516,534	331,433	907,704	603,861	614,688
Arrivals since January 1.....	776,491	583,966	825,411	916,024	1,019,928
Congo sorts.....	656,663	370,549	759,451	792,669	753,518
Other sorts.....	119,828	213,417	65,960	123,355	266,410
Sales since January 1.....	801,469	848,268	925,201	970,347	1,140,427

Liverpool.

WILLIAM WRIGHT & Co. report [March 1]:

Fine Para.—The firmness and activity of the market continues. Prices have further advanced 11d. to 1s. per pound, and at present there is no indication of any serious decline. Receipts, while not up to last year, are fairly ample for normal times, but the extraordinary American demand—another steamer took the record quantity of 14,300 tons from Brazil and about 300 tons again shipped from here—points, we are afraid, to a continuance of extremely high prices right through this crop. European manufacturers are buying sparingly, but we are afraid they will be forced to recognize that this is no mere temporary spurt.

Para.

R. O. AHLERS & Co. report [March 16]:

Owing to unusually low water on the upper tributaries of the Amazon—for this time of the year—arrivals remained far below expectations, and the wild rush of "shorts" drove the market up to startling prices. Since yesterday, however, buyers withdrew, partly owing to the impossibility to ship any more by today's steamer to New York or tomorrow's steamer to Europe. Supplies since our last report consist of 2,999 tons including Upriver and caucho balls. Receipts so far in March were 3,681 tons, thus making the total receipts 30,270 tons this year, against 30,870 tons same time 1909, and 28,250 tons same time 1908.

New York.

IN regard to the financial situation, Albert B. Beers (broker in crude rubber and commercial paper, No. 68 William street, New York) advises as follows: "During March there has been a fairly good demand for commercial paper, mostly from out of town banks, and the ruling rates have been 5@5½ per cent. for the best rubber names, and 6 per cent. for those not so well known."

of the Problems
 front the rubber manufac-
 ture be solved by the chemist.
J. MAYWALD, F.C.S.,
 CONSULTING CHEMIST,
 Phone, 823 John. New York.

BUYERS' DIRECTORY 52

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 THE INSIDE.



INDIA RUBBER WORLD



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TABLE OF CONTENTS ON LAST PAGE READING MATTER.

IS THERE A "CORNER" IN RUBBER?

THE conditions which fix the price of raw rubber are less understood by the rubber interest as a whole, perhaps, than is true of almost any other commodity in the industry in which it figures. This is due largely to the fact that rubber is produced in regions so remote from the countries of consumption—and that these different departments are necessarily in different hands, and conducted under conditions which are not always mutually understood. This article is not designed to cover the whole subject, but as an answer to some inquiries which reach this journal.

The rubber business really is carried on in three distinct and unrelated departments—

The production of the raw material;

The supplying of rubber to consumers; and

The making and sale of rubber goods.

We are writing now particularly for the interest of manufacturers—the buyers of raw rubber for consumption. The rubber manufacturer, from the beginning of the industry, has been in a position of not being able to control in any way the cost of the chief material required in his business; or to contract very long in advance for supplies at a fixed price; or even to cultivate with accuracy the cost of material at any given time ahead.

The uncertainty involved has been exceedingly incon-

venient to the manufacturers, and it is not surprising that at times the changing prices of raw rubber have been attributed to other than the actual causes.

For some reason or other many manufacturers seem disposed to consider every rise in the cost of rubber to be due to "speculation"—in other words, the idea obtains that rubber is "cornered" somewhere and held for sale at prices not justified by trade conditions. Of late this impression apparently has been strengthened by reports that rubber is being "held up" on the Amazon with the aid of the government, under the new law authorizing banks to advance money on rubber stocks, whereas formerly Amazon rubber had to go forward to market whenever it came down the rivers, without regard to prices realized.

Whatever may be the ultimate effect of the new regulations, it is a mistake to suppose that rubber is being stored on the Amazon today, with the aid of bank advances or otherwise. The price of \$3 a pound is so alluring that every producer in the world is hurrying his rubber to market, in order to realize on it before a decline comes. It may be that rubber will go still higher, but it would be superlatively foolish to pay storage charges and interest on bank advances to hold rubber from the market under present conditions.

Another point against the idea that rubber is being stored in the countries of production is the fact that the imports of consuming countries were never before so large as at this time. On the whole, it appears safe to assert that rubber prices today are as fully controlled by conditions of supply and demand as at any other time in the history of the trade.

THE HASTENING OF THE CRASH.

PROBABLY no one is qualified to speak with more authority in the way of caution regarding the British rubber craze than Sir Frank Athelstane Swettenham, G. C. M. G., who retired from the governorship of the Straits Settlements about the time profits from rubber culture in the Far East began to be realized and returned to England, where he now sits on the boards of seven or more plantation companies which have been well managed, and most of them paying dividends at a rate most astonishing to the old school of conservative business men. At a recent meeting of one of his companies Sir Frank was reported as saying that a great many rubber planting companies had been floated lately in which he thought no one outside a lunatic asylum would have invested a shilling.

This sentiment was commended heartily at the last meeting of the Kuala Selangor Rubber Co., Limited, by their chairman, Mr. William A. Horn. We have not the pleasure of this gentleman's acquaintance, but the perusal of his address to the shareholders, which would fill two pages of THE INDIA RUBBER WORLD, impresses us with the idea that his head is in the right place,

whatever may be true of his heart. Mr. Horn said that many of the new companies had not one rubber tree planted. He mentioned a case where a piece of ground had been acquired and a nursery of rubber plants formed, and then the proposition was offered to the public for about \$375,000 (gold), under a guarantee to pay the investors 6 per cent. for five years. The interest promised would amount to only \$112,500 (of the investors' own money), and the promoters could enjoy the remainder of the \$375,000 without putting out a single rubber tree.

"I do not think they [the public] really read rubber prospectuses," said Mr. Horn. "They look at the capital and they look at the area." And they fall over themselves to put their money on. A London dispatch to the New York *Tribune* says:

It is a maddening revel of speculation by the multitudes who are investing their small savings in rubber and oil shares. Rapid profits are made when two shilling shares rise to 50 or 70 shillings, and fresh investments are made in new issues.

The London *Bankers' Magazine* calculates that as between February 19 and March 20, the shares of ten rubber plantation companies, capitalized at a total of £1,313,000, rose in market value from £11,813,500 to £16,239,750, or 37½ per cent. Meanwhile 387 representative securities, other than rubber, actually declined in market value. The rubber companies referred to are earning large profits, or their shares would not be quoted at such figures, and it is this fact that stimulates everybody who can borrow 2 shillings to buy a share in one of the new proposed companies. The London *Financial News*, in commenting editorially upon a proposal that the Stock Exchange close for a week or more to allow the rubber craze to quiet down a bit, expressed the opinion that the public would object.

How sane (?) is much of the investment in rubber is suggested by a correspondent of the New York *Times*, who writes:

The story is being told of an old lady deep in rubber speculations whose purchases were confined to shares in the most extraordinarily named companies, her argument being that these must be good because the promoters could not afford to run the risk of putting bad properties on the market without making the titles smooth to the tongue.

And the character of many of the investments is illustrated by a recent prospectus of a company whose plantation, in Central America, is stated to contain 33,000 *Castilloa elastica* trees, of which only 8,000 are five years old or over. No trees have been tapped so far, and the prospectus describes no general development on the estate. And yet the promise is held out of a substantial profit this year, and a steady rise in profits until, five years hence, it is estimated that 218,000 rubber trees (mostly not planted now), will be yielding 4 pounds of rubber each, salable at a profit of 3 shillings a pound, or a total profit in 1914 of £130,800 [= \$636,538.20].

Of course no one with the slightest information in regard to rubber would be tempted by these figures to give up even a borrowed shilling, and the fact that such

prospectuses do draw much cash from the public seems to justify Sir Frank Swettenham's reference to lunatic asylums.

BENEFITS FROM HIGH-PRICED RUBBER.

AN almost certain result from the present extreme high prices of rubber is likely to prove of great benefit to the world—the exploitation of new sources of rubber. It is probable that no tree or plant now known to yield rubber of any kind will be overlooked. Besides, in the general search for this valuable material, new rubber yielding species may be discovered. Such has been the history of the trade from the beginning, when practically only "Pará" rubber was used. Witness the advent, successively, of Assam rubber, the various African sorts, and so on, down to the production of Mexican guayule on a large commercial scale.

With rubber at present prices, investors everywhere listen with interest to proposals to use their capital, even in remote districts, for the exploitation of trees and vines known hitherto only to botanists or in commercial museums. What has been done with guayule alone lends encouragement to further investigation of new rubber species. Mention may be made here of the comparatively recent discovery of "caucho" trees throughout the *Hevea* areas of the Amazon. Also of good rubber trees in the Congo State and elsewhere in Africa where formerly only rubber vines had been recognized.

No less important than the discovery of new rubber species is the better preparation of rubber in many countries. New methods of tapping and of coagulation are being applied even to the rubber species longest known in the trade, and others have been designed for the rubbers more recently discovered. The advantages of the more scientific methods of rubber treatment include (1) a larger yield per tree; (2) the arrival at the factory in better condition; and (3) better profits of production.

The desirable results here predicted from the existing era of high prices for rubber need not cease with the decline of prices which must come in time. The advantages from the use of improved practices in rubber preparation will lead to their being continued, and any new grades of rubber now being introduced will still be needed and will be seen in the markets.

Thus high prices for rubber are not necessarily an un-mixed evil for the trade.

IT IS NOT FAIR TO USE the market quotations for crude rubber in February, 1908, to illustrate the increasing value of the material. The market in that month represented the combined influences of the financial depression of the preceding autumn—when consumption was temporarily checked—and the customary large arrivals from the Amazon toward the end of winter. Rubber has been very much higher for years than the low water mark reached in February, 1908, and from that date the price has been climbing steadily upward. At least let those who delight to compare rubber prices, omit from their charts the quotations for a full year from the date of the 1907 panic.

HOW MUCH RUBBER IS PRODUCED.

INQUIRIES come from every class of people who are interested in any way in the rubber industry or trade, or in plantations, as to the amount of the raw material produced in a year. Singularly it is one of the most difficult questions to answer that is confronted in the commercial world. The following table, and the annexed comment, from an anonymous correspondent of the London *Times*, may prove of interest:

"The world's present sources of supply for crude rubber are approximately as follows:

The River Amazon with its tributaries.....	Tons.
Other districts of Brazil.....	39,000
The Federated Malay States, Ceylon, Sumatra, etc. (plantation rubber).....	2,800
The Congo Free State and the French Congo.....	4,600
Portuguese West Africa.....	5,600
The West Coast of Africa, excluding the Congo and Portuguese West Africa.....	2,900
Rangoon, Penang, Borneo, etc. (wild rubber).....	9,500
East Coast Africa, Mozambique, Madagascar, etc.....	1,200
Mexico, the East Indies, and Central America.....	800
Total.....	1,500
	67,900

"The figures given above are necessarily for the most part estimated, as with the exception of the exports from the Amazon, no exact records are obtainable of the production of the various districts, nor is it possible to obtain a complete record at the different ports of arrival, as statistics of some of the ports can only be obtained in an unclassified form, and from other ports no accurate statistics at all are obtainable."

A principal difficulty in dealing with raw rubber is that the figures of exports, say from the Amazon, never correspond with the imports at New York or Liverpool, so great is the shrinkage which occurs *en route*, especially in the case of new rubber. The chief value that such statistics have is in their indication of the steady increase in the world's production, while everybody knows that prices mount up much more rapidly. What makes the Par  statistics particularly credible is the fact that an export duty on rubber is charged there. Hence every man who handles rubber is on the alert—government officials to see that not a kilogram escapes the tax; shippers to avoid the payment of a penny too much in dues. Hence the statistical system is permanent, and on the same basis of reckoning, year after year, the export weight at Par  increases. Similarly, the weight of receipts at New York and elsewhere gains each year, though no one knows how much, for rubber is not weighed by the customs in the importing countries, an import duty being imposed in no country except Russia.

It may be added that the unsigned figures in the *Times* correspond closely, as to the total, with those supplied by the leading houses in the trade. The latest figures from an authorized source fix the production for 1909 at about 69,000 tons. The *Times's* figures doubtless relate to a twelvemonth beginning further back. But none of the recent statistics appear to include the new Mexican rubber, guayule, the production of which amounts probably to 6,000 tons a year. And a gum for which consumers readily pay 90 cents a pound certainly may be classed as rubber, whatever may be said of Pontianak gum (*gutta-jelutong*), of which 12,000 tons have been sold in a recent year, though until the "boom" came in all kinds of rubbers 5 cents a pound was considered a high price for it.

MANUFACTURE OF SPONGY RUBBER.

BRITISH patent No. 16,663 (1909), for which complete specification was accepted February 10, 1910, relates to an improved process for the manufacture of spongy rubber, by Emile Poizot, of Glos, France.

The specifications accompanying Poizot's application No. 16,540 (1909) described the manufacture of a spongy rubber with a base of caoutchouc gum, sulphur and volatile alkali, with or without the addition of factice (according to the desired quality of the product). Now it has been found that without modifying

the process of manufacture, it is possible to obtain products of good quality by adding certain bodies to those enumerated in said specification, and to use a smaller proportion of volatile alkali.

The present improvement consists in employing a mixture of "latex" caoutchouc, ordinary caoutchouc or gum, old rubber in a powdered state, sulphur, oxide of zinc, white factice and volatile alkali in any appropriate proportions, the volatile alkali being preferably added to the factice. The spongy rubber product obtained possesses the desired quality of resiliency and is utilizable for numerous industrial purposes.

The following formula is referred to as giving excellent results:

	Kilos.
"Latex" caoutchouc.....	4.00
Ordinary pure caoutchouc or gum.....	4.00
Powdered old useless rubber (first quality).....	4.00
Sulphur.....	0.80
Oxide of zinc.....	2.00
White factice.....	2.00
Volatile alkali (liquid ammonia) about 3.6 per cent., say 625 c.c.	—
Total.....	16.80

The alkali is mixed with the factice; the duration of the vulcanization process is about one hour at a pressure of about 4 kilograms.

AN ENGLISH NOTE ON "GOLOSHES."

IN an exhaustive article on the supply of rubber and the demand for it, in the London *Times*, the writer says that "motor tires alone account for a large part of the total output of the Amazon, and it will astonish many people to know that the article next in importance from the rubber consumption point of view, absorbing approximately 15,000 tons per annum, is rubber shoes, known in America simply as 'rubbers,' and in this country generally as goloshes. This is a branch of the rubber industry of which we have little to remind us in England, but in America, Russia, and Scandinavia, the wearing of rubber shoes in winter is practically universal. An American friend recently expressed the matter to the writer as follows:

I reckon there are about four million inhabitants in New York, and about five thousand of them don't wear rubbers, because somebody has told them that it is English and smart, so they prefer to go about with wet feet.

"In the hotels and restaurants in Russia the cloak rooms are furnished differently from those here, because in addition to a hook for the coat and a peg for the hat there is always to be found on the floor a little wooden box arrangement into which the Russian kicks off his goloshes.

"A good deal has appeared lately about the so-called American Rubber Trust, the full name of which is the United States Rubber Co. It will be news to most people to know that the 'rubber' here does not stand for the commodity, but for the manufactured article, 'rubbers,' otherwise 'goloshes.' The varieties mostly used for this purpose are fine Par , Peruvian ball, and medium rubbers from Portuguese West Africa and the Congo."

The Pontianak Rubber Estate, Limited, registered in London on March 21, 1910, with a capital of £110,000 [= \$535,315], will not be concerned, as some readers might suppose, with the production of the gum known to the trade as Pontianak, or *gutta-jelutong*. The company has been formed to acquire a concession covering 834.2 hectares [= 2,061 acres], held from the sultan of Pontianak, in the vicinity of the town of that name, in Dutch West Borneo. They purpose planting *Hevea Brasiliensis*, of which species there are reported to be already on the ground 30,000 trees, ranging in age from one to six years. The company's prospectus points out that a profit from rubber is expected this year of £3,750, and profits from tapioca and cocoanuts together of £1,200.

The Editor's Book Table.

LE BRÉSIL. SES RICHESSES NATURELLES, SES INDUSTRIES. Extrait de l'Ouvrage: "O Brazil, Suas Riquezas Naturaes, Suas Industrias." Publié par le Service d'Expansion Economique du Brésil. Tome I. Introduction—Industrie Extractive. Paris: Librairie Aillaud et Cie. 1909. [Paper. Large 8 vo. Pp. 404 + map. Price, 7s. 6d.]

WITH a view to the general development of the resources of Brazil, the head of one of the departments of the federal government a few years ago deputed to the body known as the Centro Industrial do Brazil the preparation of an exhaustive report on the natural wealth of the nation, together with a record of its development to date, and suggestions toward still further development. The volume before us is the first in the series devoted to the subject in question, the whole being produced under the direction of Dr. L. R. Vieira Souto, a professor in the Polytechnic School of Rio de Janeiro, and first vice president of Centro Industrial do Brazil. This first volume embraces (1) a general introduction to the work on an elaborate scale, dealing with the history of the country from the earliest dates, and a general outline of its natural wealth; and (2) a dissertation on the "extractive industry," the most important factor in which is caoutchouc. Succeeding volumes will be devoted to studies relative to agriculture, transportation, and manufacturing.

It cannot be said that this work, while evidently the result of systematic and painstaking care, involves any original contribution of value to the subject of rubber and its collection. The chapter on rubber, however, does embrace a summary of compiled facts which cannot fail to be serviceable to readers without access to an extensive library of reference, or without an opportunity to consult the same freely. There is also a wealth of statistics of rubber production and exports, dating back to 1827, when the whole amount that could be credited to Brazil was 32 tons, up to the present, when the total volume has become so extensive. The officially declared value of rubber exports from Pará, by the way, for the year 1827, was only about 7½ cents per pound, in United States gold. It would be interesting to know what American importers paid.

This work has been produced in the best style of typographical art, including in its scheme a large number of high class half tone illustrations, and deserves a place in every library devoted either to Brazil and its conditions, or to the production of rubber. It may be added that the book is in French, and has been brought out in Paris.

HEVEA BRASILIENSIS OR PARA RUBBER IN THE MALAY PENINSULA. Notes and figures in connection with the cultivation of Para rubber. By W. F. C. Asimont. London: L. Upcott Gill. [1909.] [Cloth. 12mo. Price, 2s. 6d.]

THERE is naturally a demand for estimates of the cost of producing rubber on plantations, and the present author, who has had considerable experience in administrative work on large plantations, has sought to fill such demand, though not professing to give the last word on the subject. In fact, he invites free criticism of his figures. He gives an estimate on the total outlay for forming a plantation of *Hevea* of 4,000 acres and its upkeep until the whole is productive—estimated to be at the end of the tenth year. The income from rubber, the yield of which on the first planting is estimated to begin in the fifth year, is also taken into account. It is evident that the actual cost in no two cases will be the same, and that probably no two managers would make the same requisitions for implements, hospital outfit, guard room, and office furniture. Thus on one estate a grindstone at \$24, as estimated by Mr. Asimont, might be considered as necessary, while on another a lower priced article would suffice. Likewise the guard room on every plantation might not require

"12 pairs handcuffs at \$2.50." Again, on some estates there might be no use for boats. This is a useful book, none the less, in that it suggests a heading of expenditure which the intending planter in the Malay peninsula may expect to have to consider. Mr. Asimont believes in catch crops during the formative period of a rubber plantation, and in weeding. The unit of his calculations is the British dollar, equivalent to 2s. 4d. [= 57 cents, gold.]

THE COPPER HANDBOOK. A MANUAL OF THE COPPER INDUSTRY OF THE WORLD. Volume IX. Houghton, Michigan: Horace J. Stevens, compiler and publisher. 1909. [Cloth. 8vo. Pp. 1628. Price, \$5.]

ONE can hardly even glance through this book without gaining an enlarged idea of the importance to the world of copper. This metal is treated from every viewpoint—its occurrence in nature, its mining, and its applications in the industries and otherwise. The very large employment of copper in the electrical field makes it if no little interest to a branch of the india-rubber trade, and from the recent increase in the uses of electricity it is safe to predict that the insulation of copper wires with rubber will see an even greater expansion. The statistical department is very full, and no fewer than 7,751 copper mines and copper mining companies, throughout the world, are mentioned by name and details of interest given in regard to them. "The Copper Handbook" appears annually.

OTHER BOOKS RECEIVED.

ETUDE GENERALE SUR LE *FICUS ELASTICA* (ROXB). PAR Georges Vernet Ingénieur Agricole, Chimiste à l'Institut Pasteur de Nha-Trang (Annam). [Reprinted from *Le Caoutchouc et la Gutta Percha*, Paris, 1910.] 31 pages.

ANNUAL REPORT OF THE DIRECTOR OF FORESTRY OF THE Philippine Islands. For the Period July 1, 1908, to June 30, 1909. Major George P. Ahern, Director of Forestry. Manila: Bureau of Printing. 1909. [Paper. 8vo. Pp. 20.]

IN CURRENT PERIODICALS.

GEFAHREN, Fehler und Verbesserungen in der Kautschuk-Production Asiens. By D. Sandmann. = *Der Tropenpflanzer*, Berlin. XIV-3 (Mar. '10). Pp. 117-140; XIV-4 (Apr. '10). Pp. 180-206.

Les Fourmis Blanches dans les Plantations d'*Hevea*. Moyens Pratiques de Destruction. By E. Mathieu. = *Journal d'Agriculture Tropicale*, Paris. X-104 (Feb. 28, '10). Pp. 34-38.

Le *Funtumia* à la Côte d'Ivoire. Nouvelles Observations. By Aug. Chevalier. = *Journal d'Agriculture Tropicale*, Paris. X-104 (Feb. 28, '10). Pp. 44-47.

Remarques sur la Sélection et la Saignée du Manihot Glaziouii. By O. Labroy. = *Journal d'Agriculture Tropicale*, Paris. X-105. (Mar. 31, '10). Pp. 65-69.

La Saignée de l'*Hevea* par la Nouvelle Méthode Northway. By O. Labroy. = *Journal d'Agriculture Tropicale*, Paris. IX-98 (Aug. 31, '09). Pp. 236-237.

Flora Agricola de la Region Oriental de Columbia—Caucho. By J. M. Vargas Vergara. [Relates mainly to the *Hevea* rubber found in the east part of the republic.] = *Revista del Ministerio de Obras Publicas*, Bogotá. IV-18 (Aug. '09). Pp. 597-607.

OUR TWENTIETH ANNIVERSARY.

TO THE EDITOR OF THE INDIA RUBBER WORLD: I want to take this opportunity of congratulating your journal on its Twentieth Anniversary, and on the excellence of its anniversary edition. As you know, the Philippine Bureau of Forestry has been actively interested for several years in studying the economic production of rubber, and has carried on investigations with a view of introducing it more widely in the Islands. In this work THE INDIA RUBBER WORLD has been of distinct assistance, acting as a sort of international clearing house for new information of interest to growers and manufacturers. You have my best wishes for continued success in the future.

Very respectfully,
Manila, February 14, 1910.

GEORGE P. AHERN,
Director of Forestry.

Para, Manáos and the Amazon.

By the Editor of "The India Rubber World."

FIRST LETTER.

All the Way from Brooklyn to Salinas.—Barbados as a Half-Way House, Where One Goes in Training for Tropical Adventure.—Many Last Looks at the Beautiful Island.—The Writer at the Point of Invading Pará, the Neck of the Amazonian Rubber Belt.

I HAD been planning an Amazonian trip for several years, only waiting for the psychological period when everything would be ready for a really profitable visit. When, therefore, during the latter part of 1909, prominent Brazilians began to call at my office, full of interest in rubber planting and in new methods in collecting and coagulating rubber, I felt that the time had come, and made rapid preparations for the journey. The really luxurious traveler to the Amazon, if he be a New Yorker, goes to Europe first, and is able to make the whole passage on a big boat. It is a question, however, if he gets very much more of comfort than I got on little 3,000-ton steamer of the Koninklijke West-Indische Maatschappij, which sailed from Brooklyn, a well known suburb of New York, on the afternoon of January 3 for Bridgetown, Barbados, West Indies. Certainly he does not get as much Amazonian information *en route*.

It is a "Sabbath day's" journey from Manhattan by ferry and dock trolley to the Bush Terminal pier, from which the southern boats start. Ours was advertised to sail at 1 o'clock. The steamship office informed me in confidence that it got away at 2, my ticket read "Sailing at 3," and we really got away at 4.

Built in Amsterdam in 1908, commanded by Dutch officers, with Curacao negroes for a crew, and with only 13 passengers and a deck load of mules, the *tout ensemble* was unique, and the voyage gave promise of unusualness sure to appeal to one not wedded to luxury and the beaten track. Escorted by tugs and saluted by a mob of "dago" stevedores, we worked our way out through the press of tramp steamers, lighters, and foreign shipping, and our journey was begun. The sea was smooth, and the tiny social hall and smoking room bright with electric lights, were very cozy. The impress of Dutch art was upon both rooms, and



TYPICAL BARBADIAN NEGRO HUT.

showed in the inlaid tables, chairs, and walls, the Dutch-made rubber tiling of a pattern none but a Hollander could design, the upright piano of hard action and soft tone, in a queer, stiffly ornamented case, built into the side of the room, together with a fascinating panel painting of a mermaid in a tail-maid suit, sitting upon a rock, and alluring a low browed savage by blowing through a conch shell.

We had hoped for a smooth passage, and as we left New York right after the great Christmas storm, yearned for warmer weather, but it was not until the third day of the voyage that there was any suggestion of either smoothness or warmth. A following wind from the northeast chilled the air and made of the Gulf stream a steaming vapor crested caldron.

There were about the usual health seekers, in the persons of



SUGAR MILL IN BARBADOS.



CRUSHING CANE IN A SUGAR MILL.

middle aged individuals, who were fleeing from the winter rigors of the north to summer safety, an asphalt man and a drummer for a big textile house. There was little or no excitement even when the friendly ones in the smoking room succeeded in introducing the potent and pleasant West Indian cocktail—the "Swizzle"—to the masculine contingent.

The usual route of the Dutch boats is outside all of the islands, Barbados being the first land sighted, but for the sake of smoother seas for his passengers, the Captain took the inside route. We therefore, late on Saturday night, saw Sombrero island in the distance, and awoke Sunday morning off Sabre island, a brown sugarloaf peak rising from the ocean depths. Later we passed the Dutch island of St. Eustacia, which we saluted. Then, running through white capped seas, we passed St. Kitts, Nevis, Barbuda, and Guadaloupe. All day long we skirted shores where the sea was a wonderful blue, where mountain peaks were wreathed in cloud, and the land, often heavily forested, showed the most wonderful, varied, and vivid, greens—colors that only a tropical sun and abundant moisture can create. That night, the last on board, we had a special dinner, with ornamented menu, and, as a finale, ice cream served in a huge block of ice, lighted by candles ingeniously arranged in crystal niches. At nightfall we passed outside again between Dominica and Martinique, and as it was squally the Captain spent the night on the bridge while the rest of us slept.

ARRIVAL AT BARBADOS.

In the morning we were close to the island of Barbados, which we partly circled, anchoring in the open roadstead off Bridgetown at noon. A swarm of boats manned by husky black oarsmen crowded along by the ship's side, shouting anything and everything to attract attention to their boats. They had given genuine darkey names to their craft such as "Ladybird," "Lilywhite," "Mel Rose," etc. With all of our luggage in the "Lilywhite," we went ashore, passed the courteous customs successfully, leaving my heavy service revolver in their care until I sailed again, and were soon bowling along the dazzling white coral roads to the Hotel at Hastings. Here we had lunch and, three hours later, the luggage having arrived, were comfortably settled in cool, airy rooms, windows and doors wide open, clad in linen suits, wondering how cold it was on Broadway.



BELLEVILLE, FASHIONABLE RESIDENCE DISTRICT IN BRIDGETOWN.

After all of the northern cold, and the hoisterous and chilly sea, it was supremely comfortable to relax in the semi tropical warmth and enjoy the evening stillness, broken only by the bird calls, the piping frogs, and the distant plaints of sheep and goats.

One of the first visits was to the headquarters of the Imperial Department of Agriculture for the West Indies. Dr. Francis Watts, C.M.G., the imperial commissioner, was absent, visiting the various islands in his bailiwick, much to my regret. I was, however, received very civilly by his chief clerk, who was good enough to introduce me to Henry A. Ballou, M.S.C., the entomologist, who gave me much interesting information.

Rubber has not as yet been successfully grown in Barbados. There is, to be sure, a small planting of *Funtumia* on one of the estates, and a few *Ficus elasticas* in the gardens, but that is all.



GINNING SEA ISLAND COTTON, BARBADOS.



MANJACK MINES, BARBADOS.

Not that the commissioner and his associates are not on the alert for any rubber producer that may be of use. Indeed, their quiet alertness was fully proved when the "Ekanda" first came in brief prominence. They secured some of the tubers, set them out, proved them useless, and turned to other work before the rest of the world was through with the preliminary discussion as to their probable value. Sugar is the great staple, and often produced in the old fashioned way by hand labor in planting and gathering, and is often extracted by the wasteful windmill.

Something like 500 tons of Manjack or glance pitch is mined in Barbados. This form of asphalt is very solid and pure and is used in insulation quite largely. None of the small deposits that I saw were being worked, and the industry did not seem to be of great importance.

Of greater interest to the rubber trade than sugar and molasses is the sea island cotton on the island. The entomologist was surprised to learn that cotton was as vital almost to the rubber manufacturer as was rubber. It took but a few words descriptive of the component parts of automobile tires, belting, hose, and the like, to gain his most alert attention, and he brought out a wealth of material on cotton in Barbados and the other islands that I greedily absorbed.

By the way, Barbados figures in the cotton trade possibly to a greater extent than some of my readers may be aware of. While cotton was found native in the present area of the United States, there is no record of that variety ever having been put under cultivation. The cotton varieties now grown in our country came from the West Indies. Just where is not certain, and is not of importance, but it may be mentioned that the cotton known as "sea island" is termed by the botanists *Gossypium Barbadense*, the latter word indicating, in Latin, that its origin was in Barbados.

For a long time, for reasons which it is unnecessary to consider here, the West Indian planters seemed not to be interested in cotton, but now, under the urgency of the British imperial government that every colony shall be self supporting, if not more so, they are planting cotton and all sorts of other things down here, and especially in Barbados. The amount of cotton produced here is not large as yet, but considering the enterprise of the planters as a class, and the encouragement of planting interests by the governmental authorities, it seems reasonable to expect an important development from the small beginnings which I am able to record here. The exports of cotton from Barbados have been:



CODRINGTON COLLEGE, BARBADOS.

Year.	Sea Island pounds	Total
1903-04	not stated	43,392
1904-05	77,814	125,178
1905-06	121,174	138,150
1906-07	225,932	293,036
1907-08	300,333	427,819
1908-09	432,691	459,303

As a final touch to the subject of cotton, came my visit to the Central Cotton Ginning Factory, located at Bridgetown. Here a very careful Scott somewhat reluctantly took us over the factory. That is, he was doubtful at first, but after a bit warmed up and showed everything with enthusiasm. The work of ginning, cleaning the seed, baling the lint, crushing the seed, expressing and clarifying the oil, and grinding the cake, are well



BOAT LANDING IN THE ISLANDS, NEAR PARA.



SHORE VIEW, ISLANDS, NEAR PARA.



A STREET IN PARA.



A WATERFRONT VIEW AT PARA.

done throughout. The machinery used is mostly English, with some American for special purposes.

Just to get an idea of the topography of the island, we rose early one morning and drove over to Codrington College, some 14 miles away. The roads were all good, narrow but smooth, with no sidewalks even in the small towns. It is a wonder, so smooth are the roads, that the 40 automobiles owned on the island, as well as the 1,500 bicycles, are not equipped with solid tires rather than pneumatics. There are no speed limits, but there are so many turns, and such a crowd of foot passengers and vehicles, that more than twenty miles an hour is out of the question. So smooth are the roads that the boys with a forked stick roll three inch iron wheel for miles—a form of toy not seen elsewhere.

The drive was a very beautiful one. Through great fields of sugar cane, by big and little sugar mills sometimes run by steam power, but more often by the wind. We stopped briefly at St. John's church, which is situated on the top of a hill fronting the ocean, and climbing the bell tower got a wonderful view of sea and shore. Then we wandered through the ancient churchyard and looked at the quaint headstones and limestone vaults, took photographs, and went on our way.

A four-mile drive down a series of steep hills, where the driver roped one of the rear wheels to keep it from turning, and we were at Codrington College, which we did not see much of, as the main buildings were being repaired. Here under a huge tree, from the shade of which we evicted several sullenly reluctant toads, we opened our lunch basket. We were very comfortable, for the caretaker brought us chairs, and a "monkey" of cool water, and the food was excellent. We loafed and smoked through the heat of the day and finally, at 3:30, started back. On the way we stopped at a sugar estate and saw a windmill at work and the process of boiling the juice. The proprietor was an absentee, but his colored superintendent was elaborately polite and hospitable. After the examination of the plant he led us to the "gallery" (veranda) of the house and treated us to a pitcher of the hot syrup.

GOLFING IN THE TROPICS.

The day following I called upon the American consul, who promptly put me up at the Golf Club, and was particularly helpful. I was much interested to know that he had a son in the States, who occupies a responsible position

with one of the big rubber companies. Speaking of golf, I had been advised that it was well before a journey to the Amazon to get in as good a physical condition as possible. That was one reason that I was glad to be put up at the Savannah Club (the golf club), which institution merits a little extra attention, as the links were different from any that I had ever played over. There is a station half way between Bridgetown and Hastings known as Garrison. Here are arranged on three sides of the Savannah the brick barracks and officers' houses that once sheltered full regiments. To-day there is hardly a corporal's guard left. One of the buildings, the "clock tower," where the regimental bands played, has been acquired by the Savannah Club, that in the face of a dearth of men have kept tennis, cricket, and polo alive and incidentally laid out a six-hole golf course. The putting greens, circles of 23 feet, cut into the thick bunch grass of the fields, are fine. Seeded to Bermuda grass, they are always level, free from worm casts, and as nearly perfect as possible. Then, too, the course to the first hole, across the polo field, is such that one can use a brassy, but nowhere else. All of the tees are built on a slant and grassed, and it is wonderful how far into the sky one can drive a ball. The caddies, funny little darkies, go on ahead and locate the ball in the deep grass, and thereafter one uses a loft. By the club rules if a caddy fails to find the ball, any other boy who does gets a threepence, to be deducted from the caddy's fee. Very few balls are lost. Although it is hot there is usually a breeze, and eighteen holes with tea afterward on the club "gallery" is a good healthy afternoon's work, and pleasant finish.

Did I by any chance say there were no bunkers on the golf course? I was wrong. From one tee the drive was over the race course and a high board fence. Then, too, there were the big banyan trees that circled one green. The only play was to loft the ball up over the one fronting you. Then the small movable bunkers, the tethered cows, sheep, and goats, might all be called hazards. One cow in particular lowered her head and charged golfers whenever they indulged in too much preliminary wrist wriggling. I don't blame her. If I had her horns and bulk, I'd try to break the practice myself. The goats chewed the balls some, but that was only because they were thirsty and hoped that some of the Americans were using water core balls. Oh, yes, there was lots of interest and sport, particularly when a sergeant was drilling the awkward squad on horseback on the

polo field and you were at the first tee. It was a poor drive that didn't get a horse or a man, and the sergeant never knew what broke the formation. Then at the last hole when you sliced on the approach and cannoned on a carom—no, caromed on a—well, hit one of the row of cannon, it only threw you off a bit, and added to the zest. So I kept at it between whiles, and awaited the boat that was to take me to Pará.

The owner of the Hotel is very much of a genius in making his guests comfortable and, incidentally, amusing them. Aside from dancing and bridge for those so inclined, as he is not saddened or disgusted if you have other preferences, he has a series of tallyho rides that are unique. With good horses, and the only coach on the island, he is a whip who would be accounted an expert anywhere. To be conveyed over the slippery limestone roads on Saturday night, down through the indescribably crowded streets, cutting close corners, around the market and out under the low stone arch set in a very inconvenient curve, through "Murderer's Lane" and home, is a delightful experience and not without thrills. Then, too, there are his special excursions in the afternoon to the "haunted wood," the "baboon village" and the "smuggler's cave," places not noted in the guide-books, but full of fun and interest.

I saw sights and wrote forenoons, and golfed at 3:30 each day, and, by the time my boat arrived, was feeling very fit. Indeed, I should advise any one coming in midwinter from the north to stop at Barbados and get used to warmer weather, and incidentally rested and refreshed before essaying the heat.

Barbados is the water resort of those who find the climate of South America too much for them. That is why I have given it so much space, and why also I add the following personal conclusions:

Barbados is the oasis in the watery waste between New York and Pará where all wise travelers stop for rest and refreshment.

No bother at all with customs. They only tax tobacco and spirits.

Everybody speaks English. The 200,000 residents are negroes,

but at the same time British subjects. Two or three weeks' study renders their English quite intelligible.

Clothing is as good and as cheap as anywhere in the world. Just the place to buy for a journey up the Amazon. No, it does not fit.

George Washington, our own George, came down here when a young man, and the governor hospitably gave him an elaborate breakfast and the small pox.

Gentle showers almost every day. Good water. No fleas, few flies, some mosquitoes.

Bathing ideal, but beaches are few and guarded by coral reefs that are like the broken glass on the top of an orchard wall.

Living reasonable, labor plentiful, cheap, and profoundly inefficient.

Barbados is unique among the islands that crowd the southern seas, in that it is dry, comparatively level, has no forests, is of coral formation, and is said to be almost as healthy as heaven.

TAKING LEAVE OF BARBADOS.

It was 6 in the morning of a Sunday when the welcome information came that our boat was in. So we got up hurriedly, finished packing, and went down stairs, fearful that we would not have time for breakfast, for it was said that her stay would be only two or three hours at most. Somebody had blundered, however. It was not ours, but another *from* Manáos and Pará, and soon a number of bright young American engineers from the Madeira-Mamoré railroad came in. After a year in the jungle they were glad of a vacation and were friendly, jolly and apparently as healthy as if they had been at work on the New York Central. We waited until 2 p. m. and at last our boat did arrive, and at 3 o'clock we started for the pier. We had to hurry but managed to call at the postoffice and extract a letter from a languid clerk after answering innumerable questions. Then I went to the custom house and secured my revolver, and, boarding a shore boat, got to the ship's side at exactly ten minutes of 4. A pretty close shave, for she was to sail at 4 sharp.



Tree at Museum Goeldi, 12 to 13 years old, yielded 500 grams in 25 tappings.

Dr. Jacques Huber using his adjustable knife, called by Bridge, Huber's "perfect knife."

Trunk of a *Hevea* at flood time, during which these trees are not tapped.



"BARCA," OR NATIVE BOAT, PARA RIVER.

We hastened to get our luggage stowed, fortunately exchanging our cabin on the saloon deck for one on the upper deck with more room and better air. Then we went out and took a long last look at the beautiful island that had been our resting place for thirteen happy days.

Having looked this look, we threw coppers to the diving boys, chatted with the harbor police, and went in and smoked. At 5 o'clock we came out and took a last long look at the beautiful island that had been our resting place for thirteen happy days.

Then we went to the cabin, rearranged our baggage, put on rubber soled shoes, smoked a pipe, and at 6 o'clock went out on deck and took a last long look at the island that had been our resting place for thirteen happy days.

At 6:30 the agent came aboard, then three boats filled with females and luggage—two females and several tons of luggage. The females were dusky of hue, and the luggage was done up in wicker baskets, bed quilts, and paper boxes. At last the side ladder was up, the anchor weighed, and we went on deck to take a last long look at the island that had been our resting place for thirteen happy days.

AT SEA AGAIN.

We had dinner that night in a cozy little saloon decorated with a variety of foreign flags, to please no doubt the somewhat varied assortment of humans who fronted the viands. There were Barbadians, Brazilians, Peruvians, Mexicans, Swiss, Germans, English, and Americans, and an interesting lot of engineers returning for a fresh attack upon the jungle for the Madeira-Mamoré railroad.

The smoking room crowd told weird tales of fevers, sicknesses, and deaths, all of which we discounted, for were they not going back, and was not the ship's doctor, a quiet, healthy man, going up the river for his thirtieth visit? Still the stories were entrancing, especially when they described that mysterious *berri-berri* that begins in the legs and ends sooner or later in complete paralysis.

The third day out I awoke with a feeling of numbness in my legs. When I walked the deck it was quite painful. Remembering the vivid descriptions of *berri-berri* that I had heard from convalescents in the smoking room the night before, the absence of fever, the way it affects the legs, and so on, I began to think. Nor was I at all reassured when the ship's doctor halted beside



CANOE HARBOR AT PARA.

me as I leaned over the rail, and looking at me keenly said:

"How do your legs feel?"

"Oh, so so," I said truthfully—for they did, only the left felt more so than the right.

"Humph! Thought the combination of hot decks and rubber soled shoes might have lamed you a bit. It does most," he answered, and my depression vanished.

Outside of the boat, her officers, and passengers, there was only the monotony of the bounding billow. No gulls, whales, sharks, or sails. Even Halley's comet, which should have been visible each night, was regularly obscured by clouds. And as for sunsets we didn't have a pretty one on the whole voyage. One evening three little Peruvian girls played a trio on the piano, then one of them played while the others danced a graceful *fandango*. Between whiles there was talk of Neptune coming aboard, and those who had never crossed the equator got very nervous and asked innumerable questions.

I think it was at dinner that the Peevish Passenger who had only just been able to crawl down to table, catching a twinkle in the Captain's eye, groaned:

"Here comes the whiskey joke."

"I'm a sailor twenty-six years an' I say water's a fine thing—with a drop of whiskey in it," announced the Captain. [Much applause.]

Another twinkle of the same eyes.

"It's eggs this time," whispered the P. P.

"If I 'ad my life to live hover again I wouldn't go on as much water as would boil two eggs," said the Captain. [More applause.]

Suddenly the Peevish Passenger arose.

"I'm sick," he said, looking at the humorist.

"Wot of?" inquired the Captain.

"Of them eggs. This is the tenth y'y'ge you've served 'em up, and they're getting stale," and he stalked unsteadily out.

All the voyage it was the same. Every one who knew enough took quinine, loafed, read, and kept generally quiet. Indeed, although the sea was not unusually rough, the boat rolled so constantly that the best sailors among the passengers frankly acknowledged their discomfort. It was not so much the fault of the boat; it was the cross seas stirred up by the steadily blowing trade winds that made the mischief, and we were all thankful when the light off Salinas (on the Brazilian coast) was sighted and we picked up a pilot for the hundred-mile run up the river Tocantins to the city of Pará—or Belem—the last lap of the journey down the Atlantic.



OFFICES OF A. H. ALDEN, LIMITED, PARA.



OFFICES OF GRUNER & CO., PARA.

SECOND LETTER.

Travel in a Boat Consecrated to Rubber.—The Lower Amazon and the Approach to Para.—Vast Waterways and the Perils of Navigating Them.—Experiences with Customs Officials.—Landing Right in the Rubber District, and Landing "Right."—Courtesies at Para.

OUR craft was first and last a rubber boat and had carried million of dollars' worth of fine Pará to the States and to Europe—\$4,000,000 in one cargo. Almost from the beginning the Captain and officers talked rubber. They spoke with pride of Riker's plantation up at Santarem, and said he had 50,000 trees and was already tapping.* Posted in the chart room was the following:

SHIPMENTS OF RUBBER IN MANAOS, PARA AND OTHER PORTS.

SPECIAL NOTICE TO CAPTAINS AND OFFICERS.

We desire to call the special attention of our captains and officers to the fact that for some time past rubber cargoes have come forward with the weights in kilos incorrectly marked on many of the cases, the result being that whenever these cases are landed here broken, the vessel is invariably called upon for the deficiency between the foreign and the English weight.

We therefore insist upon the utmost care being taken in receiving and stowing this description of cargo, so that the cases stand no possible chance of being broken, and that a thorough search for loose rubber be made in all lighters before being taken away from vessel.

It is also important that very special attention be given to port of destination on cases of rubber from Havre, and that shipments of *pelles* and other loose rubber belonging to various consignees be entirely separate; different holds preferred.

Great care must be taken in the storage of nuts and Lisbon cargo, that the immediate discharge of rubber in Havre and Liverpool be not interfered with. This is very important.

We had been in the mouth of the Amazon for certainly twelve hours, and the yellow waves gave no suggestion of saltiness. We told each other the ancient tale of the boat's crew perishing from thirst, hailing a passing vessel and begging for water, and getting the well-known reply, "Dip it up then; you're in the mouth of the Amazon." We never realized what a mean trick was played on those thirsty mariners until we got a deckhand to dip up some water. It was exceedingly brackish and far from drinkable.

At nightfall it began to rain in torrents, and we felt our way up to the pilot boat, which lay rolling in the trough of the sea in a manner that suggested the greatest discomfort to those on board. After a time a boat put off from her side and we saw it jerkily advancing over the waves to meet us. That is, we didn't see the boat—it was too dark for that; we saw the gleam

of a lantern at intervals when it rode on the crest of a wave. The pilot, a huge two-hundred-pound Indian, caught the side ladder and climbed aboard with surprising agility.

After about half an hour steady steaming, through sheets of rain illumined by occasional lightning flashes, with the lead going constantly, we anchored in 15 fathoms of water to wait for daylight before proceeding up the river. At 5 o'clock the next morning we started on again, and soon it was daylight. The yellowish green water had taken on a deeper yellow and the morning was a mixture of rain squalls and short intervals of sunshine. The Tocantins looked like one of our own great lakes after a storm. In all directions were floating forest wreckage and marsh grasses, and in the far distance the low lying coastline.



RUBBER OFFICES IN A PARA STREET.

* This was mentioned in THE INDIA RUBBER WORLD several years ago.



PART OF THE PORT OF PARA WORKS.

Soon we began to see the fishing boats of typical Portuguese construction, fitted with sails, dark brown, red and blue. As we got further up the river the water became calmer. Did I mention that it was growing warmer all of the time? It certainly was hot, and those who were to remain on board the boat during its stay in port were already getting out mosquito bars. The captain explained to me the reason for anchoring the night before. It seems this coast is afflicted with unusual and strong currents. He pointed out a bank which a huge freight steamer skirted by unlucky chance one dark night, running her bilge keel upon it, and turned turtle almost instantly. Then, too, he showed us the reefs where only a short time before another huge freighter had been wrecked, the captain blowing out his brains when he found his vessel was a total loss. Soon we sighted some of the many islands with which the waterway is filled, and then almost at once got our first glimpse of the water front of the great Rubber City.

In coming up to Pará everything is on so large a scale that one gets no idea at all of the wonderful configuration of the country. The view is confined to wide expanses of muddy water, low shores, densely overgrown with tropical forests, and a few islands. A bird's eye view would show islands big and little by the thousands, rivers of all sizes coming in from every point of the compass, almost; creeks, lagoons, waterways, the whole lower country a gigantic plain rising but a few feet above tide level, sparsely settled, the riot of vegetation crowding every inch of space, and even stretching far out into the quiet earth-laden waters.

We passed in safety the little Portuguese built fort that guards the entrance to the harbor, skirted the shore where the great plant of the Port of Pará* is located, and finally dropped anchor about a mile from the piers. When the great tropical contractors, the Pearsons, finish their work, Pará will have a fine system of granite quays, at which steamers may discharge and load, and passengers go ashore over a gangplank. Until that is done, cargoes are handled in huge lighters covered with movable sheet iron awnings, and passengers go ashore in launches, tugs or rowboats.

I had heard many stories of the vigilance of the customs officials, and that everything paid duty. I, therefore, took only hand baggage for the first trip ashore, and even then would have had trouble with the camera had not a Smoking Room Friend

explained in profuse Portuguese that I was intimately connected with the *intendente* (mayor) and had come from New York purposely to get his photograph. Both federal and state customs, who were aboard almost as soon as the anchor was down, passed me at that. They don't take any chances, however; a passenger going ashore even for a few minutes cannot return to his boat without a permit from a shore official, and one's luggage may remain in the custom house until the Amazon freezes over, if the officials do not choose to bestir themselves. At least so everybody says. To finish my own custom house experiences, a newspaper friend went next day, picked out my luggage, got it passed and up to the hotel within two hours. He did this by reading again and again to the bored official a personal estimate of the Editor of THE INDIA RUBBER WORLD that he himself had caused to be put in the daily papers. In self defense the customs man marked the luggage.

The shore tug on which we embarked took us within a hundred yards of the shore and then tied up to one of the huge lighters, where we were to be transferred to a small rowboat. We saw a couple of porters jump on the lighter, walk around its shelf-like edge, and disappear on their way to shore. Rather than wait for the boat, I followed and wished I hadn't, for the other side of the lighter was made fast to what was once a long wooden pier, but the planking having all been removed, there remained an uneven, rotting nail studded skeleton with the yellow water looking surprisingly dirty and deep underneath it. I got ashore all right, but the broiling sun and my exertions put me in a perspiration that would fill a Turkish bath attendant with envy.

We landed right in the rubber district. There was rubber everywhere, on the sidewalks, in the streets, on trucks, in the great storehouses and in the air—that is, the smell of it. We didn't pause to see the rubber men then, however, but went up a narrow street to the electric car line, swung aboard, and were soon at the Café Da Paz and located in a comfortable room.

Breakfast is at 12 o'clock, noon, in Pará, and while I was enjoying that meal, I took occasion to chat with an American commercial traveler who came to Brazil once a year. It makes me proud always to see evidences of American enterprise in foreign countries, so I asked him a few questions.

"Do many commercial travelers strike this port?"

"Lots of them," said he.

"How many American drummers are there in town at present?"

"I'm the only one," was the reply.

"How many Germans are here?"

"Eighty," said he.

[TO BE CONTINUED.]



SIX MONTHS OLD "HEVEA," PARA MUSEUM.

*An American corporation improving the harbor.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

IT is unfortunate that the recent boom in the waterproofing branch is being seriously affected by the high and constantly rising price of the raw rubber. Proofers have great complaints to make on this head, as, unlike the manufacturers of many other classes of rubber goods, they cannot keep advancing

PROOFING TRADE.

their prices with the assurance that the volume of business will hardly be affected. Although there is a sort of combination among the rubber waterproof manufacturers, this body takes no decided action with regard to advances in price, and it may therefore be considered as of little importance at this critical juncture. In the mackintosh garment trade an increase in price to the wholesale dealers proportionate to what can easily be obtained in other branches brings business to a standstill. The trade, therefore, is confronted with the old alternative which has worked so much havoc in the past. It hardly need be mentioned that this is the lowering of the quality of the rubber mixing in order to prevent manufacture at a loss. This is bound to occur if the wholesale dealer buys in the cheapest markets and where there is no general agreement among manufacturers as to prices. The boom to which I have referred is by no means confined to high class goods for motorists; it is concerned with the public generally and it is unfortunate that the desire to make and sell only really reliable goods should be met with the present difficulties. Trade statistics for last year showed a considerable rise in our exports of proofed cloth to Canada, and there is at present a good demand from that country. Of course there are home factories, but presumably they cannot meet the full demand or supply the particular qualities desired at the price of their British competitors.

As some misapprehension is current with respect to the present position of this machine, it may be of interest to give the facts.

THE PENTHER PATENT MACHINE.

The machine, which has for its object the grinding of rubber scrap such as pneumatic tires with the complete separation of the textile fiber, was brought over from Hanover to the works of Messrs. J. E. Baxter & Co., at Leyland, Lancashire. The various improvements which were found necessary led eventually to a dispute between Mr. Baxter and the inventor, a dispute which found its way into the law courts. This, however, was by no means the end of the machine. Mr. Penther returned to Germany and the machine is now being manufactured under his supervision at the great works of Krupp's who, it is understood, hold the patent rights for the world except as far as Great Britain is concerned, where they belong jointly to Messrs. Baxter and Penther. Several machines are now on order at Krupp's, one for a prominent British rubber works. Among the improvements recently effected is a great increase in capacity—though I don't know whether there is now any greater immunity from the danger of the rubber taking fire—a contingency which has caused trouble in the past.

Fine grinding of scrap rubber has received attention in more than one quarter recently. T. Gare, of Hazel Grove, has

GARDNER'S GRINDING MACHINE.

patented a machine which is generally acknowledged to do very good work in this direction. William Gardner & Co., Limited, the well known engineers of Gloucester, have also recently patented a rubber grinding machine, combined with exhaust fan and metal dust collector. The rubber to be reduced is placed in a box which contains a feed which is automatically weighted, so that as the reducing takes place the weight keeps the rubber in constant contact with the surface of the grinding wheel, until the feed box is empty, when by means of the return motion

worked by hand the box can be filled and the work started again. The powdered rubber is discharged into a box between the legs of the machine, this box being fitted with a separating grid so that in the event of the material becoming overheated it prevents damage to the bulk being ground. By means of the exhausting fan the light rubber dust which would otherwise float about the room is collected, this naturally forming the finest product of the process. I understand that this machine has given complete satisfaction with compounded rubbers. It is not claimed for the machine that it will separate textile material from the rubber, nor do I suppose can it work upon rubber in thin sheets.

THE recent move of this society in instituting a Rubber section emphasizes the great difference in procedure which has for

THE AMERICAN CHEMICAL SOCIETY.

long distinguished it from the Chemical Society of London. I don't know enough about the Continental societies to carry the comparison further. The English society, however, still confines itself to the reading of original papers on purely scientific topics, very little attention indeed being paid to analytical chemistry. Its meetings also are held only in London, so that country members can rarely put in an appearance. Referring more particularly to the new Rubber section, it is clear that matters of strictly technical interest will come under discussion and the success or otherwise would seem to depend on how far the trade through their chemists are disposed to be communicative. Such a section would not have much life in England, as its proceedings would be contributed to only by a limited number of rubber analysts and patentees. In America, of course, it may be quite different, though I have been told that the former American openness with regard to work procedure has given way of late rather to secretiveness. Naturally, the first business of such a section in America is to set to work to standardize the methods of analysis, and I am not surprised to see in THE INDIA RUBBER WORLD for February that steps have already been taken to put this work in hand. In this desirable work the committee hope to have the full sympathy and support of the rubber manufacturers. It may be asked, however, whether the manufacturers as a body are keenly desirous of having all their goods minutely dissected by the scalpel of the chemist. I could certainly point to manufacturers in this country who would want to know where they came in if they were bombarded with queries from a scientific society. I notice that it is stated that no public use will be made of any trade information obtained, but guarantees of this sort can hardly be rigidly adhered to. Suppose, for instance, a firm employs to its advantage some new rubber chemical. Surely the publication of the method of its estimation in rubber amounts to a statement that it is in use or at any rate under trial or consideration. With regard to the International committee appointed in September, 1908, to investigate rubber analysis I presume that the Americans appointed on that committee will now throw in their lot with the new organization, which will probably get through its work first.

THE use of this article, which became prominent on the increased application of higher boiler pressure, shows continual expansion. Originally the bulk of the supply came from America, and this may possibly be the case today, but the

HIGH PRESSURE JOINTING.

British and Continental manufacturers on similar lines have made considerable progress in the last few years. Prominent firms in this line are the Jenkins and Quaker City Rubber companies, of America; the Klinger and Reithoffers companies, of Vienna; and the Calmon, of Hamburg, though this is, of course, by no means an exhaustive list. Klinger's is the oldest established

make on the Continent and it has been the aim of new competitors to produce an article resembling "Klingerite" as far as possible. Prices, of course, vary considerably from less than 1 shilling per pound to 4 shillings and upwards. It need hardly be said that reliability is of more importance than first cost in many of the applications of the material. Important though the case may be for steam pipes where the boiler pressure is 250 pounds in the square inch, it is much more important for the economizer joints to be reliably made, the delay and consequent expense being much greater in the latter case. A distinctive feature of the high pressure jointing trade is the variety of colors in which the material comes on the market. This is to be accounted for by the desire of dealers to have a brand which an engineer can at once distinguish from competitive brands. This has led to the manufacturers having to supply the dealer with jointing of many different colors to satisfy the business requirements which the latter has been at pains to initiate among his varied clientele. The amount of rubber in these jointings is only small, but small as it is the present day competition is severe enough in the cheaper makes of jointing to cause a reduction in the amount of rubber used owing to the increase of price. To digress in conclusion to a matter not strictly connected with jointing, I was informed on a recent visit to our premier lead mine that the United States metallic packing in the piston rod stuffing box of the big Cornish pumping engine was still giving perfect satisfaction, after having been in position for nine years.

THE new buildings of their works at Udsall lane, Manchester, which have just been completed, are of the steel girder and concrete type—a form of constructions comparatively new to British rubber works. As has already been mentioned elsewhere in THE INDIA RUBBER WORLD, Mr. Tinto, the head of the company, with Mr. Gomersall, the engineer, visited the United States a few months ago, and it was what they saw of the use of reinforced concrete in rubber works on that occasion that decided them to adopt that method of construction at home. Despite the high price of rubber, the Irwell and Eastern company are busy enough on mechanical goods. I was interested in examining one of their railway buffers recently returned after 15 years' service. The interior was as round and elastic as new material and one wonders whether the remade buffers, so much in evidence at the moment, will be able to show anything like the same vitality.

It will no doubt be generally understood by readers that these notes are printed without any revision by the author, so occasional mistakes are inevitable. I do not make a point of referring to these, but with regard to the paragraph in the March issue on Siemens Brothers & Co., Limited, I feel that I must correct an error. The asbestos insulated cables are used in car wiring—for the motor *leads*, not motor *trade*, as printed. In the first line of the paragraph it may be mentioned that "convention" should read "invention." In the paragraph on rubber gauntlets "Lurtgarten" should read "Lustgarten."

WHERE IS THE RUBBER "CORNER"?

THE existence simultaneously in so many markets of a rubber "boom" has led to some misunderstandings, for one reason, among others, that the boom is not of the same character in all financial centers. Coincident with the floating of an extraordinary number of new plantation companies in London, for example, has been an unprecedented rise in crude rubber prices, and in many circles an attempt has been made to trace a connection between the two lines of development. One school of writers, for example, supposes crude rubber prices to have been advanced to enhance the quotations for new plantation shares, but of this no proof has been adduced.

A report which reached London recently was that a rubber "corner" had been organized in New York, and that this explained the advance in crude rubber prices. This report evidently was based upon announcements regarding the reorganization of the Intercontinental Rubber Co., which, while largely capitalized, has no relation to crude rubber, except as regards guayule and similar products.

The New York correspondent of the London *Financial News*, in discrediting a report of a rubber corner in New York, and in discussing higher rubber prices for rubber, reports to his paper:

"There has certainly been a large increase in the demand for rubber, resulting from the tremendous expansion of the automobile industry, and the actual consumption in this respect has been far in excess of estimates made at the beginning of the season. American manufacturers, however, seem to have diagnosed the actual situation in advance much more accurately than their English cousins, and have therefore fairly comfortable supplies on hand, which seems to compare with a virtual rubber famine at European centers."

BRITISH RUBBER GOODS HIGHER.

A DEPUTATION from the India-Rubber Manufacturers' Association [says *The India-Rubber Journal*—April 4] was appointed last month to wait upon the principal manufacturers who were not members of the association, to see if some arrangements could be come to with regard to an advance in prices, and the scheme which we proposed appears to have been taken as a basis, with the result that circulars have been issued to the following effect:

"Owing to the further enormous advance in rubber and other raw materials, manufacturers are compelled to raise the prices of their manufactures according to the following schedule:

MECHANICAL GOODS, ETC.	
15. 6d. net and under.....	15 % advance
Over 15. 6 d. and up to 3s. net.....	25 % advance
Over 3s. and up to 5s. net.....	33½% advance
Over 5s. net.....	40 % advance

GARDEN, DELIVERY AND SUCTION HOSE.	
Ordinary Qualities	15% advance
Other Makes and Qualities.....	25% and upwards

"In addition to the advance in prices here notified [the same paper continues] we learn that some of the manufacturers are making the following advances:

India-rubber belting	15% advance
Piece goods and garments.....	15% advance
Sporting requisites, rugs, cart sheets, etc.....	15% advance
Carriage and solid motor tires.....	25% advance

"All other sundry articles, including football bladders, air goods, and hot water goods, etc., 25 per cent."

The following extract from an editorial in our London contemporary is of interest: "To illustrate the state of affairs, we may mention that one prominent manufacturing concern calculate that if they sold off their stock of raw rubber at present prices they would make a profit of £10,000, which would be far greater than they could hope to make by carrying on manufacture for the next three months."

THE Mutual Benefit Association, maintained by employes of the Hartford Rubber Works Co. (Hartford, Connecticut), at their annual meeting on April 14, elected C. B. Whittelsey president, George Holloway vice-president, A. Elmer secretary, and E. Forthergill treasurer. This association, formed about three years ago, and now having a membership of over 500, has a sick and death benefit fund, on account of which payments have been made up to date of over \$5,000. The second annual social of the organization was held on April 22, at Foot Guard Armory, the money realized at which was added to the sinking fund of the organization.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED MARCH 1, 1910.

- N**O. 950,761. Resilient wheel. H. H. Browne and J. M. Asher, Jr., San Diego, Cal.
 950,985. Tire. [Comprises layers of felt and rubber.] R. and S. Basch, London, England.
 951,087. Armored vehicle tire. M. L. Williams, South Bend, Ind.

Trade Marks.

- 43,701. David Sommers, Shamokin, Pa. The words *High Bred*, on either side of a circle. For rubber and other footwear.

ISSUED MARCH 8, 1910.

- 951,173. Vehicle wheel. L. Bloch, Cleveland, Ohio.
 951,574. Folding bath tub. L. F. O'Neill, Minneapolis, Minn.
 951,772. Horseshoe pad. C. E. Pearl, assignor to Pearl Economy Pad Co., Boston.

Design Patent.

- 40,570. Iva Pelle Kempshall, Boston. The ornamental design for an automobile tire tread.

Trade Marks.

- 41,191. Bowers Rubber Works, San Francisco. The representation of sections of spiral rubber piston packing, with the lettering *Universal* and *Shookum*.

ISSUED MARCH 15, 1910.

- 951,811. Utilization of waste rubber. [Consists in mixing waste rubber with anilin and heating the mixture to a temperature sufficient to cause said waste rubber to absorb, enter into a loose combination with and retain the anilin.] A. Gentsch, Vienna, Austria-Hungary.

- 951,869. Tire construction. P. E. Wirt, Bloomsburg, Pa.
 951,870. Tire and tire tread construction. *Same*.
 951,871. Tire construction. *Same*.
 951,872. Tire construction. *Same*.
 951,873. Tire construction. *Same*.
 951,881. Vulcanizing apparatus. [For tubes for tires and the like.] W. Frost, London, England.
 951,938. Spare wheel for vehicles. E. T. Burrowes, Portland, Me.
 951,980. Process of and apparatus for lining pneumatic tires. W. Baird, Pittsburg, Kan.
 952,014. Non-slipping tire. C. F. C. Morris, Stamford Hill, London, England.
 952,039. Non-skid tire. L. Greenwald, Buffalo, N. Y.
 952,072. Puncture-proof casing. [For tires; fabric and rawhide.] W. M. English, Sausalito, and H. M. Lichtenstein, San Francisco, Cal.
 952,073. Tire protector. L. Faber, San Bernardino, Cal.
 952,132. Tire. Anti-skid tread. J. Neary, assignor to Kokomo Rubber Co., all of Kokomo, Ind.
 952,138. Hair curling device. H. W. Reynolds, New York City.
 952,150. Rubber compound. [Consisting of a mixture of rubber, sulphur, filler material, and pulverulent material.] J. Smith, assignor to Arkon Carbon Co., all of Chicago.
 952,175. Pneumatic tire. R. T. Badgley, New York City.
 952,188. Armored tire for vehicles. C. D. Farr, Detroit, Mich.

Trade Marks.

- 45,206. The B. F. Goodrich Co., Akron, Ohio. The representation of a dynamo. For steam hose.
 45,553. Collyer Insulated Wire Co., Pawtucket, R. I. The representation of a coil of insulated cable, with the lettering *IXL*. For insulated wires.

ISSUED MARCH 22, 1910.

- 952,675. Pneumatic tire. L. B. Krum, Chicago.
 952,951. Vehicle tire. W. W. Scott, Hampton, Va.
 953,000. Armor for vehicle tires. C. S. Barrell, Boston, assignor to Barrell Holding and Mfg. Co., Portland, Me.

Designs.

- 40,587. Iva Belle Kempshall, Boston. The ornamental design for an automobile tire tread.

ISSUED MARCH 29, 1910.

- 953,071. Tire armor. A. G. Thomson, assignor of one-half to A. Sutton, both of San Francisco.
 953,099. Heel. J. H. Nash, Beverly, Mass.
 953,327. Elastic wheel. G. Friedberg, assignor of two-thirds to K. Kotwinski, both of Wieliczka, Austria-Hungary, and F. Drobniak, Brzeszcze, Austria-Hungary.
 953,477. Pneumatic tire rim. A. L. Lockwood, Jackson, Mich.
 955,512. Tire grip. E. E. Burns, Hartley, Iowa.
 953,645. Wheel. J. H. Story and F. C. Winkel, Woodbury, N. J., and H. D. Weed, Syracuse, N. Y.
 953,658. Adjustable anti-skid device. D. E. J. Breckett, Cleveland, Ohio.
 953,673. Grip tread for tires. H. D. Weed, Syracuse, N. Y.

Trade Marks.

- 43,649. J. W. Guttenecht, Steir, Germany. The representation of a pair of scales. For rubber erasers, rubber bands, and the like.

- 45,916. International Pulp Co., New York City. The word *Asbestine*. For a powder prepared from talcous for use as a filler in rubber, and the like.
 47,170. Norvell-Shapleigh Hardware Co., St. Louis. The word *Mizzoo*. For inner tubes of tires, rubber hose and fruit jar rubbers.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the application, which in the case of those listed below was in 1908.

* Denotes Patents for American Inventions.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MARCH 2, 1910.]

- 23,770 (1908). Spring wheel with tire of india-rubber blocks protected by metal shoes connected by ball and socket joint. G. Debladis, Paris, France.
 23,859 (1908). Pneumatic tire with two air tubes, one for inflation ordinarily, while the other forms a reserve. D. Marshall, Cheltenham.
 23,882 (1908). Lever for applying or detaching a pneumatic tire. H. Thorne and P. H. Thorne, Leeds.
 24,015 (1908). Repair of cuts in pneumatic tires. F. M. Fogarty, Brighton, and A. Lambourne, Hove.
 24,051 (1908). Solid rubber tire. C. Challiner, Manchester.
 24,180 (1908). Pneumatic tire with or without special tread of solid rubber. L. F. Rousseau, Argenteuil, France.
 24,194 (1908). Solid rubber tire. P. Gunther, Budapest, Hungary.
 24,285 (1908). Wheel with two elastic tires, side by side. A. Turnbull, Glasgow.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MARCH 9, 1910.]

- 24,438 (1908). Machine for removing foreign matter from india-rubber, by means of rollers having highly roughened surfaces working under water in combination with a plate for forcing the rubber between the rolls. British Murac Syndicate, and M. M. Dessau, London.
 24,464 (1908). Pneumatic tire cover with special form of beaded edge. W. H. Paull, Birmingham.
 24,591 (1908). Elastic tire other than pneumatic. A. Boerner, Briessnitz, near Dresden, Germany.
 24,640 (1908). Security bolt for pneumatic tires. J. S. Clayton, Aston, Birmingham.
 24,661 (1908). Pneumatic tire of either the continuous or the sectional type. A. T. Collier, St. Albans, and H. S. Foster, Westminster.
 24,812 (1908). Elastic tire other than pneumatic. R. Basch and S. Basch, London.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MARCH 16, 1910.]

- 24,995 (1908). Repairing patch for pneumatic tires. F. Woodgates and T. W. Jourdan, Tiverton.
 25,107 (1908). Rim for carrying a pneumatic tire. J. Fitz Gibbon, Lahinch, County Clare.
 25,111 (1908). Pneumatic tire. I. B. Kempshall, London.
 25,204 (1908). Compound fabric for tires. Lady M. Jenkins, Cardigan, Wales, and E. Kempshall, London.
 25,250 (1908). Press for molding rubber tires or tubes. J. C. Kay & Co. and J. H. Coffey, both in Bury, Lancs.
 25,282 (1908). Spring wheel with elastic tire. L. P. Landtved, Copenhagen, Denmark.
 25,309 (1908). Elastic tire other than pneumatic. H. G. Hugon, Pas-de-Calais, France.
 25,395 (1908). Pneumatic tire. J. Muirhead, Glasgow.
 25,417 (1908). Pneumatic tire with cushion tread. G. Standen, Loxwood, Sussex.
 25,590 (1908). Elastic tire other than pneumatic. J. I. Mitchell, Glasgow.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MARCH 23, 1910.]

- 25,630 (1908). Pneumatic tire cover. H. Harmel and C. Toussaint, Courbevoie, France.
 25,713 (1908). Pneumatic tire with tread formed of circumferential rims. J. Webster, Manchester.
 25,725 (1908). Handles and corner pieces for trunks and the like, consisting partly of leather and partly of rubber, with metal strengthening pieces. F. Zeltzer, London.
 25,803 (1908). Vulcanization of tires and tire tubes by electrical means. W. Frost and Harvey Frost & Co., London.
 *25,815 (1908). Device for overcoming the electrical insulation from the earth of motor cars having rubber tires. P. A. Newton, London. (B. Brower, New York.)
 25,842 (1908). Tire rim with detachable side flange for motor car wheels. H. P. Gibbs and H. E. Ormerod, Bangalore, India.
 *25,935 (1908). Pneumatic tire. J. Edman, Minneapolis, Minnesota.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MARCH 31, 1910.]

- 26,209 (1908). A pneumatic tire air tube divided into two compartments by a radial flexible web, separate valves being provided for the two compartments. J. Boelen, Amsterdam, Holland.

- 26,304 (1908). Apparatus for molding pneumatic tires. G. C. Taylor, Helsby, Cheshire.
- 26,315 (1908). Telephone mouthpiece to prevent overhearing of the conversation. P. B. Clarke, Liverpool.
- 26,319 (1908). An inflating valve for footballs, tires, and the like. G. Carruth, Paisley.
- *26,377 (1908). Elastic tire other than pneumatic. W. P. Thompson, Liverpool. (Safety Tire Co., Portland, Maine.)
- 26,445 (1908). Heel protector. J. C. Hancock, Perth, and A. B. Thompson, Brookton, West Australia.
- 26,490 (1908). Devisible rim for carrying a pneumatic tire. G. J. Arnold, Torquay, Devonshire.
- 26,585 (1908). Elastic tire with non-slipping recessed cover. C. J. Watts, Calne, Wiltshire.
- 26,598 (1908). Tire inflating pump. A. Höhler, Kreis Diedenhofen, Germany.
- 26,599 (1908). Means of securing a non-skid tread to a pneumatic tire. F. E. M. de Meeste, Malines, Belgium.
- 26,680 (1908). Apparatus for vulcanizing rubber at a required temperature for a definite period of time. M. Bouchet, Paris, France.

THE FRENCH REPUBLIC.

PATENTS ISSUED (with Dates of Application).

- 407,108 (Aug. 17, 1909). G. G. Johnston. Pneumatic tire.
- 407,109 (Aug. 19). W. P. Mulié. Segmental pneumatic tire for bicycles.
- 407,146 (Sept. 18). J. C. Bongraud. Devulcanization of waste rubber.
- 407,218 (Sept. 21). L. M. Nelson. Wheel tire.
- 407,258 (Sept. 22). Hall and Baynes. Demountable tire.
- 407,298 (Sept. 24). M. Byrne. Interior pneumatic cushion for boot heels.
- 407,354 (Sept. 25). G. O. Draeger. Elastic tire.
- 407,377 (Sept. 27). A. B. Cathala. Rubber studded heel for boots.
- 407,409 (Dec. 28, 1908). Putvis. Tire.
- 407,482 (Dec. 29). Martin. Tire.
- 407,555 (Dec. 31). Largeron. Pneumatic tire.
- 407,559 (Oct. 4, 1909). Hill and Baquic. Pneumatic tire.
- 407,597 (Jan. 4). Baraduc Muller. Protected tire.
- 407,706 (Oct. 8). Garronne. Pneumatic cycle tire.
- 407,754 (Oct. 6). V. Guillemin and J. Rougelet. Elastic tire.
- 407,823 (Oct. 12). L. Huillier and Royé. Method of manufacture of flexible tubes.
- 407,791 (Oct. 11). I. O'Brien. Tire protector.
- 407,891 (Oct. 14). P. M. J. David. Protected air tubes for pneumatic tires.
- 407,943 (Oct. 16). F. R. de Urruela. Demountable rim for pneumatic tires.
- 407,944 (Oct. 16). Handeck, Dykes and Rawlings. Covering for electric wires.
- 407,793 (Oct. 11). L. Banchieri. Process for devulcanization.
- 407,864 (Oct. 13). V. Scholz. Process for obtaining caoutchouc and gutta-percha in a pure state.
- 407,681 (Oct. 7). J. & J. Schoenfeld Frères. Process of manufacturing rubber nipples.

[NOTE.—Printed copies of specifications of French patents can be obtained from R. Robet, Ingenieur-Conseil, 16 avenue de Villier, Paris, at 50 cents each, postpaid.]

DUTCH INTEREST IN GUTTA-JELUTONG.

AN American consular report states that a company has been organized in Amsterdam, with the support of American capitalists for the purpose of working the forests of Dutch Borneo which supply the well known product gutta-jelutong, or Pontianak gum. This product hitherto has been gathered by the natives (Dyaks) in a crude and destructive manner, and the supply, which would otherwise have been sufficient for a long time to come, has consequently been decreased to a very considerable extent. Although the government promulgated a law which compels all persons who intend to gather gutta-jelutong to obtain a permit, it will be readily understood that it was found impossible to enforce this measure in an efficient manner. The government now expects to obtain more satisfactory results by granting concessions to companies who are willing to proceed in an adequate and rational manner. The company referred to above was granted an area of 300,000 acres, and is under obligation to respect the rights of the natives and to erect within a term of two years several factories for the gutta trade. If the company is to be successful in its operations, two factors will have to take a favorable turn, viz.: firstly, the selling price, which is subject to large fluctuations, and secondly, the labor question.—*Gummi-Zeitung*.

"RUBBER" IN A DICTIONARY.

THE spectacular industry of the world today is the rubber industry. The daily papers chronicle the market changes, the fever of speculation in "rubber shares," and the discovery of new substitutes. The weeklies and monthlies are replete with illustrated articles combining fact and fiction that center about rubber gathering or manufacture. The muckraker has "muck raked" the Congo and the Mexican plantations. The rubber novel has passed into history. So much of evanescent worth has the industry accomplished. Of permanent accomplishment, however the additions to the English language that have been evolved in connection with the trade must be noted. From the latest volume of the "Century Dictionary" we cull the following words and definitions that have not appeared in any dictionary hitherto:

rubber² (rub'ér), *n.* [Short for *rubber-neck*.] One who turns around to see something; one who gazes or looks out eagerly; often used as an exclamation in mockery of one who turns to look at something. [Slang, U. S.]

rubber² (rub'ér), *v. i.* [*rubber², n.*] 1. To turn around to see something; to look out or about in an eager or awkward manner; in general, to look about. [Slang, U. S.]

If they're [Police Commissioners] any good they prob'ly *rubber* around on their own hook an' they must see these joints . . . everybody *rubbers* in this town [Boston].
Josiah Flynt, in *McClure's Mag.*, June, 1901, p. 117.

2. To listen when others are talking through the telephone (on party lines). [Recent slang, U. S.]

rubber-neck (rub'ér-nek), *n.* [A humorous term, meaning literally 'one who has, as it were, a long, flexible neck,' which turns easily.] One who turns his head to look or gaze at something or some person he has passed, or at anything that attracts attention; one who gazes eagerly or awkwardly at the sights of the town. [Slang, U. S.]

In the West we have long used the term '*rubberneck*,' just now so popular with you here in the East. Its meaning there differs slightly from the interpretation you put on it. A '*rubberneck*' West is one who snops around and tries to get into business deals and like things. Now the term is countrywide and attracts but little attention, but formerly, when confined to the West, it always caused inquiry from the Eastern visitor.

N. Y. Tribune, April 14, 1901.

Rubber-neck wagon, a vehicle with cross-seats used for conveying parties of tourists or other persons about the streets of a city, under the direction of a guide, equipped with a megaphone, who calls attention to and describes the various 'sights.' [Recent slang, U. S.]

rubber-neck (rub'ér-nek), *v. i.* To stare like a rubber-neck; go about staring at or prying into things; rubber. [Slang, U. S.]

Still joy is *rubbernecking* on the street . . .
Still does the masher march around the block.

Wallace Irwin, *Love Sonnets of a Hoodlum*, xxii.

WHY HER DANCING DRAGGED.

BY A NEW REPORTER.

A YOUNG chap who was born on a ranch and who, while getting his education in the East, has turned westward each summer and has thus maintained a fine, strong physique, recently danced with a young woman of some two hundred pounds in a New Jersey town, not far from Princeton.

He noticed that the dancing was uphill work, and, when it was over, sank into a chair in a state of exhaustion. The young woman looked thoughtfully across the shining surface of the floor and threw a glance of inquiry at the corner where the punch bowl stood.

"Doesn't it strike you that the floor is very sticky tonight?" she asked.

The young man gallantly denied thinking so.

"It seems so to me," observed the young woman.

Then, looking down at her foot, protruding from a silken skirt, she exclaimed:

"Why! I've got my rubbers on!"

Rubber Sundries Manufacturers' Association.

FOR a number of years past the Rubber Sundries Manufacturers' Association have followed their annual meeting, in New York, by a banquet at Delmonico's. This year, urged perhaps by the impulse that is moving everything uptown, their dinner, on the evening of April 14, was given in the "New Banquet Hall" in the Plaza Hotel. The hour of assembly was 7, at which time the members of the Association met in one of the cozy parlors adjoining the banquet hall and enjoyed some fifteen minutes of friendly converse. Then the President, leading with the guest of honor, all filed into the banquet hall.

In former years the members of the Association have been seated about a huge round table. This year the table took the form of an elongated ellipse. The center of the table was occupied with what appeared to be a miniature lake, upon the unruffled bosom of which floated snow white swans. Surrounding the lake were first, diminutive sandy beaches; then stretches of green sward, tiny houses and stables; and in the fields browsing cattle and sheep. Although the flowers that adorned the table were not tropical, it was suggested that the scene was Amazonian, a compliment to the Editor of THE INDIA RUBBER WORLD, who, just back from a trip to South America, was fortunate enough to be the Association's guest that evening.

The Plaza proved itself equal to the occasion, and furnished a feast that for quality and service was beyond criticism. During the dinner a quartette dressed in ornate Mexican habiliments played and sang Spanish selections, and even rendered some of the latest popular airs.

With the coffee Mr. H. C. Burton arose and delivered his valedictory as retiring President. He paid a high tribute to three members who during the last twelve months have passed to the Great Beyond. They were Joseph Davol, George M. Allerton, and James Connolly. He sketched briefly and appreciatively the characteristics of the departed, and the company, rising, paid a brief silent tribute to their memory.

Mr. Burton then introduced to the assemblage their new President, Mr. George B. Hodgman, as one who by inheritance, training, and capacity, was especially fitted to be at the head of their Association. Mr. Hodgman replied briefly, modestly deprecating his own fitness to succeed the brilliant and capable presidents that had preceded him, but pledged himself to carry on the work of the Association to the limit of his ability. Mr. Burton then spoke of the many tropical trips that had been taken by the Editor of THE INDIA RUBBER WORLD and welcomed him back from the Brazils and invited him to take as much time as he saw fit in speaking of his visit to the "Rubber Country." Mr. Pearson spoke some twenty minutes, giving a brief outline of his trip, the detailed story of which, he explained, he was hard at work preparing for publication.

Mr. H. E. Raymond was next introduced. With the utmost seriousness—that is, as far as demeanor went—he read extracts from a booklet published by one of the firms belonging to the association, and by clever comment, timely interpolation and elision, made it such a jumble of absurdities that the room rang with peals of laughter, and even the



BANQUET OF THE RUBBER SUNDRIES MANUFACTURERS' ASSOCIATION.

dignified head of the house that issued it, after a few moments of dismayed surprise, laughed until tears rolled down his cheeks.

Mr. Fred. Hall Jones, for a long time treasurer of the Association but now vice president, was called upon, and in his response, after telling very well some typical after-dinner anecdotes, sounded a note that appealed to all present. He sketched, very happily, the characteristics of the manufacturers of New England, New York, and the West, who made up this Association, and who by differences of temperament and of training, were able when they worked in unison to make an ideal and effective body industrial.

After a vote of thanks to the retiring President, the audience turned and faced the tiny stage at one end of the room where appeared, first, a full blooded Moqui Indian, in resplendent war dress, who not only spoke understandable English, but who had a line of sleight-of-hand tricks that would make any pale-face prestidigitator white with envy. Then followed a very jolly little comedian, who sang songs

and told new stories, and then a huge Dutchman who made excellent music out of tin cans, barrels and all sorts of unpromising material.

This year's souvenir was a dainty little traveling clock, about three inches high, a triumph of French clockmaking art in brass and crystal. The clock was covered by a beautifully finished pigskin case, in itself both a protection and an ornament. Taken by and large, this year's was the equal of any that the committee—Messrs. Hodgman and Huber—have ever planned, which is saying much.

The afternoon of April 14 was devoted by the Rubber Sundries Manufacturers' Association to a business meeting and election of officers for the ensuing year. The officers elected were George B. Hodgman, president of the Hodgman Rubber Co., President; Fred. Hall Jones, president of the Tyer Rubber Co., Vice President; Edward E. Huber, of Eberhard Faber, Secretary and Treasurer. Mr. Huber has been the secretary of the Association for several years, and now has two offices to his credit.

A British Raid on the Golf Market.*

HAVING finally smashed the American patent on rubber cored golf balls over there, the Britishers are seeking to get their own makes into this market. They are not trying to establish branch houses here or to put their golf balls on sale in the stores or the professionals' shops. This would be a violation of the American patent law, and the Britishers would have to defend an injunction suit, which could be carried as far as the supreme court at Washington. Should the evidence that prevailed with the lower court, the chancery division and the house of lords prevail here the Britishers could break the patent rights and create an open shop in golf balls.

"I wish they would or could break the patents," said a wholesale dealer in golf goods. "With an open shop we would make our own golf balls, as we did in the days of the solid gutta; they would cost the public one-half what they do now and as we would not pay royalties to any one our profits would be larger."

But the newest British trade invasion does not seem to have any ulterior motive as to patent breaking. The firms of St. George are not seeking a combat with the American patent dragon. Instead they seem to seek only the nimble shilling or so in profit. To golfers in different parts of the United States have recently been delivered by the letter carriers a neat linen bag, the sort in which golden guineas are carried about the stage in melodrama, fastened loosely by a cord so that the contents may be examined at the postoffice. The address tag is stamped—American value three cents in stamps—and on it is written in pencil, "Samples, no value." In the bag is a paper box holding two golf balls. One end of the box is broken, but each golf ball is in its original package and the seals are intact.

In an earlier mail appears an advance notice, a forewarning that the mysterious looking bag does not contain dynamite or a bomb. The gist of the letter is:

"We are sending you samples of our golf balls. We shall be glad if you will favor us by testing these. We are sending these balls into the States at the special price of \$10 for two dozen, carriage paid direct to user, who pays duty on arrival.

Similar offers are being advertised in American golf magazines. Duty paid, the balls stand the user about \$7 a dozen. The odd part of the proposal is that it invites the user to violate the patent law, and if the transaction is sifted thoroughly the United States postal authorities may be placed as confederates in the temptation. The British shipper, whether he uses the mails or sends by express, may only be punished by having his goods stopped and sent back. An injunction suit might possibly be brought, but

not so readily as if the British firms would set up branches here and openly attack the American market.

An individual who gets samples of the British balls or who orders them sent over need not fear that he will be enjoined from using them. A leading New York dealer said three years ago when the American patents were first wiped out in Great Britain and certain golfers here were using English balls: "We can't reach the makers or the underhand consigners of these balls made in contempt of the American patent, but we can get after the individuals who openly use them. We will stop by legal means, and very quickly, the golfer who plays with an English golf ball or any golf ball made in defiance of our rights on an American course."

Regarding this threat, a New York lawyer who is a golfer uttered at this time this informal opinion: "An injunction might be served on the player who is using the obnoxious ball. A temporary injunction might be asked for from the court, and unless the player demonstrated his legal right to use the ball, the injunction would then be made a permanent one. There could be no arrest in the first instance, but if the injunction were granted and subsequently violated there might be cause for a criminal action.

"It is good law, I believe, that an American patent must be protected from encroachments on the American markets of articles made in violation of that patent in other countries. But in general law, to speak offhand, it may not be easy to obtain a permanent injunction against a golfer who may prefer to use a golf ball made in England and which is not on sale in this country. The golfer may prove to the court that in England it has been decided it is lawful to make and vend the golf ball he is using. An American judge might follow the decision of the English court—law is largely a matter of precedents—and refuse to enjoin the golfer from using the foreign made ball."

Last week the New York dealer previously quoted revealed that he had changed his tune about going after the individual offenders. "I don't believe," said he, "that any interference would ever be made with a golfer who uses English balls no matter how he gets them. The game wouldn't be worth the candle. Regarding this new offer from England, I think it a joke. The sales will be so small at the quoted price plus duty that there will be no money in it for the consigners. If the American patentee thought it worth while he could bar out the parcel post deliveries or any other deliveries here. I don't believe the Britishers are seeking a test case. Instead I believe they are absolutely ignorant of our patent rights and are just

*From the New York Sun, March 6, 1910.

trying to push their balls and advertise them in this trade."

There is a flood of home manufactured rubber cored balls on sale in England and in addition to the rivalry between the natives two American firms have branch factories there. The American patentee could not establish priority of invention in Great Britain. After he began to sell broadcast here in 1900 there were many other sorts of rubber cored balls brought out. In 1903 the patentee brought suit against all other makers for infringement of his patent and cumulative damages. The action drove all the small manufacturers to the wall, but the case never went to a finish. The two or three principal defendants put in answers denying priority of invention, but there was never a trial. This was because they confessed judgment and since then all makers of golf balls having a core of wound rubber threads have paid a royalty to the patentee.

REPRODUCTION OF GUAYULE.

THE subject of the reproduction of the guayule plant is treated at length in the prospectus of the Guayule Rubber Co., Limited, recently brought out in London. This prospectus quotes from a report by Señor Albert S. Valdespino, of Torreon, Mexico, who has made a careful study of the guayule situation. In estimating the present and prospective supply of guayule shrub, he includes the item of "annual cutting," which he explains is really gleanings—guayule which was left by former contractors. His report proceeds:

"The real second crop should then be considered. A very important feature of the guayule business today is the question of future crops, which now seem to be assured. It is a well known fact that where one large plant is pulled up, six or eight small plants will spring up in its stead, being from the shoots which break off and remain in the ground. I remember that during the year 1906 the general opinion prevailed that in two years' time there would be no guayule. This fear seems to have passed over, and the factories at the present time are better stocked and estimate their supply of raw material far in excess to what they did in 1906."

A report in the *Mexican Herald* is to the effect that a larger production of guayule is expected in Mexico this year than at any time in the past. The estimates in the hands of the department of fomento indicate that the acreage over which guayule shrub will be gathered this year will exceed by 30 per cent. the figure for last year. It is stated further that, whereas guayule shrub could be bought at \$25 a ton in the open market only a few years ago, it is selling at present as high as \$150 a ton.

* * *

REGARDING a report on the use of a regrowth of guayule, from fields once worked over, a high authority on guayule, to whom the matter was referred, writes:

TO THE EDITOR OF THE INDIA RUBBER WORLD: Replying to your letter. I would say, with reference to the statement that new growth of guayule is actually being used, that such statements must be received with the greatest caution. I had occasion, just a year ago, to look into this particular question. Guayule was being brought to the factory and it was said to be second growth from an area which had been cut three years previously. Upon investigation I found that there was not a plant to the bale less than eight to ten years old, and there was no evidence at all that any of it was second growth, strictly speaking. The only thing you can say of it is that it was a second gathering, apparently of stuff left at the first gathering. My own experience teaches me caution with regard to any statements concerning guayule not verifiable from personal observation.

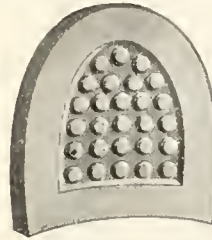
Auburn, Alabama, April 13, 1910.

FRANCIS E. LLOYD.

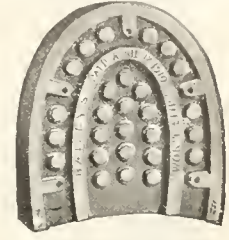
A BOOK for everybody interested in tires—"Rubber Tires and All About Them"—this office.

BAILEY'S "WON'T SLIP" RUBBER HEELS.

THE latest contribution to the world's supply of rubber heels for shoes is the "Won't Slip," for which a United States patent was granted on April 12, 1910, to Mr. Charles J. Bailey, of Boston. The construction suggests the well known tread principle for tires with which this inventor's name long has been identified. These heels, made from the toughest fibered rubber, are referred to as being rendered more durable by their form than if solid. The rubber studs next to the leather heel of the boot



HEEL SURFACE.

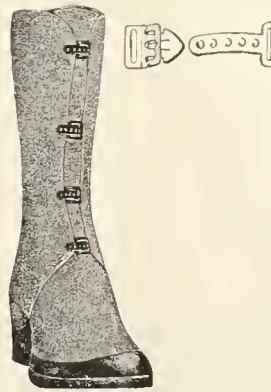


TREAD SURFACE.

give it a permanent double cushion that forces the center of the heel and releases mud or snow with each step. The tread surface formed with "U" shaped ribs, together with flat ended rubber studs, form a surface that is positively non-slipping on ice or other slippery surface. The two cuts herewith illustrate respectively the heel and tread surfaces of this new article. Foreign patents have been applied for. [C. J. Bailey & Co., No. 22 Boylston street, Boston.]

THE NEW CRANE BUCKLE.

THE attention of the rubber footwear trade is being called to a new buckle for use on men's and women's "arctics," which is a great improvement over many buckles hitherto in use,



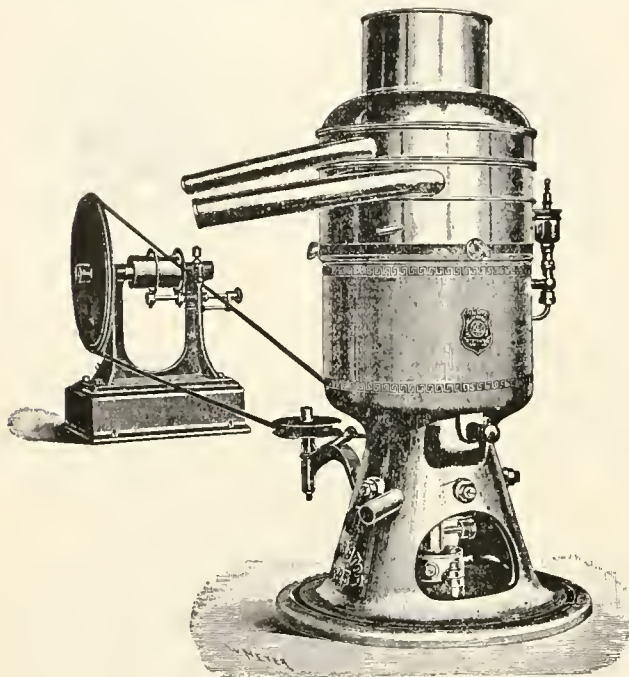
THE CRANE BUCKLE.

and which overcomes the objections which have been raised against the latter. In addition to these buckles being neat in appearance, some of their advantages are that they do not cut the fabric of the arctic itself; the buckle is easily adjusted; and it is commended particularly to ladies, for the reason that it does not tear the wearers' skirts. The buckle is fastened by lifting the square spring member and inserting under it the ratchet shown in the cut; then folding down the spring upon the ratchet at any point desired. It may be pushed forward over the teeth of the ratchet until the arctic is adjusted to the foot to any degree of snugness which may be wished. This buckle, being made of the best of steel, is practically indestructible. [Crane Buckle Co., No. 19 Pearl street, Boston.]

THE accounts of British Insulated and Helsby Cables, Limited, for the business year 1909, show a trading profit of £131,767, comparing with £193,832 for the preceding year. The comparison is more favorable, however, with years previous to 1908. It is pointed out that, pending the transfer of the business of the National Telephone Co. to the government, a decline in the buying of telephone supplies has come about, to the detriment of the company's business, but this is regarded as only temporary. The company have established an automobile tire factory at Helsby. The dividends for the past year have been as usual—6 per cent. on the preference and 10 per cent. on the ordinary shares.

CENTRIFUGAL COAGULATING PROCESS.

THE problem long has confronted the rubber producing interest of preparing rubber from latex more speedily and more economically than by the primitive processes still in vogue, as a rule, in connection with forest rubber. Not only this, but the desirability of supplying manufacturers with rubber in a cleaner condition has been recognized. The success of the rubber planters of the Far East has been due, to no small extent,



"EMPIRE" CENTRIFUGAL RUBBER COLLECTOR.

to their adoption of methods whereby the cost of preparation has been reduced to a figure until recently considered impossible, while the product contains practically no impurities. As the rubber plantations in Mexico—of more recent origin than those in Ceylon—arrive at a productive stage, the planters there also are taking an interest in mechanical appliances for giving to their product the best possible character.

An apparatus which has been used successfully on one of the



RUBBER PRODUCED BY THE COLLECTOR.

largest Mexican plantations producing rubber, and which is illustrated on this page, is the Centrifugal Rubber Collector, which may be described as being of the nature of the cream separator used in dairies. This machine is referred to as collecting all the rubber which may exist in the latex, but with a minimum of resin. The operation of the machine is rapid, and the rubber which comes from it is ready for market more promptly than that produced by any other method from the latex of *Castilloa*.

Rubber produced by the centrifugal collector in the sizes now used is delivered somewhat in the form of Par  biscuits, having a circumference at base of 30 inches, height of 9 inches, and a weight of 19 pounds. These rubber biscuits, of course, line the walls of the bowl in which they are formed, and have an opening through the center.

One of the accompanying illustrations shows the specimen of this product sliced in half, a view of the two pieces being given. When the rubber is thus cut in two it shows very densely coagulated light colored surface, with a suggestion of thin layers such as are produced by the smoking process, and suggesting typical fine Par  biscuits. A convenient method of operating this machine is by means of small gasoline engines. This centrifugal machine is offered for the treatment of *Hevea* and other rubbers, as well as *Castilloa*. The manufacturers are The Empire Cream Separator Co. (Bloomfield, New Jersey).

NEW TRADE PUBLICATIONS.

THE GUTTA-PERCHA AND RUBBER MANUFACTURING Co. OF TORONTO, LIMITED, issued under date of March 1 their catalogue of "Maltese Cross" rubbers for the ensuing season. As usual this catalogue covers an extensive range of goods, and is attractively and profusely illustrated. [3 $\frac{3}{8}$ " x 5 $\frac{7}{8}$ ". 72 pages.] Also: Net Price List "Maltese Cross" goods. [3 $\frac{3}{8}$ " x 5 $\frac{7}{8}$ ". 24 pages.]

FIRESTONE TIRE AND RUBBER Co. (Akron, Ohio) send out a booklet containing valuable suggestions to motorists on the correct air pressure for tires. [6" x 3 $\frac{1}{2}$ ". 16 pages.]

E. J. WILLIS Co. (No. 8 Park Place, New York) send out an extensive catalogue of Automobile Supplies—Catalogue A, 1910—illustrated with practically every type of automobile accessories in the trade, including tires of the leading makes, and many other articles in rubber. [7 $\frac{1}{4}$ " x 9". 68 pages.]

THE HARTFORD RUBBER WORKS Co. (Hartford, Connecticut), in a tastefully got up booklet entitled "A Factory's Progress and Product," devote space to a historical sketch of the works, after which are illustrated and described not only their Clincher and Dunlop automobile tires, with such special features as the Midgley and Bailey treads, but also their solid rubber tires and single tube bicycle tires, and a very full line of accessories adapted to use in connection with these various products. The catalogue is unusually well illustrated. [8 $\frac{1}{8}$ " x 9". 28 pages.]

HOOD RUBBER Co. (Boston), issued at the beginning of the month their Catalogue and Net Prices to Retailers, showing the regular and early order prices before June 1 of their "Hood" and "Old Colony" brands of footwear, illustrating some new features of interest. [3 $\frac{3}{8}$ " x 6". 64 pages.]

THE NORTH BRITISH RUBBER Co., LIMITED (Edinburgh), issue, under date of March, 1910, a new list of aeroplane and balloon fabrics, it being their sixth edition. [8 $\frac{3}{4}$ " x 11 $\frac{1}{4}$ ". 8 pages.]

W. D. ALLEN MANUFACTURING Co. (Chicago), issue their Catalogue No. 26 devoted to the Brass Goods which they manufacture, including a line of hose accessories and lawn sprinklers. Their product of packings is also included. [6 $\frac{3}{4}$ " x 9 $\frac{3}{4}$ ". 112 pages.] Their catalogue No. 27, styled "Architects' Edition," is devoted mainly to fire hose equipment for interior use. [6 $\frac{3}{4}$ " x 9 $\frac{3}{4}$ ". 32 pages.]

B. F. STURTEVANT Co. (Hyde Park, Massachusetts), include in their latest installment of "Bulletins" Catalogue No. 170—"Sturtevant Vacuum Cleaner." This is a device for household use, adapted to being operated by electricity from lighting circuits. [6 $\frac{1}{2}$ " x 9". 16 pages.]

ALSO RECEIVED.

THE Standard Electric Time Co., Waterbury, Connecticut—Standard Electric Time Systems. Catalogue No. 32, January, 1910. 72 pages.

J. Ellwood Lee Co., Conshohocken, Pennsylvania.—"Jelco" Automobile Tires and Tubes. Paynter Anti Skid Tires. 4 pages.

A. J. Reach Co., Philadelphia.—Baseball Catalogue, season 1910. 36 pages.

The British Rubber Craze.

THE stage of excitement which the British public in respect of rubber has reached is indicated by the long list of companies, designed primarily to deal with rubber planting, which has been compiled from recent announcements of new registrations. What follows is not presented as a complete list of British registrations of rubber planting companies during the months of February and March of this year, but only a record of those that have come to the notice of this journal in respect of those months. The list gives an idea of the wide distribution of the enterprises which have appealed during this period to British investors in rubber.

The 113 new companies mentioned in this list have a combined stated capitalization of £11,468,260 [= \$56,536,612.42]. This brings our list for the new year up to 131 companies, capitalized at a total of \$64,824,261.92. It may be noted that these are only British companies, and that new flotations are reported constantly from Amsterdam, Berlin, and elsewhere in continental Europe, not to mention "rupee" companies in Ceylon, and local organizations elsewhere in the East.

CEYLON.

Doolgalla (Ceylon) Rubber Estates, Limited; Feb. 1..	£90,000
Lavant Rubber and Tea Co., Limited; February 16..	135,000
Mahatwattee (Ceylon) Rubber Estates, Limited; Feb. 28	100
Ceylon-Travancore Rubber and Tea Estates, Limited;	
March 1	65,000
Ceylon Consolidated Rubber Estates, Limited; March 1.	80,000
Mapalagama Rubber Estates, Limited; March 4.....	25,000
Deviturai Rubber and Tea Estates Co., Limited;	
March 12	170,000
Ceylon Rubber, Tea, and General Produce Co., Limited;	
March 14	90,000
Alluta Rubber and Produce Co., Limited; March 17..	60,000

FEDERATED MALAY STATES.

P. R. Rubber Plantations, Limited; February 3.....	£3,505
Padang Java Rubber Estate, Limited; in Selangor;	
February 4	55,000
Teluk Piah Rubber Estate, Limited; in Selangor;	
February 12	35,000
Bukit Selangor Rubber Estates, Limited; February 18..	60,000
Sungei Matang Rubber Co., Limited; in Perak; Feb. 18.	40,000
Kinta Kellas Rubber Estates, Limited; February 23..	80,000
Kuala Perak Syndicate, Limited; February 23.....	500
United Batang Rubber Estates, Limited; in Perak;	
February 24	65,000
Muda Syndicate, Limited; February 24.....	20,000
Sungei Rinching Rubber Co., Limited; in Selangor;	
February 28	30,000
Khota Tampan Rubber Co., Limited; in Perak; Feb..	40,000
Malay Copra and Rubber Syndicate, Limited; March 7	5,000
Malay States Rubber Trust, Limited; March 8.....	73,000
Chimpul (Negri Sembilan) Rubber Estates, Limited;	
March 11	90,000
Strathisla (Perak) Rubber Estates, Limited; March 11.	30,000
Gan Kee Rubber Estate, Limited; March 17.....	38,000
Malayan Rubber, Loan and Agency Corporation,	
Limited; March 18	600,000
Colonial Rubber and Produce, Limited; March 19....	1,000,000
Rubber Share Trust and Finance Co., Limited;	
March 23	700,000

OTHER MALAY STATES.

Anglo-Johore Rubber Estates, Limited; February 5....	£165,000
Segamat (Johore) Rubber Estates, Limited; Feb. 9..	65,000
Bukit Mertajam Rubber Co., Limited; in Kedah; Feb. 14	175,000
Anglo-Malay Investment Trust, Limited; March 1....	210,000
Permas Rubber Co., Limited; March 9.....	75,000
Johore Pará Rubber Co., Limited; March 18.....	75,000
Carrollina (Malay) Rubber Estate Syndicate, Limited;	
March 22	30,000
K. M. S. (Malay States) Rubber and Coconut Planta-	
tions, Limited; in Kedah; March 22.....	85,000

Mount Austin (Johore) Rubber Estates, Limited;	
March 30	250,000

STRAITS SETTLEMENTS.

Victoria (Malaya) Rubber Estates, Limited; Feb. 26..	£120,000
Gemas Rubber Co., Limited; March 5.....	120,000

SOUTH INDIA.

Rani Travancore Rubber Co., Limited; February 16....	£300,000
Southern India Rubber Co., Limited; March 3.....	50,000
Teekoy Rubber Estate Limited; March 21.....	60,000

BRITISH NORTH BORNEO.

Kinatan (Borneo) Rubber Co., Limited; February 18..	£130,000
Bode Rubber Estates, Limited; March 14.....	80,000

DUTCH EAST INDIES.

Central Sumatra Rubber Estates, Limited; Feb. 5....	£180,000
Anglo-Dutch Rubber Syndicate, Limited; Feb. 9.....	5,000
Anglo-Java Rubber and Produce Co., Limited; Feb. 15..	500,000
Kwaleo Rubber Estates, Limited; in Sumatra; Feb. 15..	150,000
Djember Rubber Estates, Limited; in Java; Feb. 18..	100,000
Tangoel Rubber Estates, Limited; February 23.....	85,000
Kali Glagah (Java) Rubber and Produce Co., Limited;	
February 28	65,000
Laras (Sumatra) Rubber Estates, Limited; March 1..	90,000
East Java Rubber Co., Limited; March 3.....	80,000
Asahan (Sumatra) Rubber Estates, Limited; March 3..	250,000
Petoong Java Rubber Estates, Limited; March 4.....	70,000
Nongko (Java) Rubber Co., Limited; March 4.....	60,000
Malang Rubber Estates, Limited; in Java; March 10..	65,000
Lankat Rubber Co., Limited; in Sumatra; March 10..	100,000
Central Java Rubber Plantations, Limited; March 15..	125,000
Kasintoe Rubber Estates, Limited, in Java; March 15..	120,000
Langkapoera (Sumatra) Rubber Estate, Limited;	
March 16	70,000
Telogoredjo United Plantations, Limited; in Java;	
March 16	150,000
Pontianak Rubber Estate, Limited; March 21.....	110,000
Way-Halim (Sumatra) Rubber and Coffee Estates,	
Limited; March 26	120,000
Hayoeop (Dutch Borneo) Rubber Estates, Limited;	
March 31	215,000

PHILIPPINE ISLANDS.

Rio Grande Rubber Estates, Limited; March.....	£70,000
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BRITISH WEST AFRICA.

Rubber Concessions of West Africa, Limited; Feb. 2..	£2,550
Christineville Rubber Estates, Limited; February 18..	80,000
Agilite Lagos Rubber Estates, Limited; February 22...	150,000
Whinee Rubber Estates, Limited; March 2.....	100,000
Bukit-Sympa Rubber and Cotton Estates, Limited;	
March 14	80,000

BRITISH EAST AFRICA.

Witu Rubber Estates, Limited; February 25.....	£35,000
Meritini Rubber Estates, Limited; March 7.....	45,000
Kibwesi Rubber Lands, Limited; March 23.....	100,000

FRENCH GUINEA.

French Guinea Rubber Syndicate, Limited; Feb. 22...	£1,000
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GERMAN EAST AFRICA.

Lewa Rubber Estates, Limited; Feb. 19.....	£250,000
Muhesa Rubber Plantations, Limited; February 22....	135,000
Kamma Rubber Estate, Limited; February 28.....	110,000

PORTUGUESE EAST AFRICA.

Nyassa Rubber Co., Limited; March 3.....	£400,000
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MEXICO.

Standard Rubber Corporation of Mexico, Limited;	
February 9	£300,000
British Mexican Rubber Properties, Limited; March 9..	1,000
El Palmar Rubber Estates, Limited; March.....	145,000

PANAMA.			
Henriquez South Rubber Estates, Limited; February 8.	£50,000	L. S. Plantations, Limited; February 23.	2,505
		Rubber and Enterprise Syndicate, Limited; Feb. 24.	15,000
VENEZUELA.		British Malay Rubber Co., Limited; March 2.	100,000
Venezuela Rubber Syndicate, Limited; February 1.	£3,000	Pioneer Rubber and Oil Syndicate, Limited; March 5.	1,000
		G. P. L. Syndicate, Limited, March 9.	500
BRAZIL.		Eastern Rubber Trust and General Agency, Limited;	
Ceará Rubber Estates, Limited; February 4.	£50,000	March 12	50,000
Espirito Santo Rubber Estates, Limited; February 25.	100,000	Hevea Rubber Trust, Limited; March 16.	150,000
Serinak Rubber Estate, Limited; February 28.	50,000	Rubber and Industrial Trust, Limited; March 25.	50,000
Diamantino Rubber Plantations, Limited; March 5.	100,000	Rubber Estates and General Development Co., Limited;	
Amazonian Rubber Syndicate, Limited; March 1.	10,000	March 24	25,000
		Federated Rubber Corporation, Limited; March 30.	5,250
		Rubber and Produce Investment Trust, Limited;	
		March 31	20,000
BOLIVIA.		RUBBER INTERFERES WITH THE COURTS.	
La Martona Rubber Estates, Limited; February 11.	£250,000	[FROM "THE FINANCIAL NEWS," LONDON.]	
Zorgo Rubber Estates, Limited; February 15.	120,000	AT the city coroner's court, yesterday [April 7] several jury-	
PERU.		men who had been summoned did not put in an appearance, and	
Pacayo Rubber and Produce Co., Limited; Feb. 25.	£175,000	the court beadle reported that one of the absentees had ignored	
SOUTH AMERICA.		a summons three times. Dr. Waldo (the coroner) remarked	
South America Rubber Co., Limited; February 21.	£3,000	that the penalty was £5, and he asked the beadle how he served	
GENERAL.		the summons.	
[Including companies for which no region is named in the data reaching us.]			
Rubber Produce Agency, Limited; February 1.	10,000	<i>The Beadle.</i> —I left it with his principal clerk. The offices	
Higgoda Rubber Estate, Limited; February 11.	40,000	have been shut up so much lately owing to the boom in rubber	
Colonial Property and Rubber Co., Limited; Feb. 14.	56,000	<i>Dr. Waldo.</i> —Whatever has the boom in rubber to do with it?	
Serangoon Rubber Co., Limited; February 16.	70,000	(Laughter.)	
Rubber and General Trust Co., Limited; February 19.	125,000	<i>The Beadle.</i> —The gentlemen have been absent from their	
Muhesa Rubber Plantations, Limited; February 22.	35,000	offices owing to the increase of business.	
Blitar Rubber Syndicate, Limited; February 22.	100	It was found that another juryman was absent for the second	
Mid East Trust Syndicate, Limited; February 22.	7,000	time, so the coroner directed the beadle to go outside the court	
K. A. Syndicate, Limited; February 23.	1,000	and call the names of these two gentlemen three times aloud,	
		according to law. This having been done, and no answer received,	
		the two absentees were fined £5 each.	

England Buying Mexican Rubber Properties.

BRITISH capital of late has been attracted liberally to rubber producing enterprises in Mexico, after having absorbed the best plantations in the Far East, where the commercial production of rubber under cultivation began at an earlier date than elsewhere. Having acquired the existing plantations in the East, the British investors eagerly turned their attention to every proposal to establish a new plantation, in whatever country. As for Mexico, the rubber planting enterprise has now gone far beyond the experimental stage, and commercial results are beginning to be realized on a satisfactory scale. Besides, the production of guayule rubber in Mexico has become one of the most important industries in that country, besides affording a most important contribution to the world's supply of rubber. In the paragraphs which follow are outlined several recent London "flotations" in respect of Mexican rubber.

A TWO-MILLION-DOLLAR GUAYULE COMPANY.

THE Guayule Rubber Co., Limited, with a stated capital of £400,000 [= \$1,946,600], has been formed in London to acquire as a going concern, as from February 28, 1910, the rubber producing business known as Compañia Explotadora de Caucho Mexicano, S. A. This company was an outgrowth of the experiments with guayule begun in 1902 by Dr. Adolpho Marx, of L'Anglo Mexicano, a company with headquarters in Hamburg, and concerned with ixtle and other fibers in Mexico. The rubber company formed by Dr. Marx was participated in by leading bankers of Berlin and Dresden, and by the great German rubber manufacturers, Vereinigte Gummiwaren-Fabriken Harburg-Wien. [See THE INDIA RUBBER WORLD, March 1, 1905—page 183.]

The Mexican company acquired by The Guayule Rubber Co., Limited, are stated in their prospectus to own two factories at Saltillo, with combined engine capacity of 800 H. P. and prepared to produce 100 to 115 tons of rubber monthly; also a smaller factory at San Luis Potosí, and a leasehold on property

at Jimulco. They have contracts for the guayule existing upon 6,000,000 acres of land. They are stated to have produced 2,181,277 pounds of rubber during the calendar year 1909, at a cost figured at 1s. 6d. [= 36½cents] per pound. There exist some uncompleted contracts for the forward sale of rubber, which it was thought wise to make during the financial depression a year or so ago, and the terms of which are not disclosed. But their London selling agents report: "We could, if authorized to do so, make forward contracts at the present time for the whole of the production of the company, during the next twelve months, or perhaps longer, at the present price of 4 shillings a pound."

The prospectus of the new company embraces no analysis of past or expected profits, but states that the present business points to an annual profit of "nearly £110,000." The prospectus indicates the sale of Compañia Explotadora de Caucho Mexicano, S. A., to the British Mexican Rubber Properties, Limited, for £275,000, in cash and shares. The latter sell out to The Guayule Rubber Co., Limited, for £350,000, also in cash and shares. The first public issue is 250,000 shares, of £1 each, calculated to afford £50,000 working capital.

In connection with the statements in the guayule prospectus it may be of interest to read the following extract from the annual report of Vereinigte Gummiwaren-Fabriken Harburg-Wien—shareholders in the guayule company—for the year ended June 30, 1909 [see THE INDIA RUBBER WORLD, December 1, 1909—page 73]:

The Compañia Explotadora de Caucho Mexicano, of Mexico, was this year again unable to declare a dividend, the output of guayule rubber having been smaller than last year, in consequence of the necessity of stopping the manufacturing plant on various occasions. The adoption of a new chemical process failed to produce the expected results, and the old process has consequently been used exclusively. In view of these circumstances, we consider it necessary to contribute a considerable amount to

the sinking fund of the Participation Account, and propose that 200,000 marks [= \$47,642] of the profits carried forward to new account be used for that purpose.

"EL PALMAR" ESTATE ANGLICIZED.

ALREADY several companies have been floated in London for the purpose of purchasing Mexican plantations. One of these is El Palmar Rubber Estates, Limited, registered during the past month with a capital of £145,000 [= \$705,642.50]. The property involved is the "El Palmar" estate, in Vera Cruz, on which rubber cultivation was begun about twelve years ago, in connection with sugar and other products. Reference has been made already [see THE INDIA RUBBER WORLD, December 1, 1908—page 109] to the rubber product of "El Palmar," in which estate has been interested the important Mexican mercantile firm, Lions Hermanos y Cia. (Lions Brothers & Co., Limited), of Pueblo, Mexico. American interests became involved in this property, and El Palmar Estates was incorporated under the laws of New York March 28, 1908, with \$900,000 capital. The financial agent of this company was John Andrew Barnes, of New York, who is named in the London prospectus as the representative of the vendors in the matter of the transfer of the property to the new company. The prospectus states that the directors propose to enter into an arrangement with Mr. James C. Harvey, the well known Mexican rubber plantation expert, to become superintendent of the estate. A member of the board of the new company is William Euing Birrell, Esq., J. P., chairman of the Clyde Rubber Works Co., Limited, of Glasgow. It may be mentioned that the Clyde Rubber Works several years ago obtained part of the initial shipment of rubber from "El Palmar," and reported favorably upon the quality of the product.

WHO COULD ASK FOR MORE?

No other rubber prospectus that has yet appeared promises more or claims so much as that of The Standard Rubber Corporation of Mexico, Limited, registered in London, February 9, 1910, with a stated capital of £300,000 [= \$1,459,950]. The company have been formed, the prospectus says, to purchase 88,000 acres of land on which are 11,000,000 trees (species not mentioned) ready for tapping. There are also in prospect exploitation rights over 500,000 acres on which are seven species of rubber plants discovered by Dr. Pehr Olsson-Seffer which are said to attain maturity in three years and to yield rubber superior in quality to guayule or the product of "palo amarillo." Moreover, the company acquire Dr. Olsson-Seffer's secret processes for the preparation of rubber, and a concession from the Mexican government for the extraction of rubber from the trees discovered by Dr. Olsson-Seffer, and a further concession for a monopoly of the manufacture of india-rubber goods in Mexico. It is promised that additional rubber trees will be planted until the total reaches about 40,000,000. The following pleasing scale of profits forms part of the prospectus:

Years.	1910-11.	1912.	1913.	1914.	1915.
Profits	£50,400	£112,000	£134,400	£224,000	£235,200

The Globe Rubber Corporation, Limited, registered in London, appear as the vendors to the new company.

THE directors of Asbest- und Gummiwerke Alfred Calmon Aktiengesellschaft, of Hamburg, for 1909—their fourteenth business year in their report—to be presented at the annual meeting to be held on May 10, will recommend a dividend of 6 per cent. on the entire capital of 6,000,000 marks—the same as for two years past.

THE Dunlop Rubber Co., Limited (Birmingham), are now engaging extensively in the manufacture of golf balls, besides many other lines of rubber goods which they make, in addition to the tires sold through the parent company—the Dunlop Pneumatic Tyre Co., Limited.

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

THE question of an adequate supply of water for the rubber factories at Akron has been one of no little anxiety, particularly as this has depended in the past upon the northern division of the Ohio state canal, and the state legislature has failed of late to make an appropriation to complete the projected improvements on the canal system. This neglect of the matter by the lawmakers has suggested the possibility that the canal adjacent to Akron might be abandoned, with the result that the water supply involved might pass into the hands of private owners. Recently, however, leases for the use of water have been renewed for four years at the old price, and it is reasonable to suppose that no change in the situation unfavorable to the manufacturers will occur meanwhile.

* * *

THE month of April has been notable, in Akron, for the number of building permits issued, and additions to rubber factories figure prominently in the list. The B. F. Goodrich Co., for example, have contracted for the erection of two large additions—a machine shop on the south of the present factory building, which will add to its already imposing frontage on South Main street, and an addition to the factory proper in the rear of the present building. The machine shop will be a six-story building 160 x 140 feet, of steel and concrete construction, and the second building will take the form of a hollow square 265 x 185 feet. The completion of these two buildings will largely convert the Goodrich plant into a series of fireproof buildings, which long has been the aim of the company.

* * *

THE Alkali Rubber Co. purpose spending within a year to come some \$200,000 in the enlargement of their plant. Plans which have been made already provide for the erection of three warehouses, each three stories high and respectively 76 x 231 feet, 56 x 209 feet, and 70 x 150 feet; also a power plant 50 x 150 feet, and an office building 30 x 150 feet. All these buildings will be of concrete construction.

The Swinehart Tire and Rubber Co. and the Miller Rubber Co. also contemplate additions to their plants during the year.

The Diamond Rubber Co. are extending their old office building and a new administration building will be ready soon for occupancy. The Diamond Rubber Co. will be ready within a few weeks to begin making tires in their new six-story steel frame factory building.

It may be mentioned here, as indicating the prosperity of Akron, which depends so largely upon the rubber industry, that contracts have been awarded for a new building for the Second National Bank, to cost \$500,000, and a new elevator and warehouse for the Quaker Oats Co., to cost \$250,000. Bids are under consideration for erecting the New Portage Hotel, at a cost of \$350,000.

* * *

THE \$750,000 of preferred stock of the Firestone Tire and Rubber Co., as reorganized [see THE INDIA RUBBER WORLD, April 1, 1910—page 256] was over subscribed shortly after being placed upon the market. The company's common stock is reported by brokers to have sold at \$130 for the \$100 shares, with indications of a higher market. The Firestone company are at work already upon their extensive new factory.

* * *

RUBBER manufacturers in Akron have read with some interest reports of an investigation of municipal affairs in Chicago by what is known as the Merriam commission, appointed by the city government. Based upon the results of the work of this commission, the local United States district attorney has assigned an assistant to watch developments in relation to the purchase of fire hose and rubber tires for the use of city departments, with a view to determining whether the "rubber trust" which has

been rumored to exist constitutes a "combination in restraint of trade" within the meaning of the Sherman anti-trust law. The officials of all the leading rubber manufacturing companies in Akron, when interviewed for THE INDIA RUBBER WORLD, denied any knowledge of such a "rubber trust" as has been charged to exist by District Attorney Sims in Chicago. The branch of the trade mainly involved is the manufacture of fire hose, and it was testified at the Chicago hearing that the trade was in the hands of a combination which had decided not to bid on municipal contracts where specifications are required. By the way, several of the important Akron rubber concerns do not make fire hose.

* * *

THE Miller Rubber Co. have filed with the secretary of state of Ohio a certificate of increase of capital from \$250,000 to \$500,000. The company have more than doubled their manufacturing capacity within twelve months, new buildings having been erected to take care of their increasing business in tires. In addition to their pneumatic tire output, the company are making a specialty of solid tires for heavy trucks, under a license from H. A. Palmer, the patentee. The directors of the company are Jacob Pfeiffer (president), Charles P. Grant (vice-president), Frank Tithes, John M. Doran, and William F. Pfeiffer.

* * *

ANOTHER rumor which was prevalent early in the month, was that the great financial firm of J. P. Morgan & Co., of New York, had made overtures to important Akron rubber tire manufacturers to become incorporated in a proposed great combination of automobile factories. The B. F. Goodrich Co., The Goodyear Tire and Rubber Co., and The Firestone Tire and Rubber Co. were mentioned particularly as having been approached in this connection, but officials of all of them authorize a denial of the report so far as their companies are concerned.

* * *

INDIANAPOLIS appears to be coming rapidly into importance as a rubber tire trade center. The B. F. Goodrich Co. have opened a branch in that city, with Henry Little as manager. The Swinehart Tire and Rubber Co. have also appointed a representative in Indianapolis. Likewise the Swinehart company have opened a branch in Boston, with A. G. Green resident manager.

* * *

A MOVING picture exhibition is the latest means of advertising adopted by The B. F. Goodrich Co. The series show the tapping of rubber by natives in Pará, the distribution to the commercial centers, and the transformation of the crude gum into manufactured articles. The company's factory in Akron by night is also shown.

* * *

At a meeting of the directors of The Diamond Rubber Co. on April 19 Mr. O. S. Hart resigned his position as cashier. Mr. Hart had been with the company for twelve years, and while now severing his active connection, he remains a director.

THE RUBBER TRADE AT TRENTON.

BY A RESIDENT CORRESPONDENT.

THE rubber manufacturers of Trenton intimate that about the first of July, unless there should be a break in the raw rubber market meanwhile, the trade may look for new price lists on their products. The Trenton mills, particularly those engaged in the manufacture of automobile tires and supplies, still are stocked to some extent with rubber purchased at lower prices than now prevail, but as the supply is diminishing rapidly, new stocks will have to be taken from the open market at the ruling rate.

* * *

THE Whitehead Brothers Rubber Co. have awarded contracts for the erection of a new two-story brick office building 25 x 40

feet, on the site of the old office, in Whitehead road. The old office is being demolished, and the completion of the new building is expected within two months.

* * *

THE Hon. William S. Hancock, former state comptroller of New Jersey, and one of the directors of The Acme Rubber Manufacturing Co., returned about the middle of April from a twelve weeks' trip to South America, which included a visit to Pará, where he made an investigation of the condition of the crude rubber market.

* * *

THE extensive addition to the Acme Rubber Manufacturing Co.'s plant has been completed, and work is now being carried on in the huge building. The first floor is devoted to the manufacture of carriage cloth and matting, and part of it is used for shipping purposes. On the second floor automobile and other tires are made. The third floor is used for a hose shop.

* * *

MR. JOHN S. BROUGHTON, of the United and Globe Rubber Manufacturing Companies, will go to his summer home at Spring Lake about the middle of June, after which he expects to spend a few weeks along the Maine coast. Mr. Broughton's handsome new home in Trenton, near the state capitol building, will be ready soon for occupancy.

Mr. Watson H. Linburg, of the United and Globe companies, will go to Spring Lake about June 1, closing his Trenton home for the summer.

"Business with us is better by long odds than it was a year ago at this time," says John S. Broughton, of the United and Globe companies. "We are working a large force of men in some of the departments until 10 o'clock every night."

* * *

THE Thermoid Rubber Co. are advertising their automobile tires by the use of replicas of the bronze tablet, showing the winning cars at the last Vanderbilt Cup race, and presented to The Lozier Motor Co. [See THE INDIA RUBBER WORLD, February 1, 1910—page 190.]

* * *

C. H. SEMPLE, manager of the Empire Tire Co., states that in future the company's fine red rubber automobile tubes will be enclosed in waterproof tube bags. This innovation was decided upon in order to render the tubes safer during periods of non use. Another advantage is that a tube can be carried about in much less space in a car than formerly, when it was packed in a box.

* * *

MR. HARRY E. EVANS, treasurer of the City of Trenton, and of the Consolidated Rubber Co., has let a contract for the erection of a brick garage on East Hanover street, this city, to cost \$3,000. It is explained that in addition to housing his own cars, Mr. Evans intends going into the garage business on a small scale.

* * *

THE Ajax-Grieb Rubber Co. have awarded a contract for the erection of a one-story brick building, an addition to its plant on Breunig avenue, to be used as a blacksmith shop and carpenter shop. It will cost \$1,000.

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

THERE is a better report from the merchants this month, and all unite in saying that business is improving materially. The mechanical lines, which have been very quiet for two or three months, have taken a big advance comparatively, and all of the houses find that the present volume of business is very satisfactory. The automobile tire business is perhaps the liveliest of all, and sales of the various makes have been remark-

ably good. Money for big deals is still considered as tight, and even collections are not as easy as could be wished. Everything is still being done on a safe and conservative basis, but conditions all along the coast are so favorable, big crops are so well assured, and there is such confidence in the future that the result is a more active business all around for the present, and an improved outlook.

* * *

At a meeting of the Pennsylvania Rubber Co. of California, on April 2, Mr. J. E. French was elected president and manager, succeeding Mr. L. L. Torrey, who had held this position since the incorporation of the company, in October, 1907. This local corporation was formed to cover the Pacific coast business of the Pennsylvania Rubber Co. (Jeannette, Pa.). It is understood that as soon as practicable the California corporation will be dissolved and the business conducted as a branch of the parent company.

Mr. French, as Pacific coast manager of the Pennsylvania Rubber Co., will have headquarters at No. 512 Mission street, San Francisco, from which place he will direct also the business of the company at No. 930 South Main street, Los Angeles.

In connection with the change above recorded, Mr. George W. Shively, secretary of the Pennsylvania Rubber Co., visited San Francisco. He states that his company anticipate opening branches in Portland, Seattle, and Spokane, so that the coast will be fully covered.

* * *

THE Pacific Coast Rubber Manufacturers' Association holds its monthly banquet and business meeting on April 20, at the St. Francis Hotel. Here they will discuss matters of importance in the regulation of abuses in the trade. At the meeting in March several resolutions were passed regulating the sale of fire hose. One of them was that no member would make a bid for the sale of hose except under condition of a test pressure of not more than 400 pounds to the square inch at the time of delivery, a time guarantee of not more than three years, and no subsequent test. The members are The Goodyear Rubber Co., Bowers Rubber Works, Revere Rubber Co., Gorham Rubber Co., Plant Rubber and Supply Co., Pacific Rubber Co., American Rubber Manufacturing Co., Enreka Fire Hose Co., The Diamond Rubber Co., Barton Packing and Rubber Co., and Boston Woven Hose and Rubber Co. Meetings are held once a month and a banquet is always given at the same time. Mr. W. F. Bowers, of the Bowers Rubber Works, is president.

* * *

MR. R. H. PEASE, president, and Mr. A. B. Watson, assistant treasurer, of the Goodyear Rubber Co., have returned from New York. The firm reports that business is looking up. There has been a slight advance on tennis shoes, and it has been taken kindly by the trade.

* * *

MR. W. H. SAYEN, JR., of the Mercer Rubber Co. (Trenton, New Jersey), is now at Del Monte, California, with his bride. He writes that he will be in San Francisco within a few days.

* * *

C. E. MATHEWSON, Pacific coast manager for The Diamond Rubber Co., states that he has received, within three weeks nine carloads of tires, the Los Angeles branch in the same time received three carloads and the Seattle branch two cars, for the spring requirements, and already F. O. Nelson, manager of the Los Angeles branch, is in San Francisco to replenish his supply. This gives an idea, Mr. Mathewson says, of the volume of business that the rubber tire houses are doing on the coast.

* * *

MR. W. F. BOWERS, president of the Bowers Rubber Works, states that business is good, and steadily showing improvement. This is a growing and developing country, he said, and business is now in shape to feel the improvement. The trouble on the coast, however, especially here, is that there are too many

establishments in proportion to the consumption of goods, which keeps the dealers in a badly overstocked condition. The building at the reclaiming mill at their factory, which was injured by fire, has been repaired; new machinery is installed and will be again in operation next month.

* * *

THE American Rubber Manufacturing Co., with a factory across the bay at Emeryville, is now handling the business end from new headquarters, at No. 10 Beale street, San Francisco, where Mr. H. C. Norton, the manager, has charge. This company reports an active trade.

* * *

MR. GREGORY, manager of the New York Belting and Packing Co., Limited, says that conditions are improving, new prospects are opening up, and the outlook is better for a good business.

The Barton Rubber Co. are now turning out a lot of belt from their new factory. This is a new enterprise for them, and is working very nicely.

F. S. Winslow, manager of the Pacific Coast Rubber Co., states that business is looking up considerably in mechanical lines, and in fact all around.

* * *

DEMANDS are coming in from all quarters, showing new life in the business, which the firms are glad to see starting.

Frank Sargeant, manager for the Gorham Rubber Co.'s San Francisco house, states that, in spite of the fact that rubber is soaring, the volume of business is better than last year, and they expect a busy season. Tires have been especially active.

* * *

CHARLES HAMILTON, of the Apsley Rubber Co. (Hudson, Massachusetts), is due to arrive in San Francisco.

Mr. O. C. Tweedy, general sales manager of the Continental Caoutchouc Co., is now visiting the trade.

W. E. Barker, who has charge of the branches of the United States Rubber Co., is in San Francisco.

USES OF RUBBER IN THE LAUNDRY.

RUBBER had little prominence at the Laundry Exhibition held in London, at the Royal Agricultural Hall, April 2-9, though it appeared incidentally in connection with many pieces of apparatus shown. No rubber manufacturer was represented by an exhibit, if exception be made of Gandy Belt Manufacturing Co., Limited, who displayed a great variety of belts suited for driving laundry machines, including their balata belts. Rubber tired laundry wagons are shown, separate rubber tires, vacuum cleaning apparatus with rubber equipment, wringing machines with rubber rolls, rubber marking stamps, and so on. One exhibit included raw rubber, as a material essential for wringer rolls.

COMPETITION IN CANADA.

"COMPETITION is the best thing for any business," says *The Canadian Shoe and Leather Journal*. "Canadian made rubbers have proven this. During the last fifteen years no Canadian industry has shown more advancement than that of manufacturing rubber footwear. The battles fifteen years ago of the Canadian, Gutta Percha, and Maple Leaf companies worked wonders. Along came the Berlin Rubber Co., then the Merchants, both adding new ideas. The town of Berlin "got the habit" and the Kaufmann Rubber Co. started a year ago selling to the retailer. This season the Miner Rubber Co. commence operations in Granby, selling through district agents, and the North British Rubber Co., a Scotch concern, are in the field with, as yet, no announced selling plan. This continuous addition of new manufacturers with new ideas could, on account of the growth of the country, be only considered natural. There is room for them all to do a nice business at a good profit."

The Obituary Record.

JOHN J. FIELDS.

ANOTHER of the veterans of the mechanical rubber trade has passed away. In the death of John J. Fields, former president of the New Jersey Car Spring and Rubber Co., which occurred on March 27 at his country home at Schooley's Mountains, New Jersey, the industry has lost one who had enjoyed the distinction of being its oldest living pioneer.

Mr. Fields was born in Paterson, New Jersey, November 15, 1821. Always a man of sturdy health and unusually rugged constitution, he retained, up to eight years ago, an active interest in the company, which was established by him in 1858.

In that year he founded a business in New York city, under the title of the Elastic Cone Spring Co., for the manufacture of rubber car springs, this material being then universally used for that purpose. The spring produced was not the ordinary straight cylinder, but was, as the name of the company implied, a cone shaped affair, made on the graduated plan, the purpose being to adapt the spring to the load.

Subsequently the business was transferred to Richmond, Vir-

ginia, where it was incorporated as the Virginia Cone Spring Co., and was operated until the beginning of the civil war, when the mill was abandoned. The stock on hand was used by the Confederate authorities in making rubber blankets for the army.

After the war, Mr. Fields returned to Richmond and claimed the property. When asked how he could identify himself, he stepped to an old fashioned safe, inserted the key in the lock and opened the safe, which was regarded as conclusive evidence. This safe is still doing service at the present company's offices as a depository for documents relating to the early days of the business.

The machinery was removed to Jersey City about 1866 and set up in a temporary building in Morgan street, while new works at the corner of Wayne and Brunswick streets were being erected, and a little later the company was reincorporated under the name of the New Jersey Car Spring and Rubber Co.

Up to this period the concern made only rubber car springs, but a spiral coiled steel spring had been invented, and this type soon began to make inroads on the rubber spring industry, because the steel spring was cheaper and more durable. A num-

ber of the companies that made only rubber springs stuck to this industry until it became practically obsolete, but Mr. Fields, being more far sighted, introduced other lines, beginning with sheet packings, valves, and other molded articles. Then a hose department was added, which was soon followed by the manufacture of belting, and finally by the general line. He was one of the pioneers of the mechanical rubber goods trade, and such contemporary men as Meade, Dunlap, McBurney, Cheever, and Twombly have long since passed away.

Personally Mr. Fields was a man of striking characteristics. Distinctively original in his manners and speech, he was nevertheless conservative in his policies. His determination, force, and firmness were marked. His judgment was sound, and his perception and foresight wonderfully clear.

One of the great factors contributing to Mr. Field's success was the fact that he was an engineer and machinist by profession, and his mechanical training proved very useful in a business so closely identified with his previous technical work. In fact, when a very young man, he opened a foundry at Woodhaven,

Long Island, which he ran successfully for some years, and in 1852 he moved to Jersey City, establishing there a machine shop and foundry. In this enterprise he was originally associated with his brother, Peter Fields, but later they separated, and John J. became sole proprietor. A large volume of heavy work was handled in this Jersey City shop.

In the early sixties, during the period that the rubber mill in Virginia was inoperative, he acted as engineer in planning and putting into operation the first railroad to Coney Island, being associated in the contract for this work with C. Godfrey Gunther, who was then mayor of the city of New York. The motive power on the road was dummy engines, and that road was the beginning of the marvelous development of Coney Island.

Twenty-six years ago, then a man sixty-two years of age, he was the victim of an accident which cost him the loss of a foot. In examining one of the mills in his plant, his foot became engaged in the gearing, and by sheer presence of mind and physical strength, he succeeded in tearing himself loose, thus saving his life.



THE LATE JOHN J. FIELDS.



THE LATE THOMAS B. JEFFERY.

rangements for his care and transmission to his home in Brooklyn. While awaiting in his office the arrival of a conveyance to take him there, Mr. Fields, in the midst of his suffering, his foot completely mangled and partly gone, called for the check book and signed checks in order that any interruptions in the business might be avoided.

As an evidence of his grit and wonderful control of his faculties, it is related that finally, after his arrival at his home, some argument arose between the surgeons summoned as to which one was called first and which should perform the operation. The patience became aware of the circumstance, and raising himself, shook his fist, exclaiming, "Gentlemen, I am a plain, practical, common-sense man, in a serious condition; and you men stand on your professional etiquette, while my life is becoming more endangered every minute." The amputation was thus delayed until five hours after the accident. It was claimed at that time most unusual for a patient of Mr. Field's years to survive an operation such as he was forced to undergo. But his wonderful constitution and remarkable will power carried him through. Prior to this he had never been confined to his bed a week in his life.

A few years later he was driving a spirited horse attached to a light exercising wagon, when the animal took fright at a passing wheelbarrow, and threw him out, causing a dislocated hip. As he then said, having only one foot, he could not jump, so was obliged to simply roll out as best he could. Nearly twenty years after his first mishap, he also sustained a fracture of his good leg in another accident in which he was thrown from his carriage, through the sudden fright of his team. Although he was then over 80, the bones knit perfectly in a short time.

Mr. Fields was always an ardent horseman, and for many years was a familiar figure on the boulevards of Brooklyn. Back in the days of the old "Coney Island road," before the opening of the present Ocean parkway, he could be seen daily behind his lively steppers on his way to the track of the old Prospect Park Fair Grounds Association, of which he was one of the original fifteen members. He was also an active member of the Coney Island Jockey Club, as well as of the Lincoln and Union League clubs of Brooklyn.

In the summer months it was his habit to spend much of his time on long driving trips through the scenic sections of New Jersey and southern New York, but during the latter years of his life Mr. Fields derived his chief pleasure from the management of his extensive farm at Schooley's Mountains, where he spent the greater part of his time.

In 1902 Mr. Fields was succeeded in the presidency of the New Jersey Car Spring and Rubber Co. by his son, John J. Fields, Jr., the present active head of the concern.

THOMAS BUCKLAND JEFFERY.

An important contribution to the development of rubber vehicle tires was that of Thomas B. Jeffery, whose death occurred suddenly at Pompeii, Italy, on the night of April 2. Mr. Jeffery was in good health when he left New York accompanied by his wife in January.

Thomas Buckland Jeffery was born February 5, 1845, at Stoke, Devonshire, England, and in his eighteenth year came to America, settling at Chicago. Prior to the beginnings of the development of the bicycle, Mr. Jeffery's occupation has been described as that of a struggling inventor, occupied with a railroad velocipede and similar appliances. Visiting England, he became interested in bicycles, and arranged for the importation of parts to be assembled in the United States. In the early eighties Mr. Jeffery formed a partnership with R. Philip Gormully, who had been a schoolmate of his in England. They organized the firm of Gormully & Jeffery, later becoming the Gormully & Jeffery Manufacturing Co., makers of bicycles. From the beginning of their career the company encountered litigation, notably with the interest headed by Colonel Albert A. Pope. The latter in-

terest had attempted to monopolize certain patents relating to bicycle construction, but Gormully & Jeffery succeeded finally in opening to the world the use of the inventions in question. The Gormully & Jeffery firm, as makers of the "Rambler" wheel, became immensely successful, and in 1899 the company was absorbed by the American Bicycle Co. Mr. Gormully died soon after, and Mr. Jeffery, at Kenosha, Wisconsin, engaged in the business of making automobiles, in which he was likewise successful. This business will be continued by his two sons.

Mr. Jeffery was essentially an inventor. The interest of his work to the rubber industry is based upon the fact that he not only promoted largely the use of rubber tires by broadening the bicycle and automobile trades, but he was recognized in the courts of the United States as the inventor of the type of tire now known as the "clincher." This tire was introduced by the manufacturers of the Rambler bicycle at a time when each leading make of bicycle offered a particular form of tire.

The fact that this type of tire was identified with a single bicycle factory probably interfered for a while with its sale, but in time it began to be marketed as the "G & J" tire, and to be pushed in the general trade. The American makers carried it to England and began its manufacture there, which was stopped as the result of an action for infringement brought by the owners of the Bartlett patent. Similarly the North British Rubber Co., Limited, sought to market their clincher tires in America, when they were successfully proceeded against by the G & J people, although American patents had been granted to Mr. Bartlett. The present G & J Tire Co. was formed to control the patents of Mr. Jeffery on rubber tires, and whatever tires of the clincher type are made in America have been called upon to pay a royalty under these patents.

Mr. Jeffery married in 1874 Miss K. E. Wray, of Chicago, who survives with two married daughters and two sons. The body of Mr. Jeffery was brought to the United States for burial.

CHARLES W. DUNHAM

CHARLES W. DUNHAM died on April 5, 1910, at his home in Brattleboro, Vermont, in his fifty-seventh year. After a business experience in other New England towns, on July 1, 1885, he joined his younger brother, George L. Dunham, in the purchase of a retail shoe store in Brattleboro, out of which grew an extensive jobbing trade which embraced rubbers as well as leather goods. In January, 1909, the Dunham firm became incorporated under the name of Dunham Brothers Co., after which the volume of their business continued to increase, Charles W. Dunham being not only the senior member of the house but the director of its financial policy. For a number of years the Dunham house has represented in New England the sale of the products of the Mishawaka Woolen Manufacturing Co. (Mishawaka, Indiana).

INDIA RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufacturers of india-rubber and gutta-percha for the month of February, 1910, and of the first eight months of the five fiscal years, beginning July 1:

MONTHS.	Belting, Packing and Hose.	Boots and Shoes.	All Other Rubbers.	TOTAL.
February, 1910	\$137,451	\$66,053	\$313,800	\$517,304
July-January	\$1,096,459	\$1,371,199	\$2,739,953	\$5,207,611
Total, 1909-10	\$1,233,910	\$1,437,252	\$3,053,753	\$5,724,915
Total, 1908-09	896,362	1,013,544	2,454,707	4,364,613
Total, 1907-08	924,585	1,305,352	2,485,307	4,715,244
Total, 1906-07	801,238	918,569	2,321,211	4,041,018
Total, 1905-06	834,554	1,303,164	1,836,312	3,974,030

A BOOK for rubber planters—Mr. Pearson's "What I Saw in the Tropics."

MECHANICAL RUBBER ASSOCIATION.

A MEETING of the Mechanical Rubber Goods Manufacturers' Association, at the Waldorf-Astoria Hotel, New York, on April 26, beginning at 10.30 A. M., was more largely attended, perhaps, than any preceding meeting of the kind. Not only was every company on the list of membership represented at the meeting, but several companies had more than one representative. Besides the leading firms in the industry in the United States, Canada was represented for the first time, in the name of the Canadian Consolidated Rubber Co., Limited. The proceedings were not of a public character, and it was the sense of the association that publication of any conclusions reached with regard to the condition of the trade should be deferred. A number of new lists for rubber goods were proposed and several adopted, including the list on rubber belts, which is presented herewith.

NEW LIST OF RUBBER BELTS.

Inch	2-ply	3-ply	4-ply	5-ply	6-ply	7-ply	8-ply
1	\$.09	\$.11	\$.13				
1 1/4	.11	.13	.16				
1 1/2	.13	.15	.19	\$.23			
1 3/4	.15	.17	.22	.27			
2	.18	.20	.25	.31	\$.37		
2 1/2	.22	.25	.31	.38	.46		
3	.26	.30	.37	.45	.55		
3 1/2	.30	.35	.43	.53	.65		
4	.34	.40	.50	.61	.75	\$.86	
4 1/2	.38	.45	.55	.69	.84	.06	
5	.42	.50	.61	.76	.91	1.06	
6	.50	.60	.72	.89	1.08	1.25	\$ 1.44
7	.59	.70	.84	1.04	1.25	1.46	1.68
8	.67	.80	.96	1.19	1.44	1.68	1.92
9	.76	.90	1.07	1.34	1.60	1.88	2.16
10	.84	1.00	1.20	1.49	1.77	2.09	2.40
11	.92	1.10	1.32	1.63	1.96	2.29	2.62
12	1.00	1.20	1.43	1.78	2.15	2.50	2.85
13	1.10	1.30	1.56	1.95	2.34	2.73	3.12
14	1.19	1.40	1.69	2.11	2.54	2.96	3.39
15	1.28	1.52	1.83	2.28	2.74	3.19	3.65
16	1.37	1.65	1.96	2.44	2.94	3.42	3.92
18	1.55	1.87	2.22	2.77	3.33	3.88	4.44
20	1.74	2.09	2.49	3.10	3.73	4.35	4.97
22	1.94	2.33	2.77	3.47	4.16	4.85	5.54
24	2.16	2.60	3.08	3.85	4.62	5.39	6.16
26	2.38	2.86	3.39	4.23	5.08	5.93	6.78
28	2.60	3.12	3.70	4.62	5.54	6.47	7.39
30	2.82	3.39	4.00	5.00	6.00	7.00	8.00
32	3.04	3.65	4.31	5.39	6.47	7.55	8.62
34	3.26	3.92	4.62	5.78	6.93	8.09	9.24
36	3.48	4.18	4.93	6.16	7.39	8.62	9.86
38	3.70	4.44	5.24	6.55	7.85	9.16	10.47
40	3.92	4.71	5.55	6.93	8.32	9.70	11.09
42	4.14	4.97	5.85	7.32	8.78	10.24	11.70
44	4.36	5.24	6.16	7.70	9.24	10.78	12.32
46	4.58	5.50	6.47	8.08	9.70	11.32	12.94
48	4.80	5.76	6.73	8.47	10.16	11.86	13.55
50	5.02	6.03	7.08	8.85	10.63	12.40	14.17
52	5.22	6.29	7.39	9.24	11.09	12.94	14.78
54	5.46	6.56	7.70	9.63	11.55	13.48	15.39
56	5.68	6.82	8.01	10.01	12.01	14.01	16.02
58	5.90	7.08	8.32	10.40	12.47	14.55	16.63
60	6.12	7.35	8.62	10.78	12.94	15.09	17.25

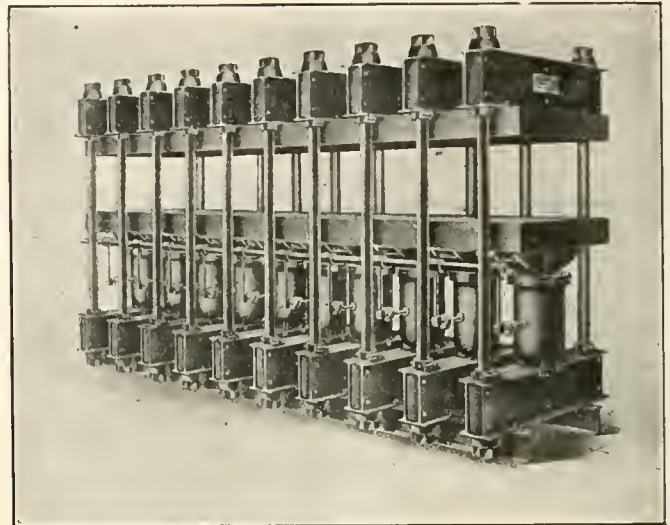
The officers of the association are William T. Cole, president; Leonard J. Lomasney, vice president; and John J. Voorhees, treasurer. The next meeting of the association is scheduled for October 25.

RUBBER CLUB OF AMERICA.

THE annual meeting of the Rubber Club of America (formerly New England Rubber Club) was scheduled for April 18, on which day several members assembled at No. 140 Essex street, Boston, at 3 P. M. In the absence of a quorum, the meeting was adjourned to Friday, May 13. At that time the Editor of THE INDIA RUBBER WORLD will give a smoke talk on his experience up the Amazon, illustrated with some new lantern slides.

ONE THOUSAND TON VULCANIZING PRESS.

THE accompanying cut shows a 1,000-ton ten cylinder vulcanizing press, with plates 48x218 inches, built under the supervision of Mr. O. P. Bushnell, superintendent of the Monarch Machinery Co., No. 30 Church street, New York. Mr. Bushnell has devoted 30 years to designing and constructing hy-

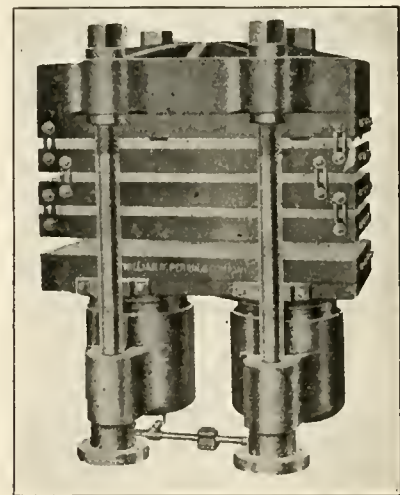


ONE THOUSAND TON VULCANIZING PRESS.

draulic presses for various uses, and his extensive experience is demonstrated by the splendid design, perfect radiation and uniformity of heated plates supplied with "Monarch" presses. These presses are built in various sizes to suit customer's requirements, and steam or power hydraulic pumps are supplied of capacities to conform to size of press. This company's factory is equipped with large electric cranes and modern tools, enabling them to handle large presses. Mr. E. B. Van Atta, president of the company, has been well and favorably known among the users of hydraulic presses for a quarter century, and the methods adopted for proper care and protection of customers have worked to the material advantage of the company and secured for them the confidence of their patrons.

TWO CYLINDER VULCANIZING PRESS.

THE subject of the accompanying illustration is a two cylinder vulcanizing press that is coming into general use in the rubber trade, and is made by William R. Perrin & Co. (of Chicago), who manufacture a standard line of hydraulic power



TWO CYLINDER VULCANIZING PRESS.

screw and filter presses. This concern specializes in presses for the rubber trade and is amply equipped to supply any type required, as they operate one of the largest press producing concerns in this country, with branches abroad.

Progress of Rubber Planting.

AMERICAN RUBBER PLANTERS IN THE PHILIPPINES.

AN article on "The Cultivation of Rubber" in the Philippines is contributed by Dr. J. W. Strong to a "historical and industrial number" of *The Mindanao Herald*, published at Zamboanga. This special issue is in commemoration of the first ten years of American occupation of the Philippines, and is filled with authentic information regarding the progress already made, together with indications of further development, in the near future, of the undeniably great natural resources of the archipelago.

Dr. Strong has given much attention to the progress of rubber planting there, including his own experiments on an extensive scale, with both *Hevea* and Ceara rubbers. By the way, he details the results of tapping 200 Ceara trees, taken "as they ran," beginning on the day they were three years old from the seed. They were tapped daily for 7 days, allowed to rest for two weeks, again tapped daily for 7 days, another rest for two weeks, and finally tapped for 7 days—a



DR. J. W. STRONG.

[The First Planter in the Philippines to Tap Cultivated Rubber Trees.]

total of 21 daily tapplings within seven weeks. The yield of dry rubber is stated as follows, for the 200 trees:

First seven days.....	5,100 grams	[= 11.243 pounds]
Second seven days.....	4,500 grams	[= 9.920 pounds]
Third seven days.....	3,600 grams	[= 7.937 pounds]

Total 13,200 grams [= 29.100 pounds]

The average yield was slightly under 2½ ounces per tree. One tree, however, gave 1.12 pounds. This is referred to as the first tapping of planted rubber in the Philippines.

The Davao Planters' Association has been an important factor in the agricultural development of the district referred to. The association represents 48 American and Spanish owned plantations, interested in hemp, cocoanuts, and cattle. Most of the planters have put in some rubber, and it is intimated in the *Herald* that further results from Dr. Strong's plantation are awaited with great interest. "On receipt of a favorable report," it is stated, "there will be extensive planting [of rubber] all around the gulf."

RUBBER DIVIDEND OF 125 PER CENT.

THE accounts presented at the seventh annual meeting of the shareholders of The Pataling Rubber Estates Syndicate, Limited [London, April 6], covering the year ended December 31, 1909, contained details which permit the following comparative statement to be made of the results of this company up to date:

	1905.	1906.	1907.	1908.	1909.
Yield (pounds)	25,699	43,310	58,064	80,922	152,090
Selling price, net	5s. 5d.	5s. 1 7 16d.	3s. 8 ¼d.	4s. 3 ¾d.	5s. 11d.
Equivalent to ..	\$1.31 ¾	\$1.24 ¾	\$0.89 ¾	\$1.05	\$1.44
Dividends	20%	40%	35%	45%	125%

The company now have 1,422 acres under rubber, ranging in age from two years up. No statement is given of the number of trees tapped in any year, but the cost of the rubber produced, after charging up directors' fees, office expenses in London and all depreciation, worked out at 1s. ½d. In view of the high price obtained for the rubber, the net profit averaged 4s. 10 ½d. [= \$1.18 ½] per pound. The dividends for the year—125 per cent.—were in excess of the best results reported for any company hitherto.

PROFITS OF THE ANGLO-MALAY RUBBER CO.

THE fourth annual report of The Anglo-Malay Rubber Co., Limited—presented at the meeting in London on April 30—like its predecessors, contains many details of interest. A comparison of all the details in the various yearly reports is rendered difficult from the fact that they are not drawn up on the same



CEARA RUBBER IN THE PHILIPPINES.

[First Tapping of Cultivated Rubber in the Islands. Plantation of Dr. Strong at Isabela de Basilan.]

plan: also because newer plantings come into bearing each year. But it may be mentioned that in 1909 the average yield of all the trees tapped, irrespective of age, was 4.77 pounds, whereas the average in 1907 was only 3.20 pounds, and for the 14 months previous to that year, 1.68 pounds. A comparison is available of the yield of 14,557 trees on one of the company's estates—"Ayer Angat"—as follows:

Average in 1907	2.95 pounds per tree.
Average in 1908	4.52 pounds per tree.
Average in 1909	6.69 pounds per tree.

The report gives the net sales result, and not the gross price obtained, working out at an average for this year of 6s. 0½d. [= \$1.47.02] per pound. The rubber is considered to have cost 10¾d. [= 20.28 cents], which would indicate a profit of \$1.26.7 (gold) per pound, against 68.9 cents in the preceding year. The amount realized from rubber sales during the year was £157,051 2s. 2d. [= \$764,287.30]. The capital stock outstanding is £150,000. Comparative statement of results:

	1906.	1907.	1908.	1909.
Yield (pounds)	100,013	224,778	350,688	517,550
Selling price, net	4s. 11½d.	3s. 9d.	4s. 2d.	6s. 0½d.
Equivalent to	\$1.20.6	.91.2	\$1.01.3	\$1.46.9
Dividend	18%	20%	30%	30%

RESULTS OF GOLDEN HOPE ESTATE.

At the fourth annual meeting of shareholders of The Golden Hope Rubber Estate, Limited [London, March 22] the reports presented included figures which make possible the following comparative statement of results:

	1906.	1907.	1908.	1909.
Yield (pounds)	2,400	5,591	14,075	51,420
Selling price, net .....	.....	3s. 7¾d.	4s. 3½d.	6s. 7d.
Equivalent to .....	.....	\$0.885	\$1.044	\$1.599
Dividends	5%	6%	8%	30%

The following statistics of yield are given in the report: 940 old trees, tapped six months and then rested, gave 5,249 pounds, or 5.63 pounds per tree. From 14,888 young trees 44,562 pounds were obtained, or 3 pounds per tree. The total yield includes 1,564 pounds of "rambong" (*Ficus elastica*), but this variety is to be cut out as less productive than *Hevea*. The rubber cost worked out at 1s. 0½d. per pound.

FORWARD SALES OF RUBBER.

THE Anglo-Malay Rubber Co., Limited, have sold 30 tons of their No. 1 rubber, deliveries to be evenly distributed throughout the year 1911, at 9 shillings [= \$2.19] per pound.

Forward sales for the current year were made by The Pataling Rubber Estates Syndicate, Limited, amounting to 15 tons at 6s. [= \$1.46] and 20 tons at 6s. 6d. [= \$1.58] per pound. It was announced at the recent annual meeting that the policy of selling forward would be abandoned.

For the current year the Golden Hope Rubber Estate, Limited, made a forward contract for the sale of ten tons of rubber at 6s. 3d. [= \$1.52] per pound.

The directors of Kuala Selangor Rubber Co., Limited, have planned to begin tapping this year, when 263 acres will be dealt with. The crop for 1910 has been sold forward at 9s. 6d. [= \$2.31] and for 1911 at 8s. 3d. [= \$2.01] per pound, irrespective of the scrap rubber, which has in each case been contracted for at a shilling less.

A NEW GUATEMALA PROJECT.

THE Guatemala Rubber and Plantation Co., with offices at No. 10 Milk street, Boston, and in Guatemala City, invite subscriptions to their capital, for the purpose of developing 5,000 acres in the department of Escuintla. About 5,000 wild rubber trees are referred to as being productive, and it is proposed to plant 1,000,000 more (species not mentioned). The planting of other crops, in addition to rubber, is mentioned in the prospectus as under consideration. The capital stated is \$500,000; preferred shares are offered at \$1, one share of common stock being given with each as a bonus. William A. Mosman, an in-

surance man, is president, and Frederic H. Newton, dealer in doors and blinds, secretary and treasurer. The company was incorporated November 29, 1909, under the laws of Maine. Incorporators: Lindley M. Webb, Charles J. Nichols, and George E. Higlet, all of Portland, Maine. None of these is named in the present board of directors.

"CASTILLOA" RUBBER IN CHIAPAS (MEXICO).

TO THE EDITOR OF THE INDIA RUBBER WORLD: I have read with pleasure the article in your February and March issues entitled "*Castilloa* Rubber in Chiapas (Mexico)," by Mr. J. L. Hermessen. I am glad to see you publish the facts as they actually exist in Chiapas, and will say that Mr. Hermessen's articles are right to the point and will do much to remove any prejudice resulting from articles in the popular magazines on "Rubber Slavery in Mexico."

I returned lately from Chiapas, where I went with our company's sixth annual inspector, Mr. George I. Talbot, and four other stockholders of the Wisconsin Rubber Co.'s plantation ("Florida"), and will say that we found none of the conditions described in those articles on our plantation, nor do such conditions exist on any of the other plantations in our vicinity. On the other hand, the laborers are well treated and are perfectly satisfied with their condition: if they were not, they are at liberty to leave and find employment elsewhere.

We now have over 4,500 acres planted, or about 3,000,000 trees, looking fine and growing rapidly. We tapped some of our trees planted in 1904, getting an average of 2½ ounces per tree. The stockholders with whom we went were all very well pleased and well satisfied with the condition of our plantation.

FREDERICK C. HUTSON,
Treasurer Wisconsin Rubber Co.

Madison, Wisconsin, April 4, 1910.

LIPTON'S RUBBER INVESTMENTS.

SIR THOMAS LIPTON, Bart., who has been mentioned already in THE INDIA RUBBER WORLD as being interested to an important extent in rubber as well as in tea estates in Ceylon, was reported lately to have arrived on that island on a long visit, and it was regarded probable that he would make further investments there before his departure. It is said that his rubber estates will shortly be coming into bearing.

FORTY PER CENT. MANUFACTURING PROFITS.

AT the annual meeting of shareholders of the Continental Caoutchouc-und Guttapercha-Compagnie (Hanover, March 22) 74 holders were present, representing shares of a face value of 4,653,600 out of 6,000,000 marks capital. The balance sheet was approved and the dividend for the business year 1909 was fixed at 40 per cent. The retiring directors were reelected. In connection with the proposal to increase the capital stock from 6,000,000 to 9,000,000 marks, Director Seligmann gave a detailed explanation of the condition of the company, and stated that the operations during the part of the current year already elapsed had resulted most satisfactorily. The increase of capital is to be arranged by the issue of 2,500 new shares of a face of 1,200 marks each, at the price of 2,976 marks per share. The management was empowered to place the new shares with a group of bankers in Hanover at a price of 248, the underwriters being under obligation to take over the total issue. It is stated that up to 1909, inclusive, the company have written off 11,026,000 marks for depreciation of plant, while 18,550,000 marks have been expended since 1873 for purchasing new installations for the plant.

THE exports of rubber tree seeds (*Hevea Brasiliensis*) from Ceylon during 1909 amounted to 925 cwt., of the value of 44,025 rupees.

News of the American Rubber Trade.

AFFAIRS OF THE UNITED STATES RUBBER CO.

THE annual meeting of shareholders of the United States Rubber Co., for the election of directors and the transaction of any other business which may properly be brought before the meeting, will be held at the registered office of the company, in New Brunswick, New Jersey, on Tuesday, May 17, at 12 o'clock noon. Under the corporation laws of New Jersey no shares of stock may be voted which shall have been transferred after April 26.

The board of directors of the United States Rubber Co. on April 7 declared from the net profits of the company the regular quarterly dividends of 2 per cent. on the First preferred stock (including all outstanding old "Preferred" stock), and 1½ per cent. on the Second preferred stock, payable without closing of the transfer books on April 30.

RUBBER GOODS MEETING POSTPONED.

The annual meeting of shareholders of the Rubber Goods Manufacturing Co., called for April 14 [see THE INDIA RUBBER WORLD, April 1—page 255], has been postponed, to be held at the same place on May 19. While the annual report of the company will not be made public until the date of the meeting, it is announced unofficially that the net earnings for the business year just closed were in excess of those for the preceding year.

BLOOMINGDALE RUBBER CO.—A REORGANIZATION.

IN 1879 there was established at Butler, New Jersey, a small mill for reclaiming rubber; from this beginning a large business was developed, under the style Bloomingdale Soft Rubber Works. Interested in the business were the late Hon. Garrett A. Hobart, some time vice-president of the United States, with Mr. J. J. McDavitt as partner. In 1891 they formed a corporation, and the original factory was extended. The product of the factory has been prepared always by mechanical means. Owing to the present activity of the rubber industry, the plant at Butler has been reorganized, and the business incorporated as the Bloomingdale Rubber Co. The interest once owned by Mr. Hobart has been taken over and the company is now controlled by the following board of directors: F. T. Bedford, John J. McDavitt, George A. Mahana, Ira W. Henry, and Frank Hall.

BOSTON BELTING CO. IN CHICAGO.

THE Boston Belting Co. have opened a store in Chicago, at No. 177 Lake street, in charge of Mr. M. S. Curwen, manager of sales, in which they shall carry a complete assortment of their mechanical goods' product. The Boston Belting Co. have been represented in Chicago for a number of years by agents, the last arrangement having existed since September, 1904, with the Jewell Belting Co. Formal notice of termination of this contract was issued on April 9. The Jewell Belting Co. were established in 1848 as manufacturers of leather belting, their main office now being at Hartford, Connecticut. They have also been large handlers of rubber belting, and in connection with this department of the trade have been, as here stated, carrying the Boston Belting Co.'s products. The Jewell company announce: "The Boston Belting Co. is now opening its own branch in Chicago, and we cordially bespeak for it the same liberal treatment from our friends as has been heretofore accorded to us."

CANADIAN GENERAL ELECTRIC CO.

THE report of the Canadian General Electric Co., Limited, for the year ending December 31, 1909, shows profits of \$625,990.23, comparing with \$753,088.12 in the preceding year, and \$853,675 record earnings—in 1906. It is pointed out, however, that this statement does not reflect the actual measure

of the prosperity of the company at the end of the year. The company have recovered wholly from the financial depression of a year or two ago, and are now actively employed upon large orders which promise profits equaling those of any former year. The year's dividends amounted to 7 per cent. on the preference and 7 per cent. on the ordinary shares. From 1899 to 1907, inclusive, 10 per cent. dividends were paid on the ordinary shares, but the issue of preference shares was then smaller than at present. Meanwhile the interest charge has been lessened. The directors' report points to work in construction embracing some of the most important electric equipment ever planned.

PROFITS OF THE MACKAY COMPANIES.

THE annual report of The Mackay Companies for the year ended February 1, 1910, shows an increase of earnings. The corporation owns the entire capital of The Commercial Cable Co. and the Postal Telegraph system, besides important holdings of telephone shares. It had nothing to do with the recent combination of the American Telegraph and Telephone Co. and the Western Union Telegraph Co., but remains a wholly independent organization, competing with the other companies as always. The income of The Mackay Companies is described as "from investments in other companies"—meaning those named at the head of this paragraph. Following are comparative figures for the last two business years:

	1908.	1909.
Income	\$3,685,761.91	\$3,808,779.05
Dividends paid.....	3,655,216.00	3,758,667.00
Balance carried forward.....	5,518.46	17,777.21
Surplus	885,989.15	903,766.36

The capital remains unchanged. Four per cent. was paid on \$50,000,000 of preferred shares, the same as last year. The dividend of the common shares (\$41,380,400) was increased from 4 to 4½ per cent.

NEW RECLAIMING PLANT.

THE Harmer Rubber Reclaiming Works, the incorporation of which is reported in this paper, have purchased at East Millstone, New Jersey, premises well adapted for the rubber reclaiming industry, being situated on the Delaware and Raritan canal and on the Pennsylvania railroad. The company will occupy a building 60 × 130 feet which is being remodeled, and it is expected that the machinery will be installed by June 1. The property comprises several excellent artesian wells. Thomas W. Harmer, the president of the new company, has been connected as superintendent with the Manufactured Rubber Co. (Philadelphia and Metuchen) for ten years. It is stated that the company have in hand good contracts for their prospective production.

TRADE NEWS NOTES.

THE Victor Rubber Co. (Springfield, Ohio) have adopted as the name for their new sheet packing "Viruco," the pronunciation of which is indicated by "vi-ru-co," and the name of course is derived from the title of the company.

The Fischer Process Rubber Co., Inc. [see THE INDIA RUBBER WORLD, September 1, 1909—page 436], according to an official of the company, has failed. The company was formed to work certain processes for the treatment of crude rubber, and had headquarters at No. 150 Nassau street, New York.

Morgan & Wright (Detroit, Michigan) are furnishing both their "Nobby" and plain tread tires in millimeter sizes up to 935 mm. × 135 mm. The demand for tires of such measurement indicates that they are wanted among owners of foreign cars equipped with metric rims.

NEW INCORPORATIONS.

KELLY-RACINE Rubber Co., March 23, 1910, under the laws of Wisconsin; capital \$500,000. Incorporators: Martin J. Gillen, Milton J. Knoblock, and Mary E. Lunn, all of Racine, Wisconsin. The company was organized by the election, as president, of Charles F. U. Kelly, widely known in the rubber tire trade. John H. Dwight, formerly with the Belle City Steel Casting Co., has been elected secretary, and L. J. Evans, of the Mitchell-Lewis Motor Co., treasurer. The plan is to erect at Racine a well equipped factory for tires of all kinds, and mechanical rubber goods.

The L. & M. Rubber Manufacturing Co., March 25, 1910, under the laws of Ohio; capital \$120,000. Incorporators: John R. Williams, Homer J. Richards, L. Lanahan, Irene Williams, and Fred W. McCoy. Location: Carrollton, Ohio. This company, formed to manufacture druggists' goods and mold work in rubber, will occupy what originally was the Mitzel rubber plant, and later was operated for some time under the style L. & M. Rubber Works.

A. E. Butler and D. S. Harding, both of Chicago, have been elected respectively president and vice-president of the new company, with J. Howard Richards secretary and treasurer, and Homer J. Richards general manager. These officers, with Dr. J. R. Williams, compose the directory. Harvey Miller, who has been connected with the operation of the plant in the past, will be the superintendent.

Bloomington Rubber Co., April 1, 1910, under the laws of New Jersey; authorized capital, \$100,000. Incorporators: George S. Mahanna and Ira W. Henry, New York city; and Frank H. Hall, Hackensack, New Jersey. Further details appear in another column.

Ideal Auto Tire Co., March 8, 1910, under the laws of Delaware; authorized capital, \$125,000. Incorporators: M. E. Seiler, M. McConnell, and John Seiler, all of Wilmington, Delaware.

Punctureless Tire Co., March 21, 1910, under the laws of Wisconsin; capital, \$50,000. Incorporators: H. I. Weed, C. W. George Everhart and Ulrich Anderson. The location of the business is Oshkosh, Wisconsin.

Rubber Exploitation Co., March 26, 1910, under the laws of New Jersey; authorized capital \$50,000. Incorporators: Cornelius A. Cole, Henry A. Bingham, and William C. Sherwood, all of No. 15 Exchange place, Jersey City, New Jersey.

Pilgrim Shoe and Rubber Co., April 1, 1910, under the law of Massachusetts; authorized capital \$25,000. Incorporators: Judson A. Crane, Malden, Mass.; Philip M. Clark, Cambridge, Mass., and Edward A. Taft, Jr., No. 84 State street, Boston. The company succeeds to the business conducted formerly by the Pilgrim Rubber Co., 566 Atlantic avenue, Boston. H. E. Ackerman is president and general manager, Julius Weber treasurer, and Robert L. Rice clerk.

The Cravenette Co., U. S. A., April 1, 1910, under the laws of New Jersey; authorized capital \$100,000. Incorporators: George J. Geer and Samuel H. Ordway, New York city; Langdon Geer, Hoboken, New Jersey, and William A. Gemmell, Jersey City, New Jersey. The company has been formed to take over the business of the Summit Proofing Co., of New York, and the Cravenette Co., manufacturers of textile fabrics.

The Harmer Rubber Reclaiming Works, March 23, 1910, under the laws of New Jersey; authorized capital, \$125,000. Incorporators: Joseph Gordon and Hynian A. Rosenthal, Trenton; Thomas W. Harmer, Metuchen, New Jersey; Abram Marcus and Israel Laurie, New Brunswick, New Jersey. Further details appear in another column.

E. J. Todd Rubber Co., April 9, 1910, under the laws of Connecticut; authorized capital \$2,000. Incorporators: E. J. Todd, New Haven, Conn.; A. P. Gunn, and J. W. Keating, Hartford, Conn. Eyer J. Todd is president and treasurer, J. W. Keating vice-president, and A. P. Gunn secretary and as-

sistant treasurer. Mr. Keating, who is to be active manager, was for five years associated with the Alling Rubber Co., at Hartford, in which city the new corporation is to be located. The company is an entirely distinct organization from The Todd Rubber Co., of New Haven, incorporated in 1906, and of which E. J. Todd is president and treasurer.

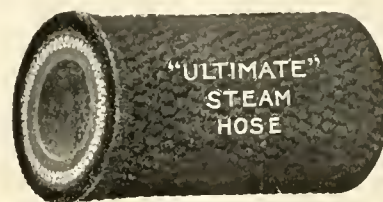
Pennsylvania Rubber Paint Co., February 24, 1910, under the laws of Delaware; authorized capital \$350,000. Incorporators: Albert J. Sherman, J. S. Oetter, Philadelphia, and Harry W. Davis, Wilmington, Delaware.

Asia Rubber Co. of America, March 19, 1910, under the laws of Maine; authorized capital, \$1,000,000. Incorporators: E. Maynard Thompson, L. H. Stevens, C. C. Ballard, F. J. C. Little, and I. S. Kearney, all of Augusta, Maine.

Coalnilla Guayule Land and Cattle Co., March 17, 1910, under the laws of Delaware; authorized capital, \$2,500,000. Incorporators: William J. Maloney, E. Butterworth Davis, and Warren N. Akers, all of Wilmington, Delaware.

A NEW STEAM HOSE—THE "ULTIMATE."

THE wise buyer wants to keep himself posted on the best sources of supply, and particularly in regard to goods for special purposes. Steam hose that will render satisfactory service is troublesome to make, especially the kind that is used for high pressure. The average buyer really expects more than is reasonable from this line. He thinks that steam hose ought to last as long for conducting steam as water hose does for conducting water, but when one stops to think that steam hose is



vulcanized in less than an hour at low pressure, it is easy to understand that with the high service pressure of the present day that the hose must quickly deteriorate. A new brand on the market—new in construction and radically different in the matter of the rubber tube—is said to meet the growing demand for high pressure steam hose. The strength is far beyond any possibility of service requirements, and the new tube composition seems to defy the action of steam. It is the "Ultimate" brand, produced by the Voorhees Rubber Manufacturing Co. (Jersey City, New Jersey).

A NEW RUBBER CEMENT.

THE St. Louis Rubber Cement Company are putting a new cement on the market, for which they report very large sales and re-orders. They call it "All Purpose" and for repairing automobile inner tubes or any rubber goods they claim it a very superior article, as they guarantee the repair to withstand any usage, regardless of heat or cold. This cement is used without heat or acid.

TIRE TRADE NOTES.

THE Converse Rubber Shoe Co. have broken ground at Malden, Massachusetts, for an addition to their plant in the shape of a two story warehouse 50' x 100'.

Yatman Rubber Co. (Newark, New Jersey) send out a calendar for 1910 embellished with a picture, "A Pot Boiler," which, while homely, is all the more attractive and true to life.

As illustrating the activity of the rubber industry just now and the demand for labor, it is stated that there appeared recently on the bulletin of the Massachusetts State Bureau of Employment the announcement "One thousand rubber and tennis shoe makers wanted."

NORTH BRITISH RUBBER CO. IN CANADA.

THE North British Rubber Co., Limited (Edinburgh, Scotland), having decided to enter the Canadian trade actively, have taken over No. 43 Colborne street, Toronto. These commodious premises will be stocked with the company's production, which includes practically every class of rubber goods made. The Canadian branch, however, will be devoted more particularly to rubber footwear. It will be under the management of Mr. Ernest L. Kingsley, of Toronto, who has had a wide experience in the rubber trade.

A RUBBER MANUFACTURER FROM AUSTRALIA.

A RECENT visitor to the United States was Mr. John Kearns, who for ten years past has been at Melbourne as factory manager of the Dunlop Pneumatic Tyre Co. of Australia, Limited. Mr. Kearns is an American, and was a successful manufacturer before going out to Australia. The factory referred to has been successful since the beginning, and has grown steadily until about 750 hands are now employed. Formed originally to manufacture tires, the company have taken on mechanicals, rubber heels, waterproof clothing, and other products. They are understood to have some important contracts for government supplies.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for four weeks, ending April 23:

COMMON STOCK, \$25,000,000.

[The treasury of a subsidiary company holds \$1,344,000.]

Last Dividend, April 30, 1900—1%.

Week	April	Date	Sales	Shares	High	Low
Week	April	2	Sales	2,930 shares	High 44½	Low 42½
Week	April	9	Sales	4,000 shares	High 44½	Low 42
Week	April	16	Sales	3,300 shares	High 45	Low 41½
Week	April	23	Sales	1,630 shares	High 44	Low 42½

For the year—High, 52½, Jan. 3; Low, 35, Feb. 7.

Last year—High, 57½; Low, 27.

FIRST PREFERRED STOCK, \$39,824,400.

Last Dividend, April 30, 1910—1%.

Week	April	Date	Sales	Shares	High	Low
Week	April	2	Sales	1,510 shares	High 115	Low 113¾
Week	April	9	Sales	834 shares	High 116	Low 114¾
Week	April	16	Sales	1,220 shares	High 116¾	Low 114
Week	April	23	Sales	910 shares	High 114	Low 112½

For the year—High, 116½, Jan. 10; Low, 108, Feb. 7.

Last year—High, 123½; Low, 98.

SECOND PREFERRED STOCK, \$9,965,000.

Last Dividend, April 30, 1910—1¾%.

Week	April	Date	Sales	Shares	High	Low
Week	April	2	Sales	220 shares	High 79¾	Low 79¼
Week	April	9	Sales	130 shares	High 79	Low 79
Week	April	16	Sales	600 shares	High 80½	Low 79
Week	April	23	Sales	316 shares	High 79	Low 79

For the year—High, 84, Jan. 3; Low, 76, Feb. 7.

Last year—High, 89½; Low, 67½.

SIX PER CENT. TRUST GOLD BONDS, \$19,500,000.

Week	April	Date	Sales	Bonds	High	Low
Week	April	2	Sales	102 bonds	High 103¾	Low 103
Week	April	9	Sales	103 bonds	High 103	Low 102¾
Week	April	16	Sales	57 bonds	High 103¾	Low 103
Week	April	23	Sales	124 bonds	High 103½	Low 103½

For the year—High, 104½, Jan. 15; Low, 102¾, March 5.

Last year—High, 106; Low, 102¼.

WORK RESUMED AT BRISTOL.

ALL departments of the factory of the National India Rubber Co. (Bristol, Rhode Island), resumed work on April 11, instead of April 18, as had been announced at the date of the annual shutdown for inventory and stock taking. The shortening of the period of shutdown was highly appreciated by both the employes and the local trades people, through whose hands so much money passes from the company's pay rolls when the factory is in operation. The daily production of the footwear department is reported larger than prior to closing.

Matthew S. Hannon, formerly with the Davol Rubber Co. (Providence, Rhode Island), has been appointed foreman of the druggists' sundries department of the Bristol factory.

BANIGAN RUBBER FACTORY TO RESUME!

It is stated that plans are under way for the resumption of work in the plant at Olneyville (near Providence, Rhode Island), established in 1896 by the Joseph Banigan Rubber Co. and operated by them until April, 1908, in the manufacture of rubber footwear. The business was acquired by the United States Rubber Co., and latterly the Banigan brands of goods have been made at another factory of the United States company. The latest reports with regard to the Banigan factory is that the making of automobile tires is in contemplation there.

NEW WATERPROOFING PLANT.

THE long established rainproofing concern, The Schwarzwaelder Co., of Philadelphia, have added a rubber waterproofing branch. They are now in the field for rubberizing all kinds of single and double texture work, all grades of hospital sheeting, and a full line of calendered goods, including army blankets and hospital sheets. They inform us they have installed an entirely new up-to-date spreading plant, together with all the latest methods for vulcanizing their goods, which they claim are the best now in the market. They have also engaged the most experienced and skillful help that could be procured.

F. W. SAVAGE RUBBER CO.

THIS new corporation [see THE INDIA RUBBER WORLD, April 1, 1910—page 254] has been formed to succeed to a private firm under the same name, and to acquire two patents issued to F. W. Savage for combinations of felt and knit boots and socks, with a protector and snow excluder. The said transfer is subject to a contract with the Hood Rubber Co. (Boston) for the manufacture of the patented articles, the product to be sold exclusively to the F. W. Savage Rubber Co., this company to resell to the jobbing trade. The location of the new company is No. 36 Lincoln street, Boston.

MEXICAN CRUDE RUBBER CO.—SALE REPORTED.

THE sale is reported, to an English syndicate, of the Mexican Crude Rubber Co., a corporation under the laws of Michigan, with \$1,500,000 capital, and headquarters at Detroit, in that State. The company was formed in May, 1906, by parties in interest with the Coahuila Mining and Smelting Co., operating in Mexico, to engage in the production of guayule. The company have been operating two guayule factories at Viesca, and one at Cedral, Mexico, turning out a considerable product. R. M. Dyar, of Detroit, has been president of the Mexican Crude Rubber Co. from the beginning, and Walter E. Parker general manager. Mr. Parker returned recently from a visit to England, accompanied by some gentlemen understood to represent the purchasing syndicate referred to above.

TRADE NEWS NOTES.

ELECTRIC Hose and Rubber Co. (Wilmington, Delaware), issue a statement to their customers showing the increase in crude rubber and in cotton yarns from the normal price for a few years past, as explaining the necessity for revising upward prices on their hose products. The keynote of the circular is "that the manufacturer who does not advance his prices is either losing money or reducing the quality of his goods."

A circular in relation to the price of shares of the Diamond Rubber Co. is issued by A. E. Butler & Co., Chicago stock brokers, under date of April 21. They record their belief that the net earnings of the Diamond company this year will exceed 80 per cent. on their present capitalization of \$10,000,000. They credit the company with a present output of 2,500 tires a day. On the date of the circular 290 was the Chicago quotation for Diamond Rubber Co. shares.

The Goodyear Tire and Rubber Co. of Canada have been incorporated with \$250,000 capital, the company to have headquarters in Toronto. Incorporators: D. B. Simpson, W. F. Stearns, Norris Wilson, D. C. Betts, J. S. Moorcraft, A. W. McMillan, and J. H. McMurtry, all of Bowmanville, Ontario.

RETIREMENT OF MR. BURTON.

No information of a personal nature that has been reported in these columns of late has been of wider or more real interest, perhaps, than the announcement, now to be made, of the retirement from all active business connection of Mr. Henry C. Burton, identified so long with the house of Parker, Stearns & Co. It must be now some thirty-four years since Mr. Burton, a native of Brooklyn and a graduate from the Brooklyn Polytechnic Institute, became connected with the rubber druggists' sundries business, conducted in Gold street, New York, by Francis H. Holton. Mr. Holton, by the way, was one of the

pioneers in this line, and later became superintendent of the sundries department of the Goodrich factory, at Akron, from which he has now retired. Two years later Mr. Burton was to be found with the Mattson Rubber Co., in New York, founded by another notable pioneer in the branch of the druggists' sundries. Next he conducted a business in New York for awhile under the name Pará Rubber Co. Meanwhile Parker Stearns & Sutton had entered the field, and were widening their



HENRY CLAY BURTON.

scope rapidly. In 1889 they incorporated in Canada the Alpha Rubber Co., establishing a sundries factory at Montreal. He was one of the incorporators and he was manager of the Montreal factory. Four years later he was called to New York by his firm, and the Montreal factory was disposed of. Since 1893, therefore, Mr. Burton has been in New York, connected in an important way with this firm—established 1879, incorporated 1892, and reincorporated in 1905 under the style Parker, Stearns & Co. Since the latter date Mr. Burton had been secretary of the corporation.

When, in the fall of 1898, the Rubber Sundries Manufacturers' Association was formed, no one manifested a deeper interest in its objects and its success than Mr. Burton. Possessing a thorough knowledge of the sundries business and a wide personal acquaintance with the trade, he recognized the benefits possible from coöperation, with the motto that to work for one's trade as a whole is a good way to promote one's own individual part in that trade. Mr. Burton was an active member of the executive committee of the association from the beginning and two years ago he was elected to the office of president. At the annual meeting last month he declined reelection, feeling the need of more careful attention to the condition of his health than he had been able to give in recent years.

Every now and then, into this modern civilization of ours, with its secret admiration for the brilliant rogue, and its distrust of the righteous, is born a man capable, energetic, intellectual, absolutely free from "manly vices," who unconsciously and perpetually gives the lie to man's idea of men. Such was and is Henry C. Burton. A tireless, intelligent, purposeful worker, modest in his estimate of himself, broadly sympathetic in his attitude toward all men, thoroughly good because he was too busy and too wholesome to have even a speaking acquaintance with evil, a cheerful optimist even when shattered by ill health, he numbered his friends by hundreds and deserved them all. Through his retirement the rubber sundries' trade loses one it

can ill spare. May the rest and relaxation which he has so tardily allowed himself strengthen his hands, restore his health, and give him years full of content and comfort.

BIRTHDAY OF MR. MARKEY.

THE seventy-sixth birthday of Mr. Isaac B. Markey, vice-president of the Eureka Fire Hose Manufacturing Co. (New York), was celebrated on April 14. During the day many

friends visited him at his office, with expressions of good wishes. At his home, in the evening, he was presented with a large vase containing 76 American Beauty roses. Mr. Markey is known throughout the United States as the "Nestor" of the fire hose business, with which he has been connected for nearly 40 years. During 25 years he has held various executive positions in the Eureka Fire Hose Manufacturing Co., and in this period he has attended every annual convention of the International Association of Fire Engineers, with the exception of a single year in which he was seriously ill.



ISAAC B. MARKEY.

At the New York office the staff presented Mr. Markey with a handsome red morocco covered mahogany arm chair, with the wish that he might be able to fill the same for many years to come.

TRADE AND PERSONAL NOTES.

MR. FREDERICK C. HOOD, of the Hood Rubber Co., sailed from New York on April 14, for his yearly visit to Europe. He was accompanied by Mrs. Hood. On the same steamer sailed Charles W. Randall, of C. W. Randall & Co. (London), representatives of the Hood company in the British trade, after a very brief visit to the States.

After a very successful year in giving public demonstrations to the shoe trade of how rubber footwear is made—which took him over most of the United States—Mr. W. H. Palmer, of the United States Rubber Co., has gone to Europe, where he will repeat his lecture and demonstration, particularly in those centers where his company maintain agencies.

Hon. L. D. Apsley has returned to his home in Hudson, Massachusetts, after a business visit to the west and a vacation at Hot Springs, Arkansas.

Mr. H. W. Smith, for thirteen years manager of the F. C. Howlett Co. (latterly operated as the Iroquois Rubber Co.), at Buffalo, New York, has resigned to embark in a new line of business. The employes presented him with a beautiful gold watch and fob as a token of appreciation.

Mr. C. D. Garretson, treasurer and general manager of Electric Hose and Rubber Co. (Wilmington, Delaware), on April 27, sailed for Bermuda on a month's rest from business cares. Unlike many young men in the discharge of their administrative duties, involving much responsibility and the formulating of plans that adapt a large growing business to changing conditions, he takes needed rest while his balance to the credit of health account is yet good. Mr. Garretson was accompanied by his wife.

The death is announced at Boston, under date of April 5, of Mrs. Susan Ada Balderston, widow of the late John C. Balderston, who was connected for so long with the rubber footwear trade and who was the father of Frank D. Balderston, now of the United States Rubber Co.

Review of the Crude Market.

It is still a difficult matter to discuss the condition of the market for rubber, which seems even more unsettled than at our last report. The fact that prices still tend upward, in spite of somewhat larger arrivals than formerly, indicates a constantly increasing consumption. As far as Pará sorts are concerned, the production has come to a practical standstill until the opening of a new season, and rubber stocks must become smaller and smaller during the next few months.

As for the conditions of business in general, no indication exists of any falling off in the demand for rubber goods. In some other countries, as will be seen in this issue, definite increases have been announced for most classes of rubber goods. While the subject of advancing prices is uppermost in the minds of American manufacturers, as well, they do not appear yet to have reached the point of agreement as to the proper advances to be made on goods, or as to the time or method of concerted action in charging more.

Following are quotations at New York for Pará grades, one year ago, one month ago, and April 29—the current date:

PARA.	May 1, '09.	April 1, '10.	April 29.
Islands, fine, new.....	123@124	252@253	275@277
Islands, fine, old.....	124@125	none here	none here
Upriver, fine, new.....	126@127	270@271	281@282
Upriver, fine, old.....	128@129	272@273	none here
Islands, coarse, new.....	58@ 59	105@106	109@110
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	95@ 96	172@173	182@185
Upriver, coarse, old.....	none here	174@175	none here
Cameta	68@ 69	130@131	126@127
Caucho (Plantation), ball..	84@ 85	174@175	180@182
Caucho (Plantation), sheet	76@ 77	135@135	none here
Ceylon, fine sheet.....	132@133	260@261	285@288

AFRICAN.	May 1, '09.	April 1, '10.	April 29.
Lapori, ball, prime.....	108@109	204@205	none here
Lapori, strip, prime.....	none here	none here	none here
Aruwimi	94@ 95	none here	none here
Upper Congo, ball, red....	96@100	170@171	190@191
Ikelemba	none here	none here	none here
Sierra Leone, 1st quality..	96@ 96	170@171	188@190
Massai, red	95@ 96	171@172	188@190
Soudan, niggers	85@ 86	none here	none here
Cameroon, ball	64@ 65	112@114	128@130
Benguela	59@ 60	none here	none here
Madagascar, pinky	90@ 91	125@126	125@126
Accra, flake	21@ 22	34@ 35	40@ 42

CENTRALS.	May 1, '09.	April 1, '10.	April 29.
Esmeralda, sausage	81@ 82	152@153	170@172
Guayaquil, strip	71@ 72	120@121	130@135
Nicaragua, scrap	79@ 80	152@153	167@168
Panama	63@ 64	none here	none here
Mexican, scrap	80@ 81	151@152	170@172
Mexican, slab	58@ 59	none here	none here
Mangabeira, sheet	53@ 54	none here	none here
Guayule	32@ 33	99@100	110@110

EAST INDIAN.	May 1, '09.	April 1, '10.	April 29.
Assam	92@ 93	none here	none here
Pontianak	43@ 44	87 1/2@87 1/2	93 1/4@103 1/4
Borneo	35@ 45	none here	none here

Late Para cables quote:

	Per Kilo.	Per Kilo.
Islands, fine.....	13\$000	Upriver, fine
Islands, coarse.....	4\$500	Upriver, coarse
		Exchange

Statistics of Para Rubber (Excluding Caucho).

	NEW YORK.		Total 1910.	Total 1909.	Total 1908.
	Fine and Medium.	Coarse.			
Stocks, February 28..	157	29	186	385	152
Arrivals, March	2341	870	3211	2068	1650
Aggregating	2498	899	3397	2453	1802

	2300	817	=	3117	2002	1482
Deliveries, March						
Stocks, March 31.....	198	82	=	280	451	320

	PARA.			ENGLAND.		
	1910.	1909.	1908.	1910.	1909.	1908.
Stocks, February 28..	465	1710	1365	510	420	1365
Arrivals, March	3890	2980	3220	632	1912	1685
Aggregating	4355	4690	4585	1142	2332	3050
Deliveries, March	3520	3129	3610	602	2002	1075
Stocks, March 31.....	835	1561	975	540	330	1975

	1910.	1909.	1908.
World's visible supply, March 31.....	3,737	4,264	4,912
Pará receipts, July 1 to March 31.....	26,895	25,320	24,415
Pará receipts of caucho, same dates.....	5,215	5,290	4,275
Afloat from Pará to United States, March 31	117	405	287
Afloat from Pará to Europe, March 31....	1,995	1,310	1,335

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for car-load lots, per pound—show a decided advance since last month, particularly in shoes:

Old rubber boots and shoes—domestic.....	10 3/4@11
Old rubber boots and shoes—foreign.....	10 1/4@10 3/8
Pneumatic bicycle tires.....	7 @ 7 1/4
Automobile tires	7 7/8@ 8
Solid rubber wagon and carriage tires.....	9 1/4@ 9 3/8
White trimmed rubber.....	10 @11
Heavy black rubber.....	6 1/4@ 6 1/2
Air brake hose.....	5 1/4@ 5 1/2
Garden hose	2 7/8@ 3
Fire and large hose.....	3 3/8@ 3 1/2
Mating	1 3/4@ 1 7/8

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weight in Pounds.]

MARCH 29.—By the steamer *Ccareense*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	TOTAL.
Poel & Arnold.....	598,600	83,000	69,900	53,300	= 804,800
N. Y. Commercial Co..	134,800	37,200	98,400	60,400	= 330,800
A. T. Morse & Co.....	81,700	12,600	71,000	78,500	= 243,800
General Rubber Co....	125,200	35,100	48,600	6,200	= 215,100
C. P. dos Santos.....	19,300	2,900	13,800	5,600	= 41,600
G. Amsinck & Co.....	16,500	3,400	2,100	5,000	= 27,000
William E. Peck & Co..	.....	.....	59,000	.....	= 59,000
L. Johnson & Co.....	.....	.....	27,000	.....	= 27,000
Hagemeyer & Brunn...	2,100	.....	9,200	.....	= 11,300
Henderson & Korn....	1,400	.....	6,600	.....	= 8,000
Total.....	979,600	174,200	405,600	209,000	= 1,768,400

APRIL 6.—By the steamer *Boniface*, from Manáos and Pará:

Poel & Arnold.....	30,300	2,100	14,500	18,600	= 65,500
General Rubber Co....	41,100	9,000	9,200	6,800	= 66,100
A. T. Morse & Co.....	.....	.....	15,200	.....	= 15,200
N. Y. Commercial Co..	2,100	.....	3,400	1,000	= 6,500
Total	73,500	11,100	42,300	26,400	= 153,300

APRIL 8.—By steamer *Sao Paulo*, from Pará:

G. Amsinck & Co.....	4,700	5,400	22,000	.....	= 32,100
A. T. Morse & Co....	8,900	1,100	19,000	.....	= 29,000
Poel & Arnold.....	.....	.....	27,700	.....	= 27,700
William E. Peck & Co..	1,100	.....	15,800	.....	= 16,900
Total	14,700	6,500	84,500	.....	= 105,700

APRIL 15.—By the steamer *Polycarp*, from Manáos and Pará:

Poel & Arnold.....	71,400	10,000	2,600	103,700	= 187,700
N. Y. Commercial Co..	87,600	20,800	13,400	15,900	= 137,700
A. T. Morse & Co....	1,800	300	33,700	62,900	= 98,700
General Rubber Co....	17,700	2,200	9,500	.....	= 29,400
Henderson & Korn....	.....	.....	19,100	.....	= 19,100
William E. Peck & Co..	700	300	3,300	.....	= 4,300
Total	179,200	33,600	81,600	182,500	= 476,900

APRIL 23.—By the steamer *Clement*, from Manáos and Pará:

New York Commercial Co..	48,000	20,500	17,100	24,100	= 109,800
Poel & Arnold.....	50,700	9,600	.....	.....	= 60,300
A. T. Morse & Co....	2,500	1,100	13,300	6,900	= 23,800
William E. Peck & Co..	1,400	.....	3,300	.....	= 4,700
General Rubber Co....	.....	.....	.....	2,900	= 2,900
Total	102,700	31,200	33,700	33,900	= 201,500

PARA RUBBER VIA EUROPE.

POUNDS.	
MARCH 24.—By the <i>Armenia</i> =Liverpool:	
New York Commercial Co. (Fine)....	115,000
MARCH 25.—By the <i>Pretoria</i> =Hamburg:	
New York Commercial Co. (Fine)....	115,000
MARCH 28.—By the <i>Laurentie</i> =Liverpool:	
New York Commercial Co. (Fine)....	7,000
MARCH 29.—By the <i>Marouye</i> =Trinidad:	
Iglesias Lobo Co. (Fine)....	5,000
Iglesias Lobo Co. (Coarse)....	8,000
APRIL 1.—By the <i>Graf Waldersee</i> =Hamburg:	
Geo. A. Alden & Co. (Coarse)....	50,000
A. T. Morse & Co. (Fine)....	6,500
56,500	
APRIL 4.—By the <i>Victoria</i> =Hamburg:	
New York Com. Co. (Fine)....	8,000
A. T. Morse & Co. (Fine)....	5,000
Gen. Rubber Co. (Coarse)....	5,000
Poel & Arnold (Coarse)....	3,500
New York Com. Co. (Coarse)....	27,000
Robert Badenhop	1,400
49,900	
APRIL 7.—By the <i>St. Louis</i> =London:	
Poel & Arnold (Coarse).....	15,000
APRIL 8.—By the <i>Canadian</i> =Liverpool:	
New York Com. Co. (Fine)....	115,000
Poel & Arnold (Coarse)....	11,000
126,000	
APRIL 9.—By the <i>Chicago</i> =Bristol:	
New York Commercial Co. (Caucho)....	33,000
APRIL 11.—By the <i>Baltic</i> =Liverpool:	
New York Com. Co. (Coarse)....	69,000
Raw Products Co. (Fine)....	11,000
80,000	
APRIL 12.—By the <i>Soramaca</i> =Trinidad:	
General Export Co. (Fine).....	12,000
APRIL 13.—By the <i>Coronio</i> =Liverpool:	
General Rubber Co. (Fine)....	115,000
Livesey & Co. (Fine).....	11,500
Neuss, Hessein & Co (Fine)....	13,500
140,000	
APRIL 13.—By the <i>President Grant</i> =Hamburg:	
George Alden & Co. (Coarse)....	6,000
New Cork Com. Co. (Fine)....	3,500
9,500	
APRIL 13.—By the <i>Oceanic</i> =London:	
Poel & Arnold (Coarse)....	8,000
General Rubber Co. (Coarse)....	2,500
10,500	

OTHER NEW YORK ARRIVALS.

CENTRALS.

[*This sign, in connection with imports of Centrals, denotes Guayule rubber.]

POUNDS.	
MARCH 22.—By the <i>El Leglo</i> =Galveston:	
Continental-Mexican	*135,000
C. T. Wilson & Co.	*22,500
E. S. Churchill.....	*5,500
*163,000	
MARCH 24.—By the <i>Armenia</i> =Liverpool:	
Poel & Arnold	22,500
George A. Alden & Co.....	5,500
28,000	
MARCH 24.—By the <i>Antilles</i> =New Orleans:	
A. N. Rotholz.....	3,500
A. T. Morse & Co.....	2,500
Eggers & Heinlein.....	2,000
Manhattan Rubber Co.....	1,000
New York Commercial Co....	1,000
10,000	
MARCH 25.—By the <i>Colon</i> =Colon:	
Isaac Brandon & Bros.....	7,500
G. Amsinck & Co.....	6,000
Piza, Nephews & Co.....	5,000
L. Johnson & Co.....	1,500
Andean Trading Co.....	1,500
A. Rosenthal & Sons.....	1,000
Fidanque Bros. & Co.....	1,000
R. G. Barthold.....	1,000
24,500	
MARCH 25.—By the <i>Pretoria</i> =Hamburg:	
Ed. Maurer	*15,000
MARCH 26.—By the <i>Esperanza</i> =Mexico:	
Harburger & Stack.....	13,500
H. Marquardt & Co.....	5,000
A. Klipstein & Co.....	1,500
E. Nelson, Tibbals & Co....	1,500
General Export Co.....	1,500
J. W. Wilson & Co.....	1,000
24,000	
MARCH 28.—By the <i>Camarcho</i> =Tampico:	
Continental-Mex. Rubber Co. *	135,000
New York Commercial Co. *	100,000
Ed. Maurer	*80,000
Poel & Arnold	*34,000
J. W. Wilson & Co.....	*20,000
J. A. Kendall Co.....	*2,000
*371,000	
MARCH 28.—By the <i>José</i> =Ceiba:	
A. Rosenthal & Sons.....	5,500

Delima, Cortissoz & Co.....	1,500	
Tropical Trading Co.....	1,500	8,500
MARCH 28.—By the <i>Proteus</i> =New Orleans:		
A. T. Morse & Co.....	3,500	
A. N. Rotholz.....	1,500	
Robinson & Co.....	1,500	
Manhattan Rubber Co.....	1,500	
New York Commercial Co....	1,500	
A. Latham & Co.....	1,000	10,500
MARCH 29.—By the <i>Siberia</i> =Greytown:		
G. Amsinck & Co.....	11,000	
Pablo, Calvet & Co.....	3,500	
American Trading Co.....	3,000	
Isaac Brandon & Bros.....	1,500	
Henry Mann & Co.....	1,500	
Meyer & Hecht.....	1,000	21,500
MARCH 30.—By the <i>Magdala</i> =Colombia:		
A. M. Capen's Sons.....	4,500	
Maitland, Coppell & Co.....	2,000	
J. Sambrada & Co.....	1,000	7,500
MARCH 31.—By the <i>El Norte</i> =Galveston:		
Continental-Mex. Rubber Co. *	90,000	
C. T. Wilson & Co.....	*20,000	*110,000
APRIL 1.—By the <i>Advance</i> =Colon:		
Isaac Brandon & Bros.....	7,000	
G. Amsinck & Co.....	6,000	
L. Johnson & Co.....	2,000	
Piza, Nephews & Co.....	1,500	
Andean Trading Co.....	1,000	17,500
APRIL 2.—By the <i>Massachusetts</i> =Mexico:		
George A. Alden & Co.....	6,500	
E. N. Tibbals & Co.....	2,500	
H. Marquardt & Co.....	1,500	10,500
APRIL 2.—By the <i>El Rio</i> =Galveston:		
Continental-Mexican Rubber Co.....	*70,000	
APRIL 2.—By the <i>Mexico</i> =Frontera:		
E. N. Tibbals & Co.....	5,500	
Strube & Ultze.....	2,500	
E. Steiger & Co.....	1,500	
A. Demarest & Co.....	1,500	
Poel & Arnold.....	1,500	
Harburger & Stack.....	1,500	
George A. Alden & Co.....	1,500	
H. Marquardt & Co.....	1,500	
Graham, Hinkley & Co.....	1,000	18,000
APRIL 4.—By the <i>Vigilancia</i> =Tampico:		
Continental-Mex. Rubber Co. *	150,000	
Ed. Maurer	*90,000	
New York Commercial Co....	*67,000	
Poel & Arnold.....	*40,000	
For Europe	*30,000	*377,000
APRIL 4.—By the <i>Attoi</i> =Colombia:		
Isaac Brandon & Bro.....	7,000	
Kunhardt & Co.....	6,500	
A. Held	2,500	
R. del Castillo.....	1,500	
Delima, Cortissoz & Co.....	1,000	18,500
APRIL 5.—By the <i>Verdi</i> =Bahia:		
J. H. Rossbach & Bros.....	43,000	
A. Hirsch & Co.....	35,000	
Poel & Arnold.....	25,000	
A. D. Hitch & Co.....	7,000	110,000
APRIL 6.—By the <i>Niagara</i> =Havre:		
Raw Products Co.....	7,000	
APRIL 6.—By the <i>Panama</i> =Colon:		
G. Amsinck & Co.....	2,000	
Suzarte & Whitney.....	1,500	
Brandon & Bros.....	1,500	
Piza, Nephews & Co.....	1,500	
Wessels, Kulenkampff Co....	1,000	7,500
APRIL 8.—By the <i>Morro Castle</i> =Mexico:		
Harburger & Stack.....	15,000	
H. Marquardt & Co.....	9,000	
Strube & Ultze.....	6,000	
E. Steiger & Co.....	3,500	
J. W. Wilson & Co.....	2,500	
Judkin & McCormick Co....	1,500	
Mecke & Co.....	1,000	
General Export Co.....	1,000	39,500
APRIL 8.—By the <i>Matanzas</i> =Tampico:		
Continental-Mex. Rubber Co. *	75,000	
Ed. Maurer	*55,000	
Poel & Arnold	*40,000	
New York Commercial Co....	*34,000	*204,000
APRIL 9.—By the <i>El Mar</i> =New Orleans:		
A. T. Morse & Co.....	5,000	
Eggers & Heinlein.....	1,500	
Robinson & Co.....	1,000	7,500
APRIL 9.—By the <i>El Alba</i> =Galveston:		
Continental-Mex. Rubber Co. *	150,000	
C. T. Wilson & Co.....	*20,000	*170,000
APRIL 12.—By the <i>Allianca</i> =Colon:		
G. Amsinck & Co.....	18,000	
Isaac Brandon & Bros.....	9,000	

J. Sambrada & Co.....	6,500	
Piza, Nephews & Co.....	5,000	
Jimenis & Co.....	3,500	
Mecke & Co.....	3,000	
A. Santos & Co.....	2,000	
A. Rosenthal & Sons.....	1,500	
Suzarte & Whitney.....	1,500	
L. Johnson & Co.....	1,500	
Andean Trading Co.....	1,500	
Delima, Cortissoz & Co.....	1,000	
Dumarest Bros. & Co.....	1,000	
Lanman & Kemp.....	1,000	56,000
APRIL 12.—By the <i>El Sud</i> =Galveston:		
Continental-Mex. Rubber Co. *	75,000	
E. S. Churchill.....	*15,000	*90,000
APRIL 13.—By the <i>Lincoln</i> =Hamburg:		
Ed. Maurer	*22,000	
APRIL 13.—By the <i>Clyde</i> =Colombia:		
J. H. Rossbach & Bros.....	6,000	
A. M. Capen's Sons.....	4,000	
R. del Castillo.....	3,000	
Caballero & Blanco.....	1,500	
H. Schutte, Gieseken & Co..	1,000	
Mecke & Co.....	1,000	16,500
APRIL 14.—By the <i>Antilles</i> =New Orleans:		
Eggers & Heinlein.....	1,500	
Manhattan Rubber Co.....	1,500	
H. Marquardt & Co.....	1,000	
New York Commercial Co....	1,000	5,000
APRIL 15.—By the <i>El Dorado</i> =Galveston:		
C. T. Wilson & Co.....	*15,000	
APRIL 15.—By the <i>Merida</i> =Vera Cruz:		
H. Marquardt & Co.....	2,500	
General Export Co.....	2,000	
A. Dumont & Co.....	1,500	
W. L. Wadleigh.....	1,000	7,000
APRIL 18.—By the <i>Seguranca</i> =Tampico:		
Ed. Maurer	*150,000	
Continental-Mex. Rubber Co. *	*75,000	
New York Commercial Co....	*40,000	
Poel & Arnold	*35,000	
Isaac Kubie & Co.....	*30,000	
For Europe	*20,000	*350,000
APRIL 18.—By the <i>Colon</i> =Colon:		
Piza, Nephews & Co.....	13,000	
G. Amsinck & Co.....	5,000	
American Trading Co.....	1,500	
Wessels, Kulenkampff & Co..	1,000	20,500
APRIL 18.—By the <i>El Norte</i> =Galveston:		
Continental-Mexican Rubber Co.....	*150,000	
APRIL 18.—By the <i>Momus</i> =New Orleans:		
A. N. Rotholz.....	2,500	
A. T. Morse & Co.....	2,000	
Robinson & Co.....	2,000	
Manhattan Rubber Co.....	1,000	7,500
APRIL 18.—By the <i>Alleghany</i> =Colombia:		
J. H. Rossbach & Bros.....	7,000	
A. Held	1,000	
Delima, Cortissoz & Co.....	1,000	9,000
APRIL 19.—By the <i>Byron</i> =Bahia:		
J. H. Rossbach & Bros.....	22,500	
Poel & Arnold.....	11,000	
A. D. Hitch & Co.....	1,500	
A. Hirsch & Co.....	1,500	36,500
APRIL 19.—By the <i>Joachim</i> =Colon:		
G. Amsinck & Co.....	4,000	
Pablo, Calvet & Co.....	3,500	
Isaac Brandon & Bro.....	1,500	
Eggers & Heinlein.....	1,000	
Suzarte & Whitney.....	1,000	
A. M. Capen's Sons.....	1,000	12,000
APRIL 20.—By the <i>El Valle</i> =Galveston:		
C. T. Wilson & Co.....	*20,000	
E. S. Churchill	*5,000	*25,000
AFRICAN.		
POUNDS.		
MARCH 24.—By the <i>Armenian</i> =Liverpool:		
A. T. Morse & Co.....	50,000	
Poel & Arnold.....	110,000	
George A. Alden & Co.....	40,000	
Rubber Trading Co.....	22,500	
A. T. Morse & Co.....	11,500	
W. L. Gough Co.....	11,000	245,000
MARCH 24.—By the <i>Carolino</i> =Havre:		
Poel & Arnold.....	45,000	
C. P. dos Santos.....	5,000	50,000
MARCH 25.—By the <i>Pretoria</i> =Hamburg:		
George A. Alden & Co.....	65,000	
A. T. Morse & Co.....	25,000	
Poel & Arnold.....	13,500	
Livesey & Co.....	11,500	
W. L. Gough Co.....	15,000	
Rubber Trading Co.....	9,000	
Robert Badenhop	2,600	141,600

MARCH 28.—By the <i>Hamburg</i> =Genoa:		
A. T. Morse & Co.....	11,500	
W. L. Gough Co.....	2,500	14,000
MARCH 28.—By the <i>Laurentic</i> =Liverpool:		
A. T. Morse & Co.....	45,000	
Poel & Arnold.....	56,000	
Robinson & Co.....	45,000	
W. L. Gough Co.....	5,500	
Livesey & Co.....	7,000	
Rubber Trading Co.....	6,500	165,000
MARCH 29.—By the <i>Kroonland</i> =Antwerp:		
A. T. Morse & Co.....	35,000	
Poel & Arnold.....	25,000	
H. A. Gould Co.....	11,000	
W. L. Gough Co.....	5,500	
Livesey & Co.....	5,000	
Raw Products Co.....	5,000	86,500
APRIL 1.—By the <i>Graf Waldersee</i> =Hamburg:		
George A. Alden & Co.....	78,000	
A. T. Morse & Co.....	60,000	
Poel & Arnold.....	22,500	
W. L. Gough Co.....	11,500	
Rubber Trading Co.....	5,500	
General Rubber Co.....	5,000	182,500
APRIL 1.—By the <i>Adriatic</i> =London:		
Poel & Arnold.....	22,000	
George A. Alden & Co.....	11,500	33,500
APRIL 2.—By the <i>Manhattan</i> =Liverpool:		
Poel & Arnold.....	22,500	
Livesey & Co.....	15,000	
General Rubber Co.....	6,500	44,000
APRIL 2.—By the <i>Lorraine</i> =Havre:		
A. T. Morse & Co.....	4,500	
C. T. dos Santos.....	2,500	7,000
APRIL 4.—By the <i>Victoria</i> =Hamburg:		
A. T. Morse & Co.....	56,000	
Poel & Arnold.....	25,000	
George A. Alden & Co.....	5,500	
Rubber Trading Co.....	3,500	
Robert Badenhop.....	2,700	92,700
APRIL 5.—By the <i>Finland</i> =Antwerp:		
Poel & Arnold.....	50,000	
George A. Alden & Co.....	30,000	
A. T. Morse & Co.....	40,000	
W. L. Gough Co.....	22,500	
W. H. Stiles.....	9,000	
Raw Products Co.....	5,000	156,500
APRIL 5.—By the <i>Festa</i> =Lisbon:		
Poel & Arnold.....		89,000
APRIL 8.—By the <i>Mauretania</i> =Liverpool:		
Earle Brothers.....		11,000
APRIL 8.—By the <i>Canadian</i> =Liverpool:		
A. T. Morse & Co.....	52,000	
Poel & Arnold.....	20,000	
General Rubber Co.....	11,500	
Rubber Trading Co.....	13,500	
George A. Alden & Co.....	11,000	108,000
APRIL 11.—By the <i>Baltic</i> =Liverpool:		
George A. Alden & Co.....	115,000	
A. T. Morse & Co.....	34,000	
Rubber Trading Co.....	11,500	
W. L. Gough Co.....	11,500	
Poel & Arnold.....	13,500	185,500
APRIL 11.—By the <i>Minnehaha</i> =London:		
Poel & Arnold.....		11,500
APRIL 12.—By the <i>Nutsford</i> =Lisbon:		
George A. Alden & Co.....		22,500
APRIL 13.—By the <i>Caronia</i> =Liverpool:		
Rubber Trading Co.....	11,500	
H. A. Gould Co.....	11,500	
A. T. Morse & Co.....	2,500	25,500

APRIL 13.—By the <i>President Lincoln</i> =Hamburg:		
George A. Alden & Co.....	70,000	
A. T. Morse & Co.....	55,000	
Rubber Trading Co.....	3,500	128,500
APRIL 13.—By the <i>Oceanic</i> =London:		
George A. Alden & Co.....	15,000	
Poel & Arnold.....	5,000	20,000
APRIL 18.—By the <i>Lapland</i> =Antwerp:		
Poel & Arnold.....	15,000	
W. H. Stiles.....	11,000	
Rubber Trading Co.....	9,000	
A. T. Morse & Co.....	9,000	44,000
APRIL 20.—By the <i>Victoria</i> =Liverpool:		
A. T. Morse & Co.....	42,000	
George A. Alden & Co.....	25,000	
Raw Products Co.....	5,500	72,500
EAST INDIAN.		
[*Denotes plantation rubber.]		
POUNDS.		
MARCH 23.—By the <i>Philadelphia</i> =London:		
Poel & Arnold.....		*16,000
MARCH 28.—By the <i>Schorsfels</i> =Colombo:		
New York Commercial Co..	*22,500	
A. T. Morse & Co.....	*15,000	*37,500
APRIL 1.—By the <i>Adriatic</i> =London:		
New York Commercial Co..	*55,000	
Poel & Arnold.....	*35,000	*90,000
APRIL 4.—By the <i>Minnehaha</i> =London:		
A. T. Morse & Co.....	*33,500	
New York Commercial Co..	*5,000	
Robinson & Co.....	*7,000	
W. L. Gough Co.....	*7,000	
Rubber Import Co.....	22,500	
Raw Products Co.....	9,000	84,000
APRIL 4.—By the <i>Augusta</i> =Hamburg:		
George A. Alden & Co.....		30,000
APRIL 7.—By the <i>St. Louis</i> =London:		
Poel & Arnold.....	*9,000	
New York Commercial Co..	*5,000	*14,000
APRIL 8.—By the <i>Kennebec</i> =Singapore:		
Heabler & Co.....	20,000	
George A. Alden & Co.....	11,000	31,000
APRIL 11.—By the <i>Minnewaska</i> =London:		
General Rubber Co.....	*7,000	
New York Commercial Co..	*4,500	
Poel & Arnold.....	*4,500	
W. L. Gough Co.....	22,500	38,500
APRIL 13.—By the <i>Caronia</i> =Liverpool:		
A. T. Morse & Co.....		*8,000
APRIL 13.—By the <i>Oceanic</i> =London:		
New York Commercial Co..	*45,000	
Poel & Arnold.....	*33,000	
Poel & Arnold.....	22,500	100,500
APRIL 16.—By the <i>Seneca</i> =Singapore:		
Malaysian Rubber Co.....	*15,000	
Otto Isenstein & Co.....	30,000	45,000
APRIL 18.—By the <i>New York</i> =London:		
New York Commercial Co..	*22,500	
Poel & Arnold.....	*15,000	*37,500
APRIL 18.—By the <i>Kasemba</i> =Colombo:		
New York Commercial Co..	*35,000	
A. T. Morse & Co.....	*18,000	*53,000
APRIL 18.—By the <i>Minneapolis</i> =London:		
General Rubber Co.....	*22,500	
Robinson & Co.....	*20,000	*42,500

GUTTA-JELUTONG.		
APRIL 1.—By the <i>Indrani</i> =Singapore:		
George A. Alden & Co.....	110,000	
Heabler & Co.....	30,000	
L. Littlejohn & Co.....	55,000	195,000
APRIL 8.—By the <i>Kennebec</i> =Singapore:		
George A. Alden & Co.....	150,000	
L. Littlejohn & Co.....	175,000	
Heabler & Co.....	175,000	
W. L. Gough Co.....	175,000	
Poel & Arnold.....	110,000	
Robinson & Co.....	55,000	840,000
GUTTA-PERCHA.		
POUNDS.		
MARCH 25.—By the <i>Pretoria</i> =Hamburg:		
E. Oppenheim.....		13,500
APRIL 1.—By the <i>Graf Waldersee</i> =Hamburg:		
E. Oppenheim.....		9,000
APRIL 4.—By the <i>Kois'n Aug. Victoria</i> =Hamburg:		
E. Oppenheim.....		9,000
APRIL 8.—By the <i>Kennebec</i> =Singapore:		
Heabler & Co.....		11,000
BALATA.		
MARCH 29.—By the <i>Marowye</i> =Trinidad:		
J. A. Pauli & Co.....		2,000
APRIL 1.—By the <i>Graf Waldersee</i> =Hamburg:		
Ed. Maurer.....		5,000
APRIL 2.—By the <i>Saba</i> =Trinidad:		
C. Tennants Sons & Co.....		2,500
APRIL 5.—By the <i>Coppename</i> =Demerara:		
Ed. Maurer.....		11,500
APRIL 12.—By the <i>Saramaca</i> =Trinidad:		
Middleton & Co.....	3,500	
Frame & Co.....	1,000	4,500
APRIL 13.—By the <i>President Lincoln</i> =Hamburg:		
Ed. Maurer.....		5,500
CUSTOM HOUSE STATISTICS.		
PORT OF NEW YORK—MARCH.		
Imports.	Pounds.	Value.
India-rubber.....	14,734,117	\$17,650,596
Balata.....	15,421	6,827
Gutta-percha.....	18,971	3,184
Gutta-jelutong (Pontianak).....	5,508,119	271,800
Total.....	20,276,628	\$12,932,407
Exports.		
India-rubber.....	253,334	\$366,742
Balata.....	3,109	1,399
Reclaimed rubber.....	137,099	16,559
Rubber scrap, imported..	2,537,589	\$192,734
Rubber scrap, exported..	14,700	1,323
BOSTON ARRIVALS.		
POUNDS.		
MARCH 7.—By the <i>Cestrian</i> =Liverpool:		
Poel & Arnold (Africans).....		11,200
MARCH 10.—By the <i>Victorian</i> =Liverpool:		
Poel & Arnold (Africans).....		45,000
MARCH 23.—By the <i>Megantic</i> =Liverpool:		
Livesey & Co. (Africans).....		9,000

PARA EXPORTS OF INDIA-RUBBER, FEBRUARY, 1910 (IN KILOGRAMS).

EXPORTERS.	NEW YORK.				TOTAL.	EUROPE.				TOTAL.	
	Fine.	Medium.	Coarse.	Cauch.		Fine.	Medium.	Coarse.	Cauch.		
Gruner & Co.....	274,709	63,907	159,277	102,240	600,133	150,280	3,910	66,023	146,674	366,887	967,020
E. Pinto Alves & Co.....	80,829	13,317	200,064	2,966	297,176	205,697	28,645	41,907	38,683	314,932	612,168
Scholz, Hartje & Co.....	26,411	5,424	44,097	33,754	109,686	124,102	23,052	30,552	61,797	239,593	349,189
Gordon & Co.....	149,668	17,408	27,933	980	195,089	33,874	5,689	9,843	44,355	93,761	288,850
Adelbert H. Alden, Ltd.....	47,767	15,457	11,650	32,929	107,803	24,140	14,110	44,720	2,640	85,610	193,413
J. Marques.....	55,497	6,301	41,580		103,378	13,940	3,740	37,950		55,630	159,008
R. Suarez & Co.....						120,552		455	8,069	129,076	129,076
Pires Teixeira & Co.....	14,450		31,350		45,800	3,910		4,290		8,200	54,000
De Lagotellerie & Co.....	16,320	3,400	12,210		31,930						31,930
Alves Braga Rubber Estates and Trades Co.....						510	60	14,160	16,328	31,058	31,058
R. O. Ahlers & Co.....					1,795						1,795
Sundries.....	510		660		1,170			7,260		8,620	9,790
Itacoatiara direct.....					8,203		1,417	6,136	306	16,062	16,062
Manaos direct.....	564,114	133,357	228,358	136,973	1,062,802	506,902	62,502	153,970	409,732	1,132,206	2,195,008
Iquitos direct.....	19,296	725	4,707	8,988	33,716	81,281	11,945	54,617	246,786	394,629	428,345
Total, February.....	1,249,571	259,296	762,781	318,830	2,590,478	1,274,751	155,070	470,983	975,379	2,876,174	5,466,652
Total, January.....	1,540,151	325,343	831,917	400,144	3,097,555	1,119,634	91,349	340,073	565,228	2,116,284	5,213,839



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MAY 1, 1910.

No. 2.

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Para.

R. O. AHLERS & Co. Report [April 1]:

Prices experienced another sensational rise since our last report, the market closing at top prices. Supplies since our last report consist of 1,169 tons, including Upriver and caucho. Receipts in March were 5,433 tons, and so far in April 6 tons, thus making the total since July 1, 1909, 32,028 tons; against last year 32,610 tons; and the year before 29,280 tons. Exports July-March were 15,841 tons to the United States, 15,570 tons to Europe.

R. O. AHLERS & Co. report [April 11]:

Prices have been advancing almost daily, with only very small arrivals. The cable to Manaos is again out of order, but the telegrams getting through with about 48 hours delay show that arrivals there also do not come up to much. Receipts since our last report amount to 1,327 tons including Upriver and caucho. Receipts in April were 1,333 tons so far, making the total since July 1, 1909, 33,355 tons; against 34,135 tons same time last year and 30,425 tons the year before.

Rubber Receipts at Manaos.

DURING March and nine months of the crop season, for three years (courtesy of Messrs Scholz & Co.):

FROM—	March.			July-March.		
	1910.	1909.	1908.	1909-10.	1908-09.	1907-08.
Rio Purus-Acre	1,616	533	938	9,105	7,866	8,129
Rio Madeira	348	309	288	2,956	2,794	2,596
Rio Jurua	490	578	345	3,622	3,686	3,389
Rio Javary-Iquitos	64	162	59	2,533	2,318	2,424
Rio Solimões	124	77	41	1,097	945	1,078
Rio Negro	95	93	67	644	483	441
Total	2,737	1,752	1,738	19,957	18,092	18,057
Caucho	1,228	967	1,067	5,187	5,039	4,647
Total	3,965	2,719	2,805	25,144	23,131	22,704

Antwerp.

RUBBER STATISTICS FOR MARCH.

DETAILS.	1910.	1909.	1908.	1907.	1906.
Stocks, Feb. 28.....kilos	516,534	331,433	907,104	603,861	614,688
Arrivals in March.....	263,188	544,126	692,398	416,734	659,562
Congo sorts	174,167	410,838	587,972	358,496	521,264
Other sorts	89,021	133,288	104,426	58,238	138,298
Aggregating	779,722	875,550	1,599,502	1,026,595	1,274,250
Sales in March.....	280,620	279,704	462,610	295,057	632,600
Stocks, March 31.....	499,102	595,855	1,136,892	725,538	641,650
Arrivals since January 1.....	1,039,679	1,128,092	1,517,809	1,332,738	1,679,490
Congo sorts	830,830	781,387	1,347,423	1,151,165	1,274,784
Other sorts	208,849	346,705	170,386	181,593	404,708
Sales since January 1.....	1,082,089	1,127,972	1,387,811	1,265,404	1,773,027

RUBBER ARRIVALS FROM THE CONGO.

APRIL 14.—By the steamer *Leopoldville*:

Bunge & Co.....(Société Générale Africaine) kilos	91,000
Do	600
Do	19,000
Do	10,500
Do	90
Société Coloniale Anversoise.....(Belge du Haut Congo)	600
Do	2,500
Do	95,000
M. S. Coles.....(Cie. franc. du Haut Congo)	1,150
Charles Dethier.....(Cie. du Kasai)	6,700
L. & W. Van de Velde.....(American Congo Co.)	4,000
	231,140

Liverpool.

WILLIAM WRIGHT & Co. report [April 1]:

Fine Pará.—The advance has been phenomenal; each day has witnessed a new record, a total advance of 2s. 8d. [=65 cents] per pound, with an active demand sums up the position this month. It is absolutely impossible to forecast the future, one can only record facts; certainly at present 12s. [=£2.92] rubber seems within measurable distance—all this with full receipts; one thing, however, is certain, the advance is not entirely due to "shorts" covering. Closing values: Upriver fine 11s. 6½d. [=£2.81]; Islands 11s. 5½d. [=£2.79].

African Rubbers.

NEW YORK STOCKS (IN TONS).

March 1, 1909.....	200	October 1, 1909.....	67
April 1.....	178	November 1.....	134
May 1.....	268	December 1.....	134
June 1.....	156	January 1, 1910.....	228
July 1.....	268	February 1.....	134
August 1.....	130	March 1.....	161
September 1.....	123	April 1.....	121

New York.

In regard to the financial situation, Albert B. Beers (broker in crude rubber and commercial paper, No. 68 William street, New York), advises as follows: "During April there has been a good demand for commercial paper, but rates have kept well up, ruling at 5@5½ per cent. for the best rubber names, and 5¼@6 per cent. for those not so well known."

EXPORTS FROM JAVA.

OFFICIAL statistics of exports from Java for the past two calendar years have been as follows (in kilograms):

	1908.	1909.
India-rubber	39,596	175,302
Gutta-percha	2,181	30,786
Gutta (other) .....	.....	45,424
Total	41,777	251,512

The greater total for 1909 is due to the increasing production of plantations. The item of "other guttas" is not sufficiently explained in the official statistics.

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INDIA RUBBER WORLD

CAOUTCHOUC

HEVEA BRASILIENSIS

DIOPHYS GUTTA

GUTTA-PERCHA

Edited by HENRY C. PEARSON—Offices, No. 395 Broadway, NEW YORK.

Vol. XLII. No. 3.

JUNE 1, 1910.

35 CENTS.

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WILLIAM PENN

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TABLE OF CONTENTS ON LAST PAGE READING MATTER.

TO HIS MAJESTY KING EDWARD VII the opportunity came in an unusual degree to promote peace on earth and good will to men, and right royally he availed himself of it. To no mortal could higher tribute be paid. No one else, perhaps, has contributed more to making the whole world akin—in other words, to bringing the nations so near together that every man shall be neighbor to every other. This sentiment, we are certain, is appreciated no less in America than in that older half of the English world in which our journal has such warm friends. May the new King conclude his reign with plaudits so well earned!

PUBLICITY FOR CORPORATIONS.

CONSIDERING the outcry only a few years ago against the organization of industrial trusts, one might reasonably expect even more in the way of criticism to-day in the press and in political orations. The number of so-called trusts has increased and their combined capital is vastly greater; they are selling more products to more people, and making larger profits. If industrial combinations were evil in principle in the beginning, they must be evil in practice now, and especially when their operations affect a constantly increasing proportion of the public.

But the old style denunciation of trusts has well nigh disappeared, along with indiscriminate abuse of railway companies, and of corporations in general. We always have been convinced that if the principle of combination in trade was sound economically it would prevail, whereas if not sound it could not be long maintained by any means. Apparently the new system has outlined the strongest opposition heard in earlier years.

It is not implied that legislation relating to corporations has ceased; doubtless new or amended laws on this subject will be "ground out" as long as laws dealing with any relations between man and man. In other words, regulation of corporations will be regarded as necessary, by the corporate interests themselves as well as by the public, but the idea of a variance between the one and the other will be dropped.

An important instance of such regulation appears in the new federal law calling for publicity of corporation affairs generally. This requirement has not been opposed, except in details, perhaps, by the leading corporations, and doubtless regulations agreeable to all concerned will yet be framed. The railway and insurance companies have become accustomed to making public the condition of their affairs under legal requirement, and industrial corporations make such reports in some of the states.

But no legal requirement as to corporation returns thus far has involved so much real "publicity" as is given through some reports made recently by certain large industrial combinations. It is evident that these reports have been made voluntarily, and that it is deemed to be to their interest to have the general public understand the condition of their affairs as well as the individual shareholders. The education of the public mind as to corporation affairs tends to legislation regarding them less affected by popular bias or prejudice. Again, it doubtless would be beneficial if the public more generally were interested as investors in the industrial development of the country—which tendency is likely to be increased by greater publicity of corporation returns.

GUNNING FOR "GOLD BRICKS."

IT is an editor's privilege, sometimes his duty, to sit in judgment on certain commercial undertakings and warn the unwary. This is often easy, and can be taken up with vigor and a measure of success when proofs of attempted fraud are manifest and plenty. At other times, while the editor may have an innate conviction that an undertaking is unsound or fraudulent, in the absence of proof he is scarcely warranted in acting on an intuition. Of course, the easy way and safe one is to condemn everything new. Then one wins a reputation for forecasting failures, and investors in them wish that they had taken the prophet's advice, while those who share in successes are so delighted that they were wiser than their editor, that they forget all but their own astuteness.

These reflections are prompted by the suggestion

that THE INDIA RUBBER WORLD start a crusade against a company that is selling much stock to exploit a process for "making rubber." According to expert testimony it is an extraction process. Aside from some statements in the prospectus which are inaccurate technically—which happens often in the soundest of propositions—it is impossible to say positively that the company cannot accomplish what it claims. In all fairness to everybody, therefore, it behooves the editor to wait for proof and say nothing.

ON THE ROAD TO TARKWA.

SITUATED about seven miles by good road from Tarkwa is "a virgin rubber estate" comprising an area of about twenty square miles, for which the native chief of the district, under date of April 2, 1910, granted a lease for a period of 99 years direct to an English company at a rental of \$175 per year. The directors of the English company "are advised that the soil is in every way adapted for the cultivation of rubber and also cotton and other profitable crops."

[Wild oats not mentioned among the profitable crops.]

The side of the earth on which Tarkwa stands produced in 1908 some 14,000 tons of wild rubber, and "it is estimated that the output for 1909 will have been found to have been 15,000 tons - - - The price of wild rubber, well cured, is invariably higher than plantation rubber, and where resiliency is required, such as for motor tires, the makers of which pay the highest prices."

[Tarkwa is in West Africa.]

The road to Tarkwa has been well surveyed. But this by some may be regarded of less importance than rubber and cotton, "both of which, as a fact, are indigenous to the soil." Wherefore "it is intended to plant the true Pará rubber tree" and the New Tree Cotton Plant, neither of which is indigenous. Of course, if rubber and cotton species are found native seven miles from Tarkwa, other varieties must prove more profitable. And a company has been incorporated in London, under the Companies (Consolidation) Act, 1908, to permit the public to share in the profits from holding the Tarkwa property under the "exceptionally favorable rental" already named. "The shares of this company are all of one class."

The labor proposition here is that a good supply of "boys" can be secured at \$5 to \$6 a month, "The Chief himself being responsible for their work and conduct."

[Whether his Majesty George V will be responsible for the native chief when the march of empire starts toward Tarkwa is a point overlooked in the prospectus.]

Profits are to arise from three sources, to wit:

(1) The sale of tires made by a company registered in London, December 11, 1908, with £5,000 capital.

(2) Collecting wild rubber from the leased property and buying rubber from neighboring natives for resale in London.

(3) Later, from planted rubber, and from other crops "to be grown simultaneously between the trees."

It was proposed to tax the public only £50,000 to share in this opportunity on the well surveyed road to Tarkwa. No doubt the offer was gladly accepted, especially in view of the fact of the soil being of a "red ferruginous type." But why should anybody trouble to lease lands from an African chief as a basis for selling rubber planting shares in these days? Didn't two ancient spinsters who recently inherited a decrepit sawmill near Pará sell the same in London as a rubber estate on the representation that Pará is where all the good rubber comes from?

WHEN RUBBER WAS SELLING AT ONLY \$1 a pound certain counterfeiters were tempted to exploit artificial and synthetic substitutes. Now that rubber is three times as valuable, and ten times as much in evidence, what a tremendous pressure of temptation these counterfeiters must be under! And why are they silent? Surely never was time so opportune, money so plenty, or innocents so abounding.

THERE ARE THOSE WHO PUT THE BLAME for the notable increase in the price of crude rubber upon the automobile tire, and it is without doubt the enormous expansion in that line that has caused the advance. Millions of dollars worth of rubber have gone into tires, tires that are to-day in use or in store, and that rubber is therefore withdrawn from all other manufacturing possibility. Such withdrawal, however, is only temporary. In one, two or three years 90 per cent. of all this rubber will come back to the manufacturers through the reclaimers. It will not be "shoddy" by any means, but a high grade recovered gum that can be used in almost any ordinary rubber work as safely as the better grades of crude rubber. And it is on this great aggregation of stored up rubber that manufacturers can count, to obviate not only a further increase in the price of crude rubber, but a perpetuation of the present abnormal condition as well.

THE PROSPECTOR FOR GOLD, for copper or iron has for years been a familiar figure. He was in a class by himself, a seacher for hidden earth products, scientifically equipped for his calling, employed by corporations whose continuance depended upon large supplies of raw material. To this class to-day is added the rubber prospector. Trained foresters, botanists, and chemists who are hetcheling the tropical and subtropical forests for rubber. Trees, shrubs, or vines annual and perennial are being discovered, examined and reported upon. The outcome is sure to be a notable increase in crude rubber, and perhaps the utilization of new sources of supply as valuable and spectacular as was the advent of guayule rubber.

CULTIVATION OF GUTTA-PERCHA.

IN a review, in *De Indische Mercur*, of Mr. Henry's article on "India-Rubber in the Electrical Field" [see THE INDIA RUBBER WORLD, January 1, 1910—page 119], Professor A. H. Berkhout writes:

"Many years ago the writer [Dr. Berkhout] considered it his duty to warn against the cultivation of gutta-percha, inasmuch as this substance is principally used for insulating submarine cables, for which purpose india-rubber could not be used at that time. The writer expressed his apprehension that a method for likewise making the latter material proof against the action of sea water would be discovered, and that there would consequently be a sharp decline in the price of gutta-percha. The foregoing article shows this apprehension to have been well founded."

THE RUBBER CLUB OF AMERICA—ANNUAL.

THE annual meeting of the Rubber Club of America (formerly New England Rubber Club) was held on Friday evening, May 13—having been postponed from April 18—at the American House, Boston. A quorum being present, the meeting was called to order by President Pearson at 6:15.

The first business was the reading of the Secretary's report, which was unanimously accepted and ordered placed on file. The second business was the reading of the Treasurer's report, which was unanimously accepted and ordered placed on file.

SECRETARY'S REPORT.

Another year having passed, the Club enters on its eleventh year in fine condition, under the name of the Rubber Club of America. The Club has a membership of 248, there having been 45 new members added during the year, while five have passed to the great beyond.

There have been two entertainments during the year, the usual summer outing held at the Riverside Recreation Grounds on July 13, and the Mid-winter Dinner at the Algonquin Club, Boston, on December 13. Both were much enjoyed by members and friends, and pronounced successful.

At the business meeting, held at the Riverside Recreation Grounds on July 13, it was voted that the name of our organization be changed from New England Rubber Club to Rubber Club of America, and that a charter be secured under the Massachusetts laws. The committee appointed to secure this charter attended to its duties promptly and thoroughly and the charter has been granted.

At a regularly called meeting of the Executive Committee held on December 1, 1909, members of the New England Rubber Club, approved by the committee, were elected to membership in the Rubber Club of America.

Our membership in the Massachusetts State Board of Trade has been maintained.

The past year has taken from us five esteemed members: George M. Allerton, Robert D. Evans, Wallace F. Foster, James B. Forsyth, and Joseph Davol. Their absence from our meetings will be a great loss, and their memories will long be cherished.

There is strong good fellowship among our members, and under our charter as the Rubber Club of America, the prospects are bright for a furtherance of educational and scientific research in india-rubber production and manufacture, and for the social intercourse among gentlemen connected with the rubber industry. Respectfully submitted,

GEORGE H. MAYO, Secretary.

TREASURER'S REPORT.

Balance on hand, April 21, 1909.....	\$618.87
Received—Initiation fees.....	\$105.00
Annual dues.....	779.00
Assessment for banquet and outing.....	1,261.00
Interest on deposits.....	11.45
Total.....	\$2,766.32

Paid Out.

Banquet.....	\$2,492.68
State Board of Trade.....	25.00
Incorporating Rubber Club of America.....	30.00
Printing, etc.—FRANK D. BALDERSTON.....	97.45
Balance, April 4, 1910.....	121.19
Total.....	\$2,766.32

J. FRANK DUNBAR, Treasurer.

The next business was the election of officers for the ensuing year. President Pearson then read the report of the nominating committee appointed at the last annual meeting, consisting of Hon. L. Dewart Apsley, Homer E. Sawyer, William H. Gleason, Charles J. Bailey and Elston E. Wadbrook. The committee recommended, in view of the successful administration of the officers of the Club during the year 1909-10, that the present officers be re-elected to serve during the ensuing twelve months.

On motion, the Secretary then read the names of the officers and by unanimous vote was instructed to cast one ballot for the following, to serve for the year:

President—HENRY C. PEARSON.

Vice President—FREDERIC C. HOOD.

Treasurer—J. FRANK DUNBAR.

Secretary—GEORGE H. MAYO.

Assistant Secretary—FRANK D. BALDERSTON.

Honorary Vice Presidents—L. Dewart Apsley, Augustus O. Bourn, George H. Hood, Henry C. Morse, John H. Flint, Alexander M. Paul and Arthur W. Stedman.

Directors—Costello C. Converse, Elisha S. Williams, Ira F. Burnham, George P. Whitmore, Frederick H. Jones, Robert L. Rice, and Elston E. Wadbrook.

There being no further business, the meeting was adjourned at 6:25.

The meeting was followed by a dinner, after which members and guests were addressed by President Pearson on his recent extensive trip up the Amazon, illustrated with a complete set of lantern slides. This interesting and instructive talk from one so well equipped and familiar with the situation in Brazil, was very much enjoyed, and all left with the feeling of having spent a most satisfactory and pleasant evening.

Following the annual meeting the Executive Committee was convened, when the usual committees were chosen: Nominating, Dinner, Sports, Entertainment, Resolutions, and Auditing.

Nominating.—Hon. L. Dewart Apsley, chairman; Homer E. Sawyer, Charles J. Bailey, William H. Gleason, Elston E. Wadbrook, secretary.

Dinner.—Francis H. Appleton, chairman; Charles A. Coe, Eugene H. Clapp, William E. Barker, Joseph W. Work.

Sports.—Frank D. Balderston, chairman; R. E. Paine, R. L. Chipman, William J. Kelly, Wallace G. Page.

Entertainment.—George H. Mayo, chairman; Charles J. Bailey, James H. Learned, George E. B. Putnam, William H. Palmer.

Resolutions.—George P. Whitman, chairman; Elston E. Wadbrook, Alexander M. Paul.

Auditing.—William H. Gleason, chairman; J. Everett Stone.

THE SINGLE TUBE TIRE PATENT DEAD.

ONE of the longest and most vigorous legal contests in respect of the rubber industry, and which certainly was the most important tire patent case in the American courts, was that based upon the single tube tire, for which a patent was held by Pardon W. Tillinghast—No. 497,971, dated May 23, 1893, and expired May 23, 1910. The history of the litigation over this tire, which type was the one principally used on bicycles in the United States, was recorded fully in the pages of THE INDIA RUBBER WORLD.

The late Colonel Albert A. Popc, in connection with his development of the bicycle industry, and the late Colonel Theodore A. Dodge, as a rubber manufacturer, were both interested to an important extent in the Tillinghast tire patent, and it was Colonel Dodge who founded the Single Tube Automobile and Bicycle Tire Co., which company has continued to exist, with Colonel Dodge as president, until his death in October last, with an interest held by the Rubber Goods Manufacturing Co. The royalties collected on this patent must have amounted first and last to a very important sum. Of course, the manufacture of single tube tires is now open to the whole trade.

Despite its popularity in America, this type of tire found little favor in any other country. It was patented in few countries, if any, outside of the United States, and particularly never was protected by a patent in Great Britain. In that country one Boothroyd described a single tube tire in an issue of *The Cyclist*, published on December 3, 1890. In the litigation in which the Tillinghast patentees sought to establish their rights, the defense in part was priority of Boothroyd's publication, but the court accepted evidence that Tillinghast had invented his tire and disclosed it to others as early as the summer of 1890, although his application for a patent was not filed until September 2, 1892. Mr. Tillinghast died about four years ago.

A ROYAL decree in Belgium provides that from July 1 next there shall be levied on rubber other than plantation product exported from the Belgian Congo, in addition to the regular export duty, a tax of 75 centimes per kilogram [= about 6 cents per pound] when the rubber is from trees or vines, and of 50 centimes on so-called "root rubber."

A PATENT issued to Philip L. Wooster, of Yonkers, New York, relates to hose pipes, consisting of an absorbent woven fabric body portion, which has been saturated with a solution of asphaltum and dried.

THE NEW MALAYSIAN RUBBER.

THE United Malaysian Rubber Co., Limited, registered in London April 26, 1910, with a stated capital of £2,000,000 [= \$9,733,000] in £1 shares, has been formed principally for the purpose of acquiring the stock of the Malaysian Rubber Co., incorporated under the laws of New Jersey (United States), June 18, 1909. The Malaysian Rubber Co. owns a process for the treatment of gutta-jelutong (Pontianak gum), with a view to producing a high grade rubber, by means of (1) a new method of coagulation of the latex, and (2) the refining of the crude product by a new process which involves the extraction of merchantable resin and all surplus water. The Malaysian company have established a factory at Goebilt, in the British protectorate of Sarawak, in the western part of Borneo, where the new processes are being operated on a large commercial scale. [See THE INDIA RUBBER WORLD, February 1, 1910—page 162.]

Through holding shares of the British Malaysian Manufacturing Co., Limited, the American concern controls a valuable concession in Sarawak, where the jelutong tree (*Dyera costulata*) grows abundantly. Negotiations are on foot for obtaining similar concessions in other territories where the tree is found, including a grant for exclusive rights to tap jelutong trees over a large area in the Federated Malay States.

The production of jelutong in Sarawak, which is only one of the company's sources of supply, is stated in the prospectus of the new company to have been as follows:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1902.....	3,356	1905.....	5,157	1908.....	2,380
1903.....	4,926	1906.....	3,832	1909.....	9,027
1904.....	4,657	1907.....	5,537		

[NOTE.—1907-08 was the period of the American financial crisis.]

Reference is made in the prospectus of the new company to the large demand in the United States for Pontianak gum under conditions previously existing, and the view is taken that under changed conditions whereby the gum can be refined in the country of production, instead of being left to be carried out in this country, there will be a largely increased demand. It is stated that the average cost of jelutong at Sarawak for the past eight years has been less than 5 Straits dollars per picul, which would figure out, say, 2½ cents, gold, per pound. This low cost will explain the small market rate for the material in the United States. However, in consequence of the advanced prices of fine rubber, the cost of jelutong is now higher. London brokers are quoted in the prospectus of the new company as quoting the price of 7s. [= \$1.70.2] or more per pound as reasonable for refined Pontianak under the new process. The present plant at Goebilt is referred to as having a capacity of about 1,500 tons of finished rubber per year and about 4,500 tons of resin. Plans are under way for a large increase in the capacity of the factory.

The directors of the United Malaysian Rubber Co., Limited, are as follows, the board including three Americans, who hold a similar relation to the Malaysian Rubber Co.:

SIR PERCY FRANCIS CUNYNGHAME, Bart. (formerly Resident of the Protectorate of Sarawak), Badgeworth, near Cheltenham, *Chairman*.

CORNELIUS VANOEBILT (Director Illinois Central Railroad Co., &c.), No. 30 Pine street, New York.

ROBERT GOELET (Director Southern Pacific Co., &c.), No. 9 West Seventeenth street, New York.

HENRY MAITLAND KERSEY, D.S.O. (Director Forestal Land, Timber and Railways Co.), Limited, 8 Croshy square. E. C., London.

MARQUIS DE CHARNACE, 35, bis, Rue d'Anjou, Paris.

MATTHEW G. HALE (of Hale & Son, Produce Brokers), 10 Fenchurch avenue, E. C., London.

JOHN L. ELLIOT (Director Mexican Coal and Coke Co., &c.), No. 71 Broadway, New York.

The secretary and registered office (*pro tem*) are H. H. F. Stockley, 22, Fenchurch street, E. C., London. The recent offer of stock was for £400,000, of which £300,000 in shares had been applied for by the directors and their friends.

The prospectus states further: "The capital stock of the Malaysian company is \$4,000,000, equivalent to about £824,000. The market value of such stock, based on sales of stocks effected during the last few months in New York, was over £1,647,000." The terms of the transfer to the new company are not mentioned.

The imports of gutta-jelutong into the United States since July 1, 1902, have been stated as follows in the customs returns:

Year.	Pounds.	Values.
1902.....	6,901,362	\$164,459
1903.....	14,994,437	390,137
1904.....	14,867,007	479,891
1905.....	25,369,473	890,842
1906.....	18,164,293	622,600
1907.....	33,679,951	1,468,080
1908.....	16,663,605	550,569
1909.....	36,817,920	1,420,220

Not much is to be found in print regarding the tree producing jelutong. The gum, however, is regarded generally to be the product of *Dyera costulata* (Hook., fil.). Jelutong is one of the names applied to this gum in Borneo, or, as spelled in the Dutch, "getah-djeloeoeng." Some authorities mention more than one species, and botanists are not agreed as to the proper designation. For instance, *Dyera laxiflora* is mentioned, and also *Alstonia costulata*. At any rate the trees are abundant in Borneo and throughout the Malay peninsula, and the territory with which the new company are concerning themselves aggregates 30,000,000 acres, though the tree is referred to as not being abundant throughout this area. A report in the *Agricultural Bulletin of the Malay Peninsula*, No. 9 (May, 1900—page 249), says:

"The jelutong tree abounds in all parts in a very liquid white latex containing a good deal of caoutchouc. The latex pressed between the finger and thumb draws out into fine and fairly firm threads as do the better class rubbers. Allowed to dry in the ordinary manner it becomes hard and brittle, but for sale it is usually coagulated with the aid of kerosene, forming a mealy rubber of a white color, and of but little value. I am informed that it is chiefly used for making moldings of picture frames, and for adulterating other local rubbers."

Mr. Pearson wrote in his "What I Saw in the Tropics" (page 72):

"Next after the *Hevea* I wanted most to examine the tree that produces the gutta-jelutong, or Pontianak gum. I found that it was very common all through the Federated Malay States, and that the gum was rarely taken from it, the tree being regarded as useful only for the cheap clogs that the natives wear. The tree is botanically the *Dyera costulata*, and when mature is a splendid forest creation. One in the gardens [Singapore], of which I have a photograph, was certainly 150 feet high, with a huge three part trunk, and a magnificent crown of leaves. We did not tap this one, but went into the jungle, found a wild one, and tapped it after the most approved method. The latex oozed out like clotted cream and seemed most abundant, but began to coagulate almost at once. It is said that a mature tree produces as much as 100 pounds, by scraping the bark rather than tapping, and mixing at once with kerosene."

THERE is to be held in Detroit, Michigan, this summer, an industrial exposition, under the auspices of the Board of Commerce of that city, beginning on June 20 and remaining open three weeks. As was the case with the important industrial exposition last year at Cleveland, Ohio, the Detroit exposition will be devoted solely to local interests. The announced purposes are: "To teach Detroit to know itself; to teach the world to know Detroit." Detroit today ranks first in the item of automobile manufacturing, and is the seat of an important rubber industry, so that it is likely that rubber will have considerable prominence in the coming exposition.

Pará, Manáos and the Amazon.

By the Editor of "The India Rubber World."

THIRD LETTER.

Pará Agreeably Disappointing.—Comfortable Though in the Tropics.—Excellence of the Public Services—Visits to the Governor, the Mayor, and the Clubs.—Views of the People and Interviews with Some of Them.—Pará as a Rubber Center.—Methods of Conducting the Trade.

I MUST confess that I was agreeably disappointed in Pará. The steamer gossips had said much about the city, and little that was good. I paid 12 milreis a day at the hotel and found both service and food excellent. My bedroom, with its lofty bare walls, 12-foot double casement, and narrow bed with mosquito net draped over a white parasol and hanging in graceful folds to the floor, was just my idea of a tropical apartment. To be sure, if one lighted a lamp and put it in the open casement at night it was possible to coax mosquitoes in. Some visitors do this and then kick. I did not. I had my cheerful little brown chamber man look through the net in mid afternoon for mosquitoes, then tuck it securely under the mattress, and what few bites I got did no harm.

As long as we are talking about mosquitoes, there are two kinds that work mischief—the little black ones that carry malaria, and the larger striped ones that may or may not provide yellow fever. We recognized both kinds and they recognized us, but nothing came of it.

The day of my arrival a Portuguese physician, who was a friend of a friend of mine in Rio, called and left a packet of powders with directions to "take one every morning," and I would not have yellow fever. His medicine was all right. I took it three days and escaped; then somebody stole the box and so I couldn't experiment further. Speaking of yellow fever, it would be foolish for any one to disregard ordinary precautions. But to my mind the pneumonia of our northern clime is much more easy to get and just about as fatal. Yellow fever is endemic in Pará. There were several deaths a week while I was there, but it was a question if they were all yellow fever. Most of those who died from it were from the lowest classes, who weaken their stomachs by drinking "cachaca" and then get what may be a low malarial fever or almost any kind of bilious fever; it all goes down as "amarilho."

A BEAUTIFUL CITY.

The city itself is exceedingly beautiful. Near the water front it develops some smells other than those produced by rubber, but up in the city proper it is fine and clean. The cafés, with tiny round tables out on the sidewalks, remind one very much of Paris. In the residence section—for example, the Avenida Nazareth—the elegant homes, luxuriant tropical gardens, the well-paved streets, and the shaded sidewalks are worth coming a long distance to see. Before daylight every morning an army of laborers sweeps every city street, using broad palm branches, one of which does the work of a dozen brooms. The litter is then carted away in huge covered tip carts,

each drawn by a single well-fed, patient-eyed steer. Then in the afternoon the heavy showers come and help notably in this street cleaning. The city in many respects is very modern. Automobiles are there in plenty, and as there are no speed limits, the drivers scorch up and down any and all streets at 35 to 40 miles an hour, but with no accidents as far as I could observe.

The police service is excellent, and one cannot go anywhere after dark without seeing a policeman at almost every corner.

The parks, both in the city proper and beyond the city limits, as well as the magnificent Botanical Gardens, are beautiful beyond compare.

It is, to be sure, a tropical city; that is, it has its hours of relaxation every day, and its days almost every week. Certain of the offices, for example, open at 9 in the morning, close between 11 and 1, and close again at 3. They also keep the bars up Sunday and feast days, which latter are many. While the lesser officials watch the clock and kill time, the *Intendente*, or mayor, works day and night, so 'tis said, and it is to his energy and foresight that many of the beautiful buildings and parks, as well as public utilities, are due.

There is an excellent fire department, with the best tropical equipment I have seen. Accustomed to the freedom of American cities, I started to walk into one of the central stations one day to look it over, and was promptly held up by a businesslike young chap with a Mauser rifle, who called for the Corporal, who reported to the Captain, who in turn got the Commandante. He very politely detailed an officer to show me through the yards, stables, gymnasium, dormitories, and munition room, and to examine the engines, hose carts and ladder trucks. It was the first combination of barracks and engine house that I had seen, and I was much interested, and said so to the Commandante, the Captain and the Corporal, each of whom saluted politely with outstretched hand and raised hat as I left. To the sentinel I gave a big



PRACA DA INDEPENDENCIA, PARA.

black cigar with a gorgeous band on it, and underneath the band a revenue stamp, which every cigar in the Brazils is obliged to wear.

AT THE GOVERNOR'S PALACE.

A friend had suggested, almost as soon as I landed, the advisability of visiting the Governor and, when I agreed, promptly arranged for an audience. But I was in flannels and my frock coat had been carried off, I knew not whither, to be pressed. The Yankee Consul, however, stepped into the breach and, communicating to the Governor my predicament, the audience was set for the day following. To learn all of the details I meandered over to the consulate, where the Consul greeted me like a long-lost brother. If I had come from Ohio, his native State, I believe he would have embraced me. A husky, warm-hearted, quick-tempered, bustling Westerner, he won my heart then and there, and when he came around next morning in a taxicab with a visiting rubber manufacturer from the States and a leading Brazilian rubber merchant, I was glad I was ready.

A frock coat and a top hat are not the most comfortable things in the tropics, but we all wore them. And as the other three were stout and I am not, my collar didn't wilt until the audience was over, which is more than they can say for themselves. The Governor received us on a sort of divan flanked by four chairs, which we occupied. He was good enough when we were seated to remark that in his last message he had quoted from THE INDIA RUBBER WORLD. I replied that as there was no international copyright, I was powerless to protect myself from such cases. I told him further that the rubber manufacturers in the United States knew of him and would be more than glad to have him call and see them. Then we talked about rubber planting, in which he is very much interested, and he said that the State was

willing to do anything in reason to encourage planting corporations.

The Yankee Consul meanwhile was getting restive because the Visiting Manufacturer was not receiving more attention, and said in liquid Portuguese:

"My friend on the right is one of the largest manufacturers of rubber in the world. He uses only Para rubber, and his factory is in Ohier."

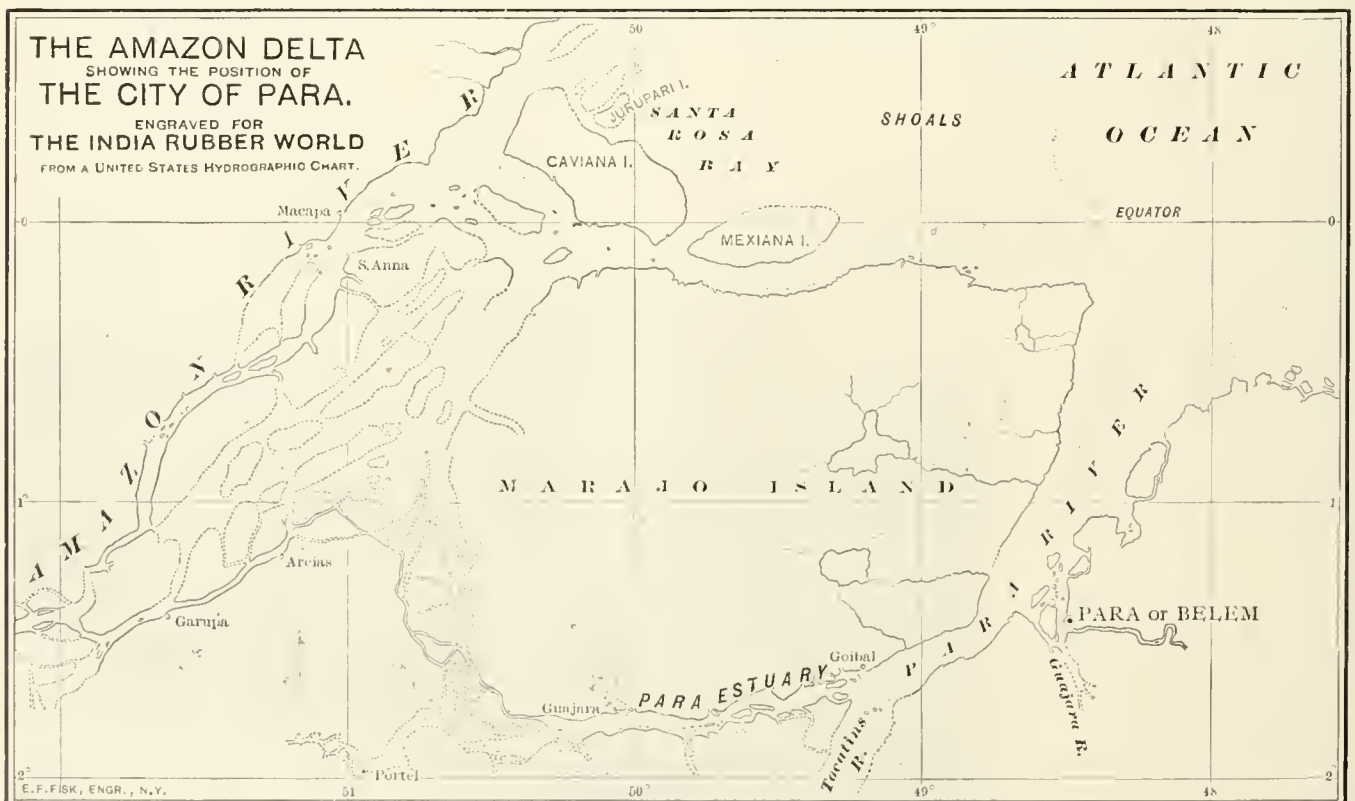
If he had said "Erbio" or "Oheco" I think the Governor would have understood that he was referring to the Mother of Presidents. But as it was he only looked blank and murmured a compliment, while the Visiting Manufacturer's eyes twinkled as he thought of his last year's bill for reclaimed rubber.

It is difficult for a democratic American to know how to address high foreign officials. The Visiting Manufacturer called the Governor "Monsieur the Signor," which sounded bully. I couldn't catch the Portuguese rendering of the title, but turned into English it reads "Mister the Mister," which, although respectful, is slightly tautological.

It wasn't really a heart-to-heart talk as the Governor knew no English and we knew no Portuguese, and I think his Excellency was glad when it was all over. Not that he showed it in any way. He was every moment the courteous, polished, dignified gentleman, and the next day sent his *aide de camp* around to my hotel to return the call, and, before I left the city, sent me a score of beautifully illustrated books and some marvelous maps for souvenirs of my visit. His word also placed everything in the beautiful public library at my disposal.

THE MAYOR ALSO VISITED.

We also made a formal call on the *Intendente* (mayor). According to his enemies, he is another Richard Croker. He received us at 8 o'clock in the morning at his home, a fine big



The river Amazon, proper, does not admit of approach by sea vessels, on account of the shoals shown by the chart. Ocean vessels enter, therefore, by what are known as Pará river and the Pará estuary, rounding the island

of Marajo, with an extent of 18,000 square miles. Marajo and the other islands shown are the source of "Islands" Pará rubber. The city of Pará is called in Brazil "Belem."



PUBLIC LIBRARY, PARA.

palace of a house, with broad verandas and magnificent apartments opening one into the other. He had with him the secretary of the municipality, a huge, intellectual, coal-black negro, who is probably the finest orator in northern Brazil, and is called the "Booker Washington of South America." I asked the *Intendente* why instead of shading the streets of the city with mango trees, he had not planted *Hevea Brasiliensis*? He answered promptly that years ago there was much tuberculosis in the city; that the mango gives off an aromatic balsam that is very healing, and that consumption had practically disappeared since the trees had matured. Besides, the poor people practically lived upon the fruit of the tree for weeks at a time.

The Visiting Manufacturer, who evidently had been picking out the wrong cabs, said to the *Intendente*:

"Why don't you fine cab drivers who do not use rubber tires?"

The reply came:

"I have done better than that; I have taken the tax off of rubber tired vehicles and kept it on the steel shod ones. Now it's up to you to make better tires so that our drivers will all be able to use them."

After that we retired, the *Intendente* wearing the honors.

Pará has a number of daily newspapers. Two of them, however, are leaders. One is owned by the *Intendente*, who edits it vigorously and wisely. The other, the Opposition Paper, with just as much vigor and great plainness disagrees with everything the government does, whatever it is. Both have large circulations and both are excellent papers. I understand that the opposition paper said some very spicy things about me because I "bowed the knee to Baal." But I couldn't read them, so was able to preserve the even tenor of my self conceit.

There are a number of good clubs. The Yankee Consul put me up at the Pará Club, where I met the bankers and steamship and rubber men—American, German, and English—and had some really good exercise at billiards in spite of the sultriness that evening often developed.

Then a rubber importer in New York had written the president of the Sports' Club, who invited me to their functions. I also went to a ball at the Universal Club, which must have been a very swell affair, for the streets were lined with people who got their reward by seeing us go in and out.

The resident head of "Casa Alden" also asked me to soap my legs and come out to the Golf Club with him. The saponaceous preliminary that he advised is for the purpose of amusing "moqueens," small and active red bugs that live in the grass, outside of the city limits, particularly on golf



SALON IN THEATRO DA PAZ, PARA.

links. If one's legs are soaped the bugs get so engrossed with climbing up as far as the knee, then coasting down to the instep, that they forget all about biting.

THE PEOPLE OF PARA.

More interesting than a city are its inhabitants. The people of Pará are Brazilians and Portuguese. Although the former come largely from Portuguese stock they do not like to be mistaken for natives of the mother country, so proud are they of their own. They are a sensitive, hospitable, enthusiastic race, with a very decided genius for and appreciation of the fine arts. Many of the substantial business men are Portuguese, and one often sees exactly the same types as once made the men of Portugal the foremost explorers of the world. The better class in Pará are exceedingly well dressed, and no politer people are to be found anywhere.

It was "carnival week" while we were there, and there was ample opportunity to see the whole city at play. As the beautiful floats passed, the showers of confetti were constant and the flower fights vigorous. Then in the afternoon, when the rain drove the revellers indoors and the cafés were packed to suffocation, a little glass atomizer made its appearance. It was filled with perfume and sold for 4 milreis. How many thousands were emptied in the course of a few hours who can say? No one escaped who came within range, and for twenty-four hours every food product in the city tasted of perfumery. Through all the festivities I saw nothing but good-humored fun, and was wonderfully impressed with the graceful, unconscious courtesy of the people of this tropical city.

Speaking of hospitality, I wish I had space to describe in detail one dinner at the home of a wealthy and cultured Brazilian, a large owner of rubber lands in the Acre, that I enjoyed. It would take pages to picture the cool spaciousness of the dwelling, the beautiful courtyard garden, with its rare blooms and extensive orchid trellises, and the dinner itself, simple and appetizingly elegant, and my host, who in almost perfect English touched lightly on current events in Europe and America and showed a knowledge of Paris, London, Berlin, and New York that made me envious; but I know I couldn't do it justice, and I must pass it simply as one of my pleasantest memories.

Every winter that great educational institution, the Hamburg-American line, gathers together some hundreds of untraveled Americans and projects them upon the people of other climes. They learn many things in these voyages; that is, they have ample opportunity to do so.

Sitting at midday breakfast in the Café La Paz one morn-



SENADOR ANTONIO JOSE DE LEMOS.
[Intendente of Pará.]



DR. JOAO COELHO.
[Inaugurated Governor of Pará February 2,
1909.]



JOSE SIMAO DA COSTA.
[Alves Braga Rubber Estates and Trading Co.]

ing, I knew that one of these great excursion steamers had arrived, for the advance guard of the army that would soon overrun the city began to trickle in. They were a comely, well-dressed, respectable lot, and I viewed them with much interest. The self-conscious swagger (we are all afflicted with it) that the men took on because they felt that many strangers were looking at them in a foreign tongue, was most exhilarating. The half-pitying glances that they cast about were not contempt, but simply embarrassment. They were wondering in their innermost recesses what the well-dressed foreigners thought of these fine specimens of American manhood. And those foreigners, sitting erect over their breakfasts, were probably wondering what the wealthy and somewhat noisy Americans thought of the fine specimens of Brazilian gentlemen that they saw for the first time. Both were self-conscious to the last degree, only the Americans showed it and the Brazilians did not.

Having heard that Portuguese was the language of the country, the tourists had a feeling that no one there understood English, or at least not very well, and it came with rather a shock to me that I was also without the pale. My knowledge came this way. Two nice old chaps stopped in front of me and one said:

"Do you speak English?"

"A leetle," was my reply.

"Good! Well, we want to take a trolley ride and go as far as we can. Understand? See?"

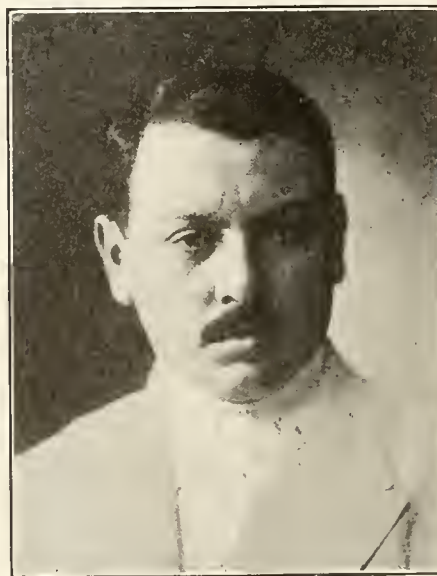
"Si, Senor; you wish to go up in zee balloon. I can arrange him."

"No, no, don't do that. Not a balloon, a trolley car—goes on rails," showing me in pantomime how an electric car ran, and making a buzzing sound that was most illuminating.

"He is off his trolley, yes?" I remarked engagingly to his companion. Then, seeing he had left his sense of humor



JOAQUIM GUILHERME GONCALVES VIANNA.
[Junior partner of Mello & Co., Pará.]



A. J. HUTTON.
[With Gordon & Co., Pará.]



ANTONIO RODRIGUES ALVES.
[Alves Braga Rubber Estates and Trading Co.]

aboard the boat, and they were likely to get away, I went on hurriedly:

"Oui, yes, si, Senor, you wish the trolley tram. The zip car. It is run by zee door. Go out to Sousa. It's quite a long ride out to Sousa and a pretty one, and if you stay aboard the car it will bring you back, saving a transfer."

I got interested in describing these details and forgot my accent. Just as I finished one of the inquirers said:

"You speak very good English."

"So do you," said I.

"But I come from Boston," was his retort.

"So do I," was mine.

I forgot to say that before I left my table two tourists sitting at another facing me were enjoying huge glasses of excellent Brazilian beer. One of them, desirous of knowing the brew, held his glass aloft (he wore cotton gloves, by the way, to protect his hands from yellow fever mosquitoes) and, addressing me cordially, said:

"Pilsener? Is this Pilsener beer?"

"Thank you," I replied, courteously; "I drink only zee champagne. I should be glad of a little bottle." And I beckoned to his waiter, while he gulped the remainder of his drink and bolted.

THE CENTER OF THE RUBBER TRADE.

The center of the rubber interest in Para is, very naturally, where the houses of the great importers, or rather exporters, are located. These are on the water front and are not only easily located by the pleasant smell of rubber with which the air is permeated, but during crop arrivals by the great quantities of rubber arriving and departing in bulk and in cases, often temporarily piled everywhere and anywhere. The carelessness with which this valuable product is handled would be a shock to any member of the Rubber Stealings Committee. Evidently there is no rubber thievery in Pará.

A narrow street running from the water front up into the city, known as "Wall street," is where most of the rubber purchasing is done. When a steamer arrives with rubber for the various *aviadores* they gather on this street or in an open room that leads off from it, and the representatives of the big buyers being present, the various lots are disposed of. There are brokers, but they do only a fraction of the business.

Each of the rubber houses employs a very capable body of men who receive the rubber, cut and examine it, and pack it in boxes for shipment. The cutting of the rubber is an absolute necessity, as some lots are badly adulterated. This adulteration takes three forms: One, in which a milky juice called "tabatinga" is added to the latex, giving a short fibered rubber that is wholly without nerve. The second is the addition of "farinha," which increases bulk and weight, but also makes the rubber very short and pasty. The third is a mixture of sand and farinha, which is perhaps the worst of all. Wherever farinha is present, if the rubber has stood for any length of time, myriads of little ants are found in the pelles, living on the starchy contents. All of these adulterations are quickly detected by the cutters, who are very expert and who promptly throw out a ball that contains layers of this sort.

THE "WALL STREET" OF PARA.

To refer again to "Wall street," time was when all the rubber buying was done in a saloon there, but that is a thing of the past, and while some is still sold in the "street," most of the purchasing takes place in the offices of the great operators. Most of the rubber is shipped in cases made of American pine. I saw a few boxes made of native wood, but the lumber was heavy and brittle and not to be compared with the imported white pine, either for safety or ease in working.

The rubber warehouse men are perhaps the best paid of any laborers in the city. They receive about \$4 a day, and extra for night work and Sundays. When rubber is arriving they work willingly night and day, often drenched to the skin by heavy tropical downpours, which they don't seem to mind in the least. But the laborers are not the only hard workers. When the gum is arriving the exporter, if he is in the market, is kept exceedingly busy. A single small steamer coming in from the Islands, where she stopped at perhaps a hundred landings, may have rubber from 200 or 300 shippers, consigned to 75 or 80 different houses. All of these interests, *seringueiros* and *aviadores*, knowing more or less about the market, are intent on getting the best price and also on the passing of any doubtful rubber without question. To do his own house justice and to satisfy the sellers keeps the exporter very busy, and he often works nights, but not out in the pouring rain.

The price at which rubber is sold in Pará and Manáos dominates the spirit of the people, and in boom times, when money is plenty, it is spent most lavishly. A rich Brazilian, even if it is only temporary wealth due to a sudden rise in the rubber market, will buy anything, from an automobile to an opera troupe, and plank down the cash with joy.

Pará, being the mother of rubber export, has not been without twinges of jealousy over the wonderful development of her daughter, Manáos. She never wished the child to come out of swaddling clothes, because she saw a decrease in rubber revenues as a result. Therefore "Manáos is unhealthy and not a place to visit"; "everything in rubber worth seeing can be seen at Pará," et cetera.

Manáos also affects to scorn Pará. "She's old-fashioned and conservative"; "her rubber forests are rapidly being ex-



BARRACKS AND CORPS OF MUNICIPAL FIRE DEPARTMENT, PARA.



RAILWAY FROM PARA TO BRAGANCA.



RUA DA CEARENSES, PARA.

hausted," and so on. Then when the representatives of these two great cities meet they are good friends and patriotic Brazilians. Their attitude reminds an American of the rivalry between Chicago and St. Louis. It harms no one, and it makes both cities more alert and aggressive.

It doesn't take very much perspicacity to figure out the fact that the rubber market is not made on the Amazon, but in the great outside centers, like London and New York. During the crop season in Pará the operators are in constant communication with their principals in Europe or America, and in semi-constant touch with their houses at Manáos. Each firm has its own cipher. None of them know each other's cipher; whether they know the rest of the numerals it is hard to say.

The houses that really do the bulk of the business are about a dozen in number, including Gruner & Co., who represent Heilbut, Symons & Co., of London, and Poel & Arnold, in New York; Adelbert H. Alden, Limited, who use the same name in London, and who in New York are the New York Commercial Co.; Gordon & Co., who represent the General Rubber Co., of New York, and William Symington & Co., Limited, in London; Suarez & Co., who have their own house in Europe, as do Alves Braga Rubber Estates and Trading Co.; and so on.

Pará has good cable communication with Europe, but rather round-about ones with America. The city is connected with Manáos by a cable which is laid in the bed of the Amazon and which gives good service except for occasional interruptions. If rubber is high, there are some who claim that the cable is purposely cut to keep the news from reaching Manáos until certain trades are effected. I only met one man who would acknowledge that he had actually seen the cut ends, and he was not an expert on cable matters, and might not have been able to tell a plain fracture from axe work. My own idea is that the river itself is perfectly competent to supply enough interruptions to suit anybody. Certain it is that one steamer is kept busy nearly all of the time attending to the thousand mile strand that binds the two rubber cities together.

There is also the wireless which proudly lifts its head to heaven at Pará and Santarem. When the concession for its installation was granted and the equipment began to arrive, what profound thankfulness filled the hearts of the many who were marooned in Manáos, often for a week at a time, hungering and thirsting for news of the outside world. Their hope of freedom, however, from the vexatious tyranny of the great river has so far borne no fruit. Messages were dispatched from either end, but failed to be received. The official explanation, I believe, was that the precipitation was so great as to interrupt them; or was it that there was too much air in the atmosphere? A more probable reason is that the messages sent in the daytime over the rubber forests were gummed up by the flowing latex and fell short of their destination. Nor were night messages any more successful. The big Brazilian fireflies, which are sporty things anyway,

got in the habit of racing with the electric sparks and often times beating them. It will be evident to the most shallow thinker that an operator standing on a tower in mosquito ridden Santarem, with a butterfly net in one hand and a receiver in the other, sorting fire-flies from flashes, would at times be slightly inaccurate. And accuracy in matters wireless is a prime necessity.

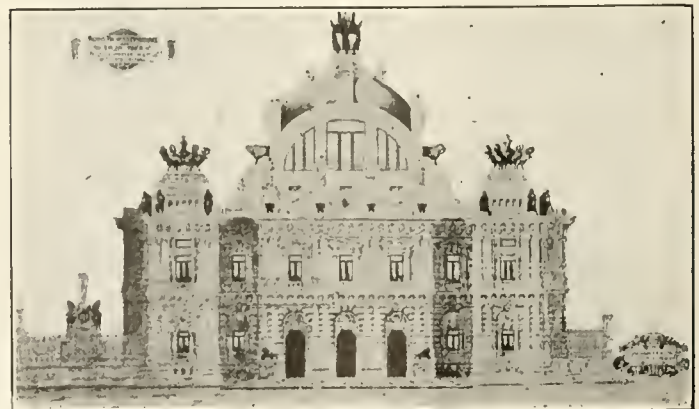
So Manáos did not get its relief, and the cable company have an extension of their contract and are to lay a second cable in the river bed.

DEALING WITH RUBBER FROM THE FOREST.

The beginning of rubber production is really with the *aviador*, who furnishes the rubber producer, or *seringueiro*, with all supplies and, in return, receives and sells his rubber. The *aviadores*, and there are hundreds of them, big and little, have outfitting places not far from the water front in Pará and Manáos. Some of them are not much more than offices; others are great and well-stocked stores. When an *aviador* discovers what a *seringueiro* is going to need for the coming season, he supplies what he may have from his own stock, which may be much or nothing. He then divides the order into dry goods, provisions, etc., making up separate orders for city merchants who handle these goods. They fill the orders, packed and delivered on the pier for shipment. The *aviador* then bills these goods, accepting in payment therefor notes that range from three to six months. These notes are discounted by the local banks, and sometimes are extended for another six months, if times are hard. The discount rates are from 10 to 24 per cent., according to the standing of the merchant.

The *aviador* is overcharged in his purchases about 50 per cent. by the general merchant. This is because of the risk that the latter takes, as some *aviadores* never pay at all, while others may not be able to pay for one or two years.

When the *aviador* receives rubber he sells it for the *seringueiro*, who is credited with the amount received. In remitting to the



PRINCIPAL FACADE PROPOSED NEW MUNICIPAL BUILDING.



ONE OF THE PARA HOSPITALS.

seringueiro, if money is sent the commission is 20 per cent.; if merchandise, 10 per cent.

In times past, according to the stories of some rubber merchants, it was an exceedingly easy thing to become an *aviador*. One asset only was necessary. That was the friendship of a director of a local bank. The man who planned to become an *aviador* would register his firm at the Junta Commercial with a capital perhaps of 50 contos. Through the director he would discount notes for that amount. This money would be used for buying shares in that bank, which would be pledged in another bank for a certain amount. This money he would deposit in a third bank. By this means the *aviador* was able to give two banks as references. In one of them he was a stockholder to the amount of about 45 contos, and in the other a depositor of 40 contos. Without a cent of money of his own, he would be rated as being worth about 100 contos. When he therefore sent letters to rubber producers offering to outfit them and sell their rubber, they were much impressed and he got the business.

The manner just cited is not the usual way, by any means, and it could not be done today. The bulk of the rubber business is built with real capital, and many of the *aviadores* are *seringueiros* who, selling their places or retaining them as they chose, established themselves in Pará or Manáos as *aviadores*. The *aviador* is the most generous man in the world in certain respects. He will gladly supply the *seringueiro* with two or three times as much as he orders, and when the proper time comes take a mortgage on his estates, and very rarely is the mortgage liquidated. Indeed, many times it is foreclosed and the *seringal* thereafter is the property of the *aviador*.

The *aviadores* also attend to another detail of the rubber gathering business, which is the arranging for contract laborers. Each year, before the beginning of the rubber season, they send agents to Ceará, Rio Grande do Norte, Parahyba and Pianhy, where abide the hard-working Brazilians commonly known as the "Caerenses." They live very well by cultivating the land and raising cattle; that is, when the rains are regular; but one dry season works great havoc. Their crops are destroyed, the cattle die of hunger and thirst, and the Amazon and rubber gathering is all that stands between them and starvation. It is usually necessary for the agent of the *aviador* to advance a little money and pay the passage of the laborer to the *seringal*. These advances are later deducted from his earnings.

The Cearense, with what little baggage he owns, including always a gaudy handkerchief and a business-like stiletto is

loaded on one of the small river boats with hundreds of others and started on his journey. This is at the time of high water, the start being made in the latter part of March or the first part of April, and it is probably the beginning of May before the *seringal* is reached. Here he is installed in one of the thatched huts provided for the laborers, if he has his family with him; if he travels as a bachelor he may sling his hammock in a large thatched house with the rest of the unmarried men.

A *seringal* is really a little village, which centers about the big frame house roofed with tile where the manager lives, where is also the office and the store. Round about this are grouped the thatched huts of the laborers. These villages are located on rising ground beyond the reach of the river, and cut off as they are from the rest of the world for months at a time, the manager is really absolute ruler.

The Amazon begins its great rise in December, and the land is not uncovered so that men can work until about the middle of May. During all of this time the tapping of rubber trees is discontinued. The laborers who remain spend their time in smoking and sleeping and in endless trivial gossip. Occasionally they take too much "cachaca" and do some desperate fighting. According to a physician whom I know, whose practice lies in the waterways above Iquitos, the Cearenses do a good deal of shooting at each other. One of his chief duties was the extraction of bullets from rubber gatherers' arms and legs. He said they never seemed to hit each other in the body, and it was only rarely that one was killed. His fee, incidentally, for extracting a bullet was paid in rubber, and at present prices would be about \$1,000.

As has been often explained, a tropical forest rarely shows a preponderance of any one kind of tree. It is a heterogeneous crowding of hundreds of different kinds of trees, criss-crossed and lashed together by giant vines. Where the rubber trees flourish they may be thirty feet apart or hundreds of feet apart. They certainly are never close together. In order to work them, narrow pathways are cut through the forest, leading from one tree to another in some general direction, until 50 or 60 trees have been located. The path then turns, either to the right or to the left, and is continued back to the central camp from rubber tree to rubber tree. This makes a very irregular ellipse and is called an *estrada*, or path.

The rubber gatherers do not waste effort, and if the reader has pictured a sylvan pathway, broad and smooth and easy to traverse, he is going too far. A stranger, unused to a forest, would never suspect the existence of these paths, and once he was on one would have difficulty in following it.

[TO BE CONTINUED.]



HUT OF A SERINGUEIRO NEAR PARA.

Rubber Plantation Results.

THE INDIA RUBBER WORLD is in receipt of several letters of inquiry respecting a recent article in a popular magazine (*The Saturday Evening Post*), the evident purpose of which is to discredit the reports of large dividends paid by rubber plantation companies. The passage in this article which has induced most of these inquiries is quoted here—from a supposititious dialogue between an intending investor in rubber and a friend who dissuaded him:

" Keep your two thousand, my boy. Put your money in the bank, and forget you ever heard of rubber."

The red haired man gasped.

"But the Vallambrosa company declared a dividend of 80 per cent.—" he began.

"It did, and that was exactly twenty years after its formation; during that twenty years no dividend was heard of. It figures down to 4 per cent. a year. Are you going to wait twenty years and then give the stock to your daughter for a wedding present?"

The ruby haired gentleman hesitated.

We believe the Vallambrosa Rubber Co., Limited, was registered in Edinburgh, April 22, 1904, so that it lacks fourteen years of being twenty years old. The company was formed by combining three neighboring estates, privately owned, on which some rubber had been planted in each year, beginning with 1898. The oldest rubber, therefore, is just now 12 years old. When the company was two years old, and the oldest planting had reached an age of 8 years, the company had marketed 39,113 pounds of rubber, at a handsome profit, but no dividend was declared in that year. The subsequent record has been, of yield (in pounds) and dividends paid:

DATE.	Yield.	Dividend.
Year ending March 31, 1907.....	156,922	55 %
Year ending March 31, 1908.....	225,302	55 %
Year ending March 31, 1909.....	272,741	80 %
Year ending March 31, 1910.....	370,902	86 2/3 %

[a—The accounts for the year have not been published; only an interim dividend has been declared; it is expected that the total for the year will exceed 80 per cent.]

Assuming that the dividend for last year will be 80 per cent., the Vallambrosa shareholders will have realized a yearly average of 45 per cent., from the date of organizing their company. Or, dividing the declared profits by 12, the average is 22 1/2 per cent., but this would be an unfair treatment of the subject, since so large a proportion of the company's trees are not yet 12 years old.

With regard generally to the age of cultivated *Hevea* trees now productive in the Far East, only a small percentage appear to have reached the age of 12 years. The latest declaration of dividends of several leading companies, and the published statistics of their trees at April 1 of this year can be stated as follows:

	Per Cent.
<i>Selangor</i> .—Twelve years, 188 acres; eleven years, 116 acres; ten years, 231 acres; less than ten years, 970 acres.....	287 1/2
<i>Linggi</i> .—From 6 1/2 to twelve years, 62,000 trees; under 6 1/2 years, 579,000 trees.....	165
<i>Pataling</i> .—From seven to twelve years, 35,730 trees; under seven years, 168,304 trees.....	125
<i>Anglo-Malay</i> .—Twelve years and over, 612 trees; ten to twelve years, 11,942 trees; not over ten years, 549,434 trees.....	80
<i>Bukit Rajah</i> .—Six to twelve years, 111,432 trees; under six years, 175,283 trees.....	65
<i>Federated (Selangor)</i> .—Eleven years, 6 acres; eight years and under, 1,017 acres.....	60
<i>Cicely</i> .—Nine years, 159 acres; five years and less, 670 acres.....	50
<i>Batu Caves</i> .—Seven to nine years, 239 acres; six years and under, 992 acres.....	50
<i>Damansara (Selangor)</i> .—"In bearing," 800 acres; six years and less, 969 acres.....	50

SOME OTHER RUBBER PLANTATION YIELDS.

THE yield of The Beverlac (*Selangor*) Rubber Co., Limited, for the calendar year 1909 was 78,128 pounds. The cost of pro-

duction, with charges for putting the rubber on the market is stated at the equivalent of 30.65 cents (gold) per pound, against 37.31 cents in the preceding year.

Consolidated Malay Rubber Estates, Limited, in Negri Sembilan, Federated Malay States:

	1906.	1907.	1908.	1909.
Yield (pounds).....	32,693	63,615	111,585	215,893
Selling price, net.....	4s. 11.77d.	3s. 6.14d.	4s. 2.22d.	7s. 2.07d.
Equivalent to.....	\$1.21.1	85.4	\$1.01.7	\$1.98.7
Dividend.....	10%	10%	17 1/2%	80%

The cost of the rubber, f. o. b. is figured at 11 1/4 d. per pound; with London charges added, the figure is 1s. 5d., without including any part of administration charges.

Linggi Plantations, Limited, in Negri Sembilan, Federated Malay States:

	1906.	1907.	1908.	1909.
Yield (pounds).....	17,229	110,741	284,873	545,219
Selling price, net.....	5s. 0.60d.	3s. 3.83d.	4s. 2.55d.	6s. 1.8d.
Equivalent to.....	\$1.22.8	.80.7	\$1.02.4	\$1.49.5
Dividend.....	15%	20%	60%	165%

[Yield in 1905—2,800 pounds; dividend 4%.]

The capital of the company is £100,000. The profit for the last year was £166,743 16s. 5d. The number of trees tapped, of all ages, was 151,796, and the average yield per tree 3.52 pounds. The average cost of rubber, f. o. b., is figured at 11.34d. [=23 cents, gold] per pound.

NEARLY 300 PER CENT. ON SELANGOR SHARES.

It is to be noted, in the latest report of the Selangor Rubber Co., Limited, in the Federated Malay States, that none of their trees are above 12 years old, and the company have been heavy dividend payers for four years past. A comparative statement for four years follows:

	1906.	1907.	1908.	1909.
Yield (pounds).....	70,577	120,524	189,979	326,654
Selling price, net.....	5s. 1 1/2 d.	3s. 10d.	4s. 1 1/4 d.	6s. 7d.
Equivalent to.....	\$1.24.6	93.2	\$1.06.4	\$1.60
Dividend.....	40%	41.6%	75%	287 1/2%

During these four years the shareholders have had returned to them an average of 111 per cent. of their capital. The amount outstanding is £30,000 [= \$145,995].

FORWARD SALES OF RUBBER.

THE Gallawatta (Ceylon) Rubber Co., Limited, have entered into a contract to deliver 30,000 pounds best quality of their 1911 crop at 6 rupees [= \$1.94.6] per pound.

The Manikande Rubber Co., Limited, of Ceylon, have sold forward 7,000 pounds of their 1911 crop at 5 rupees [= \$1.62.2] per pound.

The current year's product of the Udupolla Rubber Co. has been sold at 5.50 rupees [= \$1.78.4] per pound.

The Straits Settlements (Bertram) Rubber Co., Limited, have sold forward their 1911 sheet and crepe rubber at 11 shillings [= \$2.67.6] per pound.

GERMAN INTEREST IN RUBBER PLANTING.

A LIVELY interest exists in Germany in investments in rubber plantations, particularly in German colonial possessions. A considerable amount of rubber is reported to have come forward already from such plantations in German East Africa and New Guinea. In the latest issue of "Adressbuch der Deutschen Gummi-, Guttapercha- und Asbest-Industrie" appear the names and addresses of no fewer than 63 rubber planting companies having their headquarters in German cities, 34 of these being domiciled in Berlin. Of the latter the capitalization of 26 is mentioned with a total of 41,326,300 marks [= \$9,835,659.40]. On the boards of some of these are some leading German rubber manufacturers, as in the case of Herr Emil Spannagel, director of Vereinigte

Berlin-Frankfurter Gummiwaren-Fabriken, who is on the board of Kautschuk-Pflanzung "Meanja" Actiengesellschaft. Actively interested in the development of rubber planting, as well as in the exploitation of forest rubber in German colonial possessions, is Dr. Otto Warburg, the chief editor of *Der Tropenpflanzer*, published by the Kolonial-Wirtschaftlichen Komitee, and connected with the royal botanical gardens at Berlin.

QUALITY OF RUBBER AND THE AGE OF TREES.

ACCORDING to the *Malay Mail*, Mr. Davis, manager of the General Rubber Co., of New York, has informed Mr. Maurice Maud, manager of the Cicely Rubber Estates Co., Limited (Federated Malay States), that, according to his investigations, there is scarcely any difference in the quality of rubber extracted from trees 4½, 5, 9, 10, 17, and 27 years old. It appears, therefore, that the age of the trees, at least as far as the *Hevea* is concerned, is by no means a factor of such importance as it was hitherto considered to be.—*Der Tropenpflanzer*.

The subject of the age at which *Hevea* trees become tappable is treated in a recent publication, "The A B C of Rubber Planting Companies in Malaya," by M. Sidney Parry, who writes:

"It is now becoming a universal practice to commence tapping when trees are 4 years old. And experiments made over large areas during the last two years have proved conclusively that trees are not harmed by being lightly tapped when they are 4 years, or even 3½ years old, always provided that the girth at 3 feet from the ground is, say, 16 inches, and we have learned this from practical experience."

RUBBER PLANTING IN JAVA.

THERE appears in a recent number of *The Ceylon Observer* an interview with M. Jacob, a director in a company owning a large rubber plantation in Java. He reports that there is very little *Hevea* rubber in Java over 4 years of age, but that trees at 4 years have reached a girth of 23 inches 3 feet from the ground, and that tapping is being commenced at this age. He says that as a rule planted rubber trees in Java 4 years old are as well advanced as at 5 or even 5½ years in Ceylon. The greatest amount of capital put into rubber in Java thus far has been Belgian. Among recent visitors to the Dutch East Indies was M. Grisar, of Antwerp, important in the crude rubber trade there, who, it is understood, was planning to float a new rubber planting company on arriving at home.

"CASTILLOA" RUBBER IN CHIAPAS (MEXICO).

TO THE EDITOR OF THE INDIA RUBBER WORLD: In view of the fact that your valued journal has given particular attention to the progress of rubber growing and results attained therefrom, I take pleasure in acquainting you with the results obtained on our plantation in Mexico for the first tapping season, just closed. While something in the way of reports on the tapping of special trees has been published, by the plantations in our district, lying along the Tulija river in the department of Palenque, I am not aware that any report has ever been made covering extended tapping operations, taking all the trees as they stand in a given area, tapped by the native laborer, which must manifestly be the only basis on which results can be figured as yet.

Due to excessive rains, our tapping operations were not entirely completed on all of the trees, but so far as completed a total number of 9,987 were lightly tapped, by the full herring bone method, first on one side, later on the other side, the cuts about 18 inches apart as high as a man could reach. Later some of the trees were again tapped above the first tapplings. Of the trees tapped, 25 per cent. were four years old, 60 per cent. five years old, and 15 per cent. six years old. The total yield was 1,550 pounds, or an average of 2.483 ounces per tree. The six-year-old trees yielded from 4 to 6 ounces, or an approximate average of 5 ounces per tree.

Tapping was commenced the latter part of September, 1909,

and closed about the middle of March, 1910. The total cost per pound of this small lot of rubber, laid down in New York, approximates 28 cents, which will be materially reduced as the production increases. Recent experiments made on the first trees tapped demonstrate that they could again be tapped at the present time with no apparent diminution of the flow of latex. The work was done with a special knife devised by our manager, by the use of which the cuts heal up perfectly smooth, with no appreciable damage to the trees. J. B. SANBORN,

President [Orizaba Rubber Plantation Co.]

Chicago, April 12, 1910.

GOOD CEARA RUBBER.

A SMALL lot of Ceara, offered on the Colombo market on April 19, was valued at 9.50 rupees [= \$3.08] per pound. The *Ceylon Observer* says: "This was very thin white biscuits, which, being almost devoid of the usual bad smell of Ceara, and the characteristic 'powdery white,' were almost indistinguishable, except by the expert, from Para biscuits." The local price for the finest Para crepe on the same date was 10 rupees [= \$3.24½].

THUNDERATION IN A RUBBER DISTRICT.

A SEVERE thunderstorm, accompanied by very heavy rain, has destroyed some thousand rubber trees on the Jebong estate, and several other estates in the district have also suffered considerably.—*Times of Malaya (April 2)*.

FORWARD SALES OF RUBBER.

THE forward sales of rubber under contract by a number of plantation companies, particularly in Ceylon, have been reported from time to time in THE INDIA RUBBER WORLD. Most of the forward sale contracts now in effect were made at prices less than one-half of what have been realized lately at the London auctions, in consequence of which there has been a natural note of discontent among shareholders.

Ceylon newspapers have contained not a few communications from holders of planting shares asking what would happen if rubber prices should "break" below the contract prices; could the buyers be held to their contracts?

A Singapore paper has printed an editorial suggestion that the forward sales on the part of some companies may have been made with a view to a favorable effect upon the prices of shares of the companies most nearly concerned. This idea, however, seems not to have met a general adoption, and THE INDIA RUBBER WORLD has seen no reason to suppose that any forward sale has been made for any such purpose.

An interesting feature of the proceedings at the fourth annual meeting of The Consolidated Malay Rubber Estates, Limited (London: April 27), was a speech by Mr. John Loudoun Shand, a director and one of the secretaries of the company, in the course of which he said:

"When we met last year I congratulated you on our having been able to declare a dividend of 17½ per cent., which was considerably more than we had expected to be able to pay, and I think I have cause still more to congratulate you this year on the directors being able to recommend a dividend for the year of 80 per cent. I also mentioned last year that the average net price that we had obtained for our rubber in the previous year was 4s. 2d. per pound, and that we had begun the year well by selling our first two or three consignments at an average of 5s. per pound. I hoped in my heart of hearts that we might be able to maintain that average, though I did not feel very sure of it; but none of us, in old wildest dreams, thought our average price of 4s. 2d. per pound would be converted into a net average of 7s. 2d. this year. Many offers have been made to us from rubber philanthropists in all parts of the world—from Colombo, New York, and elsewhere—to place us in a comfortable position by buying our crops in advance; but so far we have refused these philanthropic advances." [Hear, hear.]

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

IN the ceaseless flood of new rubber promotion one or two have considerably more interest—either scientific or technical—than others, and I have selected these for a few comments. These are the Madagascar Rubber Co., Limited, with a capital of £350,000, and the Crude Rubber Washing Co., Limited, with a capital of £250,000. Both of these are promoted by the London Venture Corporation, Limited, with which British Murac Syndicate is also connected, and the two new companies have certain business arrangements with each other. It is not, however, their family connection that I am concerned with, but rather their particular objects.

NEW COMPANIES.

Briefly summarized, the Madagascar company has obtained rights over a large area in that island, where rubber vines are abundant, and it is intended to cut these down and extract the rubber in the new patent Guignet machine, with which experiments have for some time been carried on at Lyons in France. At present it appears that the native methods of extraction, without cutting down the vines, yield only a small proportion of the available rubber, while the machine gives about 3 pounds of rubber from 55 pounds of bark. I cannot go into the details of the construction of the Guignet machine, but I imagine it cannot be anything very different from what I understand has been in operation for some time in the American guayule districts.

The prospects of the Madagascar company seem to depend a good deal upon the natural reproduction of the rubber vines from seedlings. This is a matter as to which Mr. Hamilton Spence, in his report to the company, expresses himself as being in no doubt whatever, and I have not come across any expressed opinion to the contrary. There seems no reason why this improved method of obtaining *Landolphia* rubber should be confined to Madagascar, and probably others having got hold of a colorable imitation of the Guignet machine will start operations in West Africa. The new Madagascar rubber is to come in the market in a comparatively pure and clean state, and as this is a development to be expected in the case of the products from all the new African companies, it would seem that the prospects for the second company I have mentioned do not seem over bright.

The Crude Rubber Washing Co. prepare, by means of a new washing machine patented by Morland Dessau, of Murac fame, to buy dirty rubber, wash it and sell it to the rubber manufacturers. This is really only an extension of a business which has already been carried on for two years by the British Murac Syndicate, though no details of the profits are referred to in the prospectus. The new company estimates a profit of 25 per cent. on its total capital by the annual sale of 1,000 tons of standardized washed rubber. The company has the exclusive rights of the Guignet rubber cleansing machine for the United Kingdom, the continent of Europe, the United States of America, and the Dominion of Canada. This machine, I may mention, has not yet been patented in the United Kingdom, though the Murac-Dessau machine has already reached this stage.

Personally I have no interest or connection with any rubber washing machinery, but having seen in operation the new patent "Universal" washer of Werner, Pfeleiderer & Perkins, there does not seem to be much difference between this and the Dessau machine, to judge by the description of the latter given in the prospectus. In his report on the Dessau machine Mr. Herbert Wright refers to the probability of large manu-

facturers, who have put down expensive plants, preferring to continue washing their own raw rubber for some time to come. And if this is the case with those firms having the ordinary washing rolls, how much more will it be the case with firms who have already installed or have in order the Pfeleiderer Universal washer?

I understand—though the information does not emanate from the makers—that no more orders for this machine can be booked for some months to come, owing to the number now under construction. Apart from the large manufacturer, there are no doubt many of the smaller ones who, as Mr. Wright says, doubtless will find it a convenience to be able to obtain definite brands of rubber already washed. It is somewhat of a novelty to see the name of Mr. James Swinburne, the well-known engineer, in connection with a report on a new rubber machine. In his report he says he understands the rubbers he saw washed were Mozambique and manicoba, and he states that the washing is thorough. He does not, however, state whether he arrived at this conclusion by inspection only, or whether the conclusion was based on analysis.

With regard, in conclusion, to the general question of the improved washing of dirty rubbers it is clear that as time goes on the matter will become of much less importance. Already great improvement is noticeable in many African grades, and the increased supervision now to be met with in forest areas means greater purity in the product. Quite a large number of rubber washing machines have recently been sent out from England to the west coast of Africa so that rubber washing may be performed before shipment, and with improved methods of collection the present labors of these machines must tend to become lighter.

The whole of the capital of the Crude Rubber Washing Co., Limited, was subscribed by the promoters, directors and friends, and within a week or so the shares were standing at £4 premium, which shows great faith in the prospects of the company, though at the same time I may say that most of the new issues have been at once rushed to a premium. Of course the new washing machines, of whatever patent, have still to show what their wear and tear is, compared with the old-fashioned rolls, and there are not wanting those who prophesy the return of the rolls to first favor on account of the expense of upkeep of the more complex machinery.

It goes without saying that the continuing of high prices is a matter of considerable anxiety for many manufacturers. Those

POSITION OF TRADE.

who bought largely some time ago have cause to congratulate themselves on their astuteness, as they can reap the advantage of the recent advances in the price of goods, and are also in a position to dispose of any rubber they do not require, at a considerable profit. Some of the most important firms are refusing to make any contracts for goods at the present time, and there are firms who contracted for the manufacture of goods some time ago without covering their requirements of rubber. Needless to say, in such cases the situation is a decidedly awkward one. Some recent remarks of mine about the waterproof branch need modification, as the Master Waterproof Garment Manufacturers' Association, at a meeting in Manchester on April 4, decided to raise the price of garments 20 per cent., and piece goods 15 per cent. This decision has given great satisfaction to the individual members of the association, who had been for some time urging some such concerted action.

"PLEASE say in your report how much pure Pará rubber there is in the vulcanized rubber." This request is frequently found in the letter accompanying samples of rubber goods sent for analysis, but I need hardly say that in the present state of our knowledge it is quite impossible for the analyst, expert or otherwise, to give the figure sought with any degree of accuracy, and I think it is always advisable to avoid answering the query at all. In the light, then, of this deficiency in analytical procedure, it is interesting to note that some progress appears to have been made recently in Germany in filling up this hiatus. Messrs. F. W. Hinrichsen and J. Marcusson have been studying the optical activity of various rubber resins, and find a definite figure for the specific rotation in the bulk of such resins, except those derived from Brazilian and Ceylon Pará rubber. As one or two other resins are also optically inactive, it is not possible to say whether the rubber in a particular mixture is all Pará or not, but it is possible to say that whether there is any optical activity the rubber is not all Pará. At least, this is the authors' conclusion, and it will hold until some other German writes a paper showing that the data on which the conclusion is based are unreliable. The action of alkalies has also been studied by the authors, and it has been found that it is, in the main, the unsaponifiable part of the resins which shows the optical activity. In a further paper by Hinrichsen and Kindscher it is pointed out how the attempt to arrive at the quality of rubber used in a mixing by the determination of the resin content may easily lead to erroneous conclusions; ceresin was, for instance, causing an increase of resin on vulcanization. In this paper the previous statement as to the optical activity of the unsaponifiable part of the rubber resins is re-affirmed on the authority of further experiments. The matter is certainly of great interest, and doubtless it will attract attention in laboratories where the necessary optical instruments are available. As the whole of the resin in gutta-jelutong is found to be insoluble in semi-normal alcoholic potash, while the other resins mentioned all saponify to some extent, it would seem that we have at disposal a method of saying whether jelutong alone has been used in any particular compound.

RUBBER RESINS.

On April 6 the comparatively new building of the garment department of the proofing works of Messrs. Frankenstein & Co., at Newton Heath, Manchester, were completely gutted by fire, though the walls of the building remained standing. By the efforts of Manchester fire brigade, aided by the works' brigade, the fire was prevented from spreading to the main building where the bulk of the machinery is situated. It is not so long ago that another fire occurred at these works, the naphtha tanks somehow or other becoming ignited.

JOTTINGS.

Colonel R. K. Birley, of Messrs. Charles Macintosh & Co., Limited, is a director of the new Sablas (North Borneo) Rubber, Limited. In this respect I have heard some surprise expressed that the fact of his connection with the well-known manufacturing firm was not indicated on the prospectus. I don't know, however, that this matters at all in these days, when all new rubber companies are oversubscribed for on the strength of reports made by mining engineers. In the rush to get shares the public do not stop to scrutinize the list of directors, or to enquire whether a director knows anything at all about rubber.

The struggles of the stock brokers with the names of some of the new rubber companies remind me of the efforts made by ready-money bookmakers at Epsom when shouting the foreign names of horses to the Derby crowd. "That's what we call it, anyhow," said a broker testily when I remonstrated with him on his pronunciation of a certain company.

Despite the dismal results achieved so far by synthetic rubber companies, the game goes on merrily, with new supporters. The patent is to be sold for such a fabulous sum of money that those who have a special offer of getting in at bed rock for £25 or £50 frequently succumb to the temptation.

Among the papers down for reading at the International Congress of Cold to be held at Vienna, October 5, is one by Mr. H. L. Terry, entitled, "Applications of Cold in the India Rubber Industry." Among the large number of countries which will be represented at the congress may be mentioned the United States, the Argentine Republic, Brazil, and Mexico.

INCREASE IN THE GUAYULE TRADE.

WHILE no exact figures are available as to the exact amount of guayule rubber produced or sold, a fair idea can be gained from the statistics of Mexican crude rubber generally. Before the appearance of guayule in commercial quantities, the exports of rubber from Mexico averaged less than 400,000 pounds annually, and it is probably that they do not now exceed 600,000 pounds. It may be assumed, therefore, that the figures given below, in excess of 600,000 pounds yearly, relate to guayule:

UNITED STATES IMPORTS OF MEXICAN RUBBER.

	Pounds.	Value.	Average.
Year ended June 30, 1904.....	366,104	\$148,921	40.7 cents.
Year ended June 30, 1905.....	352,690	185,951	52.7 cents.
Year ended June 30, 1906.....	1,705,915	866,283	50.6 cents.
Year ended June 30, 1907.....	7,175,097	2,877,022	40.1 cents.
Year ended June 30, 1908.....	9,269,443	3,888,684	41.9 cents.
Year ended June 30, 1909.....	15,460,365	5,466,904	35.3 cents.
Nine months, ended March 31, 1910	16,905,054	7,017,010	41.5 cents.

MEXICAN EXPORTS OF CRUDE RUBBER.

[Official Returns for Years ending June 30.]

To—	1906-07.	1907-08.	1908-09.
Germany pounds	2,016,230	2,067,872	172,905
Belgium	33,211	196,084	736,435
Spain	35,389	46,266	.....
United States	8,128,380	9,788,962	12,167,767
France	105,787	39,827	109,756
Great Britain.....	1,855	230,351	45,874
Canada .....	.....	783	.....
British Honduras.....	114	961	220
Panama .....	.....	535	.....
Italy	282	.....	.....
Cuba .....	.....	.....	425

Total 10,321,248 12,372,241 13,233,382

The exports for the four months of July, August, September and October, 1909, are officially reported at 4,034,241 pounds.

GUAYULE SHRUB.

The exportation of the guayule shrub, to be worked into rubber elsewhere, is increasing at a rapid rate, in spite of the export duty imposed. The figures are:

Fiscal year 1906-07.....	pounds	1,471,226
Fiscal year 1907-08.....	.....	2,844,325
Fiscal year 1908-09.....	.....	6,649,416

From the beginning the greater part of the shrub exported has been taken by the United States, the share of this country during the last year having been 77 per cent. The remainder goes principally to Germany.

THE eighty-seventh birthday of Herr Geheimer Kommerzienrat Wilhelm Herz, senior partner in the firm of S. Herz, rubber goods manufacturers of Berlin, was celebrated on April 25. Mr. Herz, who still fulfills his duties as president of the Berlin chamber of commerce, was able to join in the celebrations and to receive the congratulations offered him from near and far. The chamber of commerce building was decorated with flags in his honor.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED APRIL 5, 1910.

- N**O. 953,700. Flexible coupling. D. E. Maxfield, Dorchester, Mass., assignor to B. F. Stuyvesant Co., Boston.
 953,735. Tire trunk. H. Cohen, New York City.
 953,736. Tire trunk. *Same*.
 953,873. Metal tire shield. A. J. Walker, Hooker, Okla.
 954,066. Baby comforter. W. F. Ware, Philadelphia.
 954,076. Removable rim wheel. R. H. Buckingham, assignor of one-half to C. Pickard, both of Chicago.
 954,224. Vehicle tire. [Solid.] B. C. Swinehart, Akron, Ohio.
 954,225. Vehicle tire and fastening means therefor. J. A. Swinehart, Akron, Ohio.
 954,232. Tread for pneumatic tires. F. G. Ward, Pittsburgh, Pa.
 954,255. Vehicle tire. H. O. Clark, New York City.
 954,333. Tire tread. D. T. O'Sullivan, West Orange, N. J.
 954,348. Hose coupling. F. O. Schaefer, Wausau, Wis.
 954,361. Vehicle tire. H. B. Tobias, Hoboken, N. J.
 954,362. Tire armor. W. W. Tompkins, New York City.
 954,375. Demountable rim. E. J. Bushey, New York City.

Trade Mark.

- 47,261. Northern Shoe Co., Duluth, Minn. The word *Tamarack*. For rubber footwear.

ISSUED APRIL 12, 1910.

- 954,416. Demountable rim for automobile tires. W. N. Booth, Cleveland, Ohio.
 954,425. Vulcanizing iron. W. L. Dinsmoor, Longbeach, Cal.
 954,730. Tire protector. A. E. Goldman, Galena, Kans.
 954,807. Fire hose carrier. H. L. Jenkins, Bridgeport, Conn.
 954,844. Elastic non skidding tire chain. C. E. Abrams and C. H. Mason, Chatham, N. Y.
 955,053. Wheel tire. G. W. Crawford, Perth Amboy, N. J., assignor to The Safety Tire Co., a corporation of Maine.
 955,100. Heel for boots and shoes. S. Peterson, Boston.

Trade Mark.

- 47,167. Norvell-Shapleigh Hardware Co., St. Louis. The words *Norleigh Diamond*. For fruit jar rubbers.

ISSUED APRIL 19, 1910.

- 955,169. Armor for tires. W. W. Jones, Downs, Kans.
 955,188. Tire. [The tread portion interrupted at intervals with relatively soft rubber blocks.] L. M. Nelson, Pennington, N. J., assignor to Nelson Tire Co., a corporation of Wyoming.
 955,213. Wheel rim securing means. O. R. Schoenrock, Chicago.
 955,260. Garden hose supporter. A. Getman, Johnstown, N. Y.
 955,306. Antiskidding device. H. Barnett, Chicago.
 955,479. Vulcanizer. [Embracing an electric heating device.] C. A. Shaler, Waupun, Wis.
 955,509. Rubber sole protector for boots and shoes. E. Fuller, Providence, R. I.
 955,545. Spring wheel [with pneumatic tire]. F. P. Prendergast, Dagus Mines, Pa.
 955,634. Antiskidding tire. J. Corwin, Chicago.
 955,739. Removable cover for vulcanizers. A. Adamson, Akron, Ohio.
 955,831. Armor for tires. C. E. Titus, Springfield, Mass.

Trade Mark.

- 46,829. Turner Brothers, Ltd., Rochdale, England. The word *Veclos*, in a scroll, over the representation of a hound. For balata belting.

ISSUED APRIL 26, 1910.

- 956,076. Coupling [for hose]. E. T. Greenfield, Kiamesha, N. Y.
 956,077. Coupling. *Some*.
 956,100. Vacuum cleaner. R. B. Hutchinson, Wilkesburg, Pa.
 956,110. External guard for pneumatic tires. J. L. La Driere, Albuquerque, N. Mex.
 956,148. Vacuum cleaner. G. S. Bennett, San Francisco, Cal., assignor to Vacuum Specialty Mfg. Co., a corporation of Arizona.
 956,049. Method of vulcanizing rubber. H. E. Pendleton, Brooklyn, N. Y., assignor to the American Wringer Co.
 954,464. Pneumatic tire for vehicle wheels. A. Wolber, Vailly, Aisne, France.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the application, which in the case of these listed below was in 1908 and 1909.

*Denotes Patents for American Inventions.

- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, APRIL 6, 1910.]
 26,953 (1908). Spring wheel with rubber tire. N. Braibant, Brussels, Belgium.

- 26,954 (1908). Puncture preventing shield for pneumatic tires. V. Monturon, Noyon, France.
 26,970 (1908). Wheel with two rims for rubber tires side by side. F. Rogers, London.
 27,029 (1908). Heel for footwear strengthened by the insertion of a flanged metal plate. G. E. Smith, Wellington, New Zealand.
 27,077 (1908). Device for replacing tires in rims. W. S. Lemond, Bristol.
 *27,090 (1908). Process of drying and packing crude rubber for shipment. R. B. Price, Mishawaka, Indiana.
 27,136 (1908). Spring wheel with rubber tire. P. J. Marmonnice, Lyons, France.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, APRIL 13, 1910.]

- 27,200 (1908). Spring wheel with rubber tire. H. M. Bigwood, Wolverhampton, and another.
 *27,285 (1908). Non skid device for pneumatic tires. F. A. Fox, New York City.
 27,297 (1908). Detachable rim flange for pneumatic tires. A. Anthony, Wolverhampton.
 27,309 (1908). Pneumatic tire cover formed in circumferential segments. J. G. A. Kitchen, Scotforth, and another.
 27,328 (1908). Method of device for tapping rubber trees. C. P. Hayley, Torquay. (C. Northway, Galle, Ceylon.)
 27,336 (1908). Elastic telescopic spoke for vehicle wheels. L. A. Garchey, Paris, France.
 27,451 (1908). Spring wheel with rubber tire. W. D. Douglas-Jones, London.
 27,460 (1908). Detachable rim for pneumatic tires. G. Webb, Monmouth.
 *27,469 (1908). Spring wheel with pneumatic tire. M. W. Rosenshine, San Francisco, California.
 27,516 (1908). Heel protector. G. L. Harrison, Norton-Trees, Durham.
 27,530 (1908). Detachable rim for pneumatic tires. W. E. Rowcliffe, Manchester.
 27,567 (1908). Method of reclaiming rubber. G. Capelle, Liege, Belgium.
 27,629 (1908). Air tube for pneumatic tire. E. Williams, Llanvetherine, Abergavenny.
 27,633 (1908). Metallic non skid band for pneumatic tires. G. Harris, Cheddar, Somersetshire.
 27,688 (1908). Elastic product similar to india-rubber formed from tree gums and resins. R. W. Wallace, London, and G. Reynaud, Paris, France.
 27,695 (1908). Tire air tube formed with closed round ends, either of which may be recessed to receive the other. J. N. Mollett, London.
 27,854 (1908). Detachable rim for pneumatic tires. S. S. Rogers, Bedford, Middlesex.
 [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, APRIL 20, 1910.]
 28,205 (1908). Pneumatic or solid tire with threads formed with projections resembling saw teeth in longitudinal sections. C. H. Wilkinson, Huddersfield.
 28,357 (1908). Non skid cover of metallic links for pneumatic tires. F. A. Fox, New York City.
 *28,369 (1908). Vaginal syringe. O. Katzenberger, San Antonio, Texas.
 28,450 (1908). Artificial rubber. J. Blum, Brussels, Belgium.
 28,473 (1908). Puncture proof and non skidding pneumatic tire. W. F. Macmullen and H. J. Parfitt, Torquay.
 28,517 (1908). Toe cap for renovating boots. H. M. Brace, London.
 28,527 (1908). Vehicle tire formed of blocks of rubber. H. Büssing, Brunswick, Germany.
 [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, APRIL 27, 1910.]
 11 (1909). Machine for cutting up rods or tubes of rubber. Bertrams, Ltd., and R. F. Gillespie, Edinburgh.
 222 (1909). Protective tread for pneumatic tires. W. Craven-Ellis, Boydon, Cheshire.
 *265 (1909). Waterproof garment. G. Brewer, London. (A. W. Powell, Brooklyn, New York.)
 344 (1909). Detachable rim for pneumatic tires. G. Webb Monmouth.
 366 (1909). Inflating valve for tires, footballs, etc. H. Broomfield, Warrington.
 410 (1909). Check valve. H. T. Blake, Ross, Herefordshire.

THE FRENCH REPUBLIC.

PATENTS ISSUED (with Dates of Application).

- 408,128 (Oct. 20, 1909). Société Anonyme du Temple. Tire.
 408,145 (Oct. 21). R. K. Gray. Electric conductor.
 408,150 (Oct. 21). Picheloup. Protection for pneumatic tires.
 408,260 (Oct. 5). Aktiengesellschaft Metzeler & Cie. Pneumatic tire.
 408,329 (Oct. 26). Olier et Cie. Vulcanizing press for pneumatic tires.
 408,355 (Jan. 21). Portier. Elastic tire.
 408,433 (Jan. 22). H. Patand. Elastic tire.
 408,451 (Oct. 29). J. C. Berry. Pneumatic tire tread.
 408,358 (Oct. 20). L. Gevaert-Naert. Process for the manufacture of pneumatic tire covers.
 408,540 (Oct. 23). G. Schulainire. Metallic tread for pneumatic tires.
 408,682 (Nov. 6). B. Souffrin. Pneumatic tire cover.



OFFICERS AND DIRECTORS OF THE UNITED STATES RUBBER CO.

1—Samuel P. Colt (president), 2—E. C. Benedict, 3—Lester Leland (second vice president), 4—Elisha S. Williams, 5—Anthony N. Brady, 6—James B. Ford (first vice president and treasurer), 7—Walter S. Ballou, 8—Homer E. Sawyer (general manager), 10—John D. Vermeule, 11—Frederick M. Shepard, 12—Henry L. Hotchkiss, 13—D. Lorne McGibbon, 14—Frank S. Hastings, 15—Harry E. Converse, 16—J. Howard Ford, 17—John D. Carberry (assistant secretary), 18—Samuel Norris (secretary), 19—Arthur L. Kelley, 20—W. G. Parsons (assistant treasurer), 21—Frank L. Hine, 22—W. H. Truesdale, 23—Edward R. Rice. [Of James Desbler, one of the new directors, no photograph is known to exist.]

The United States Rubber Co.'s Best Year.

THE eighteenth annual meeting of shareholders of the United States Rubber Co., incorporated under the laws of New Jersey, was held at the registered offices of the company in that State, at New Brunswick, on May 17. The operations of the company during the last business year and its condition at the close of the year are indicated in the annual reports of officers, as read and approved, and which are presented here:

PRESIDENT COLT'S REPORT.

TO THE STOCKHOLDERS OF THE UNITED STATES RUBBER CO.: The past year on the whole has been the most prosperous in the history of the company. The sales of merchandise by the United States Rubber Co. and its subsidiary companies, as also by the Rubber Goods Manufacturing Co. and the Canadian Consolidated Rubber Co., Limited, were larger than in any previous year, and the net profits likewise were greater.

The report of the treasurer appended hereto gives the consolidated general balance sheet and the consolidated income statement of the United States Rubber Co. for the fiscal year ending March 31, 1910.

The operations of the Rubber Goods Manufacturing Co., the Canadian Consolidated Rubber Co., Limited, and the General Rubber Co. are not included in the treasurer's report, but only the dividends derived from the United States Rubber Co.'s stock interest therein. The share of the undivided earnings of these companies for the year which appertains to such stock interest amounts to approximately \$1,700,000.

The increase in "Property and Plants" of about \$8,000,000 shown in the treasurer's report represents the investment in the Revere Rubber Co. and the total investment in the Canadian Consolidated Rubber Co., Limited.

VOLUME OF BUSINESS.

The sales of the company for the year were \$38,711,051.43 as against \$31,889,351.34 the previous year. Part of this increase, however, is accounted for by the higher selling prices which the company was compelled to establish owing to the higher cost of crude rubber and other materials.

The past winter was exceedingly favorable to the sale of rubber footwear and clothing. This is indicated not only by the increased volume of sales, but by the further fact that the stocks of goods in the hands of retailers, jobbers and mill warehouses have been materially reduced and in the aggregate are smaller than for many years past.

PROFITS.

As against \$4,507,655.39, the net profits for the year ending March 31, 1909, those for the present year are \$5,535,163.15, this net profit being after setting up \$500,000 as a "Reserve for Contingencies." Should we add to these net profits the company's share of the undivided profits of the companies in which it is a stockholder, which are not included in the consolidated statement, the profits for the year would be about \$7,235,000.

It will be observed by reference to the treasurer's report that all interest charges, including coupons on the \$19,500,000 funded debt, are deducted before this net profit is arrived at.

EXPORT BUSINESS.

The export business of the company was larger than in any previous year. The several foreign agencies for our standard brands are now established on a substantial basis, and we look for a steady growth of this branch of our business.

ECONOMY OF CONSOLIDATION.

Further progress has been made during the year toward con-

solidation of manufacturing with the view of producing goods with greater efficiency and economy; and other moves of this nature are now in contemplation, including the utilizing of one of our mills, not now in operation, for the growing business of the recently acquired Revere Rubber Co.

RUBBER GOODS MANUFACTURING CO. AND AUTOMOBILE TIRES.

The sales of the Rubber Goods Manufacturing Co. for the year ending December 31, 1909, were \$25,629,592.71, as against \$18,491,987.90 the previous year—the larger part of this increase being in automobile tires. The product of the Revere Rubber Co. amounted last year to about \$6,000,000. The brands of tires made by the Rubber Goods company are the "Hartford," "Hartford-Dunlop," "Morgan & Wright," and "G & J". The Revere company manufactures the "Continental" brand. Judging from the past, the growth of the automobile tire business will be of momentous importance in the future, and the Rubber Goods and Revere companies are well equipped to maintain their share of the tire business under the above standard brands.

CRUDE RUBBER.

There probably has been no period since rubber became an article of general and important use (following the discovery of its vulcanization by Charles Goodyear in 1838), when it has been so much talked of on both sides of the Atlantic as during the past year. The causes of this are the unprecedentedly high price of the article (fine Para and Ceylon rubber having reached about \$3 a pound as against a normal price of about \$1 a pound), and the formation of numerous companies, chiefly in London, to operate plantations in Ceylon, Sumatra, Java, Borneo, and the Malay peninsula. The profits of those plantations that are in bearing are very great—the market price of the rubber at the present time being eight to ten times the cost of production there, the Brazilian product now selling here for at least three times its cost of production. Though undoubtedly in some instances speculation in the securities of these companies has enhanced the price of their shares beyond reason, the future nevertheless promises, in the absence of some unforeseen calamity, good returns from investments made for the cultivation of the rubber tree in the Far East, even when rubber shall have returned to normal prices, which it will undoubtedly do when production shall have overtaken the consumption of the article. With almost unlimited forests of native rubber trees in Brazil and other tropical countries and an almost unlimited area in the Far East, upon which the rubber tree can be successfully cultivated, it would seem that rubber cannot be maintained indefinitely at a price from three to ten times the cost of production.

COST OF MANUFACTURE AS COMPARED WITH PRICE OF CRUDE RUBBER.

The subjects which are receiving most serious consideration by the directors and officers of the United States Rubber Co. are the present condition of the market for crude rubber, and the adequate provision for the needs of this company. Fortunately, it has obtained control, through the General Rubber Co., of a large stock of crude rubber, acquired at prices which enable it with some profit to maintain its standard of quality and to meet the demands of its customers, though it has recently been compelled to advance prices somewhat.

The wisdom of our establishing our own houses in Pará, Manáos, London, and Liverpool, which was done a few years ago, is manifest, and during the past year we have given much attention to every phase of the problem of bettering the conditions under which supplies of crude rubber are obtained. In this work special attention has been given to the initiation of plans for ourselves producing both in the Far East and in

Brazil the supply of crude rubber needed by the company, which we confidently expect will result in our obtaining in the not distant future from our own rubber properties a substantial portion of our requirements.

CANADIAN CONSOLIDATED RUBBER CO., LIMITED.

Some time since, the United States Rubber Co. purchased, through Mr. D. Lorne McGibbon, an interest in the Canadian Consolidated Rubber Co., Limited, which company manufactures about the same proportion of rubber goods consumed in Canada that the United States Rubber Co. and its subsidiary companies do in the United States. The result of two years' operations of the Canadian companies was such that your directors recently felt it desirable to increase our interest in the Canadian company. This has been done to such extent that we now own a very large proportion of the stock of the Canadian Consolidated Rubber Co., Limited.

We have recently acquired through that company a large interest in the "felt" business of Canada—a business kindred to the rubber business, and which, owing to the more severe climate of Canada, is of greater relative importance there than in the United States.

REVERE RUBBER CO.

The death of Mr. Charles H. Dale, president of the Rubber Goods Manufacturing Co., left that company without a practical rubber manufacturer at its head. It was most difficult to obtain the services of a skilled successor fitted for the conduct of this extremely important branch of our business, which embraces not only the item of automobile tires but substantially all lines of rubber goods other than footwear. Your president was con-

vinced that no need was more urgent than that of securing a skilled manufacturer, as competent as could be found, for the presidency of the Rubber Goods company.

Finally, in December, 1909, negotiations were opened with the general manager of the Revere Rubber Co., Mr. Elisha S. Williams. That company, with a capital stock of \$2,000,000, under his management had been developing for several years a large and successful business in the manufacture of tires, rubber thread, and mechanical rubber goods. Its annual output had reached \$6,000,000, and its capital stock (par \$100) was selling at \$200 a share. Mr. Williams indicated a willingness to accept the presidency of the Rubber Goods company, but only on condition that simultaneously his shareholders should receive an offer for all their shares in the Revere Rubber company at the stated market price. Prompt action was required and prompt provision of funds was necessary for such an offer. In its entirety the capital stock of the Revere Rubber company would be worth the market price, and more, to the United States Rubber Co., especially if its acquisition would procure the valuable assistance of Mr. Williams. Therefore, your president, together with some of the directors, decided that the purchase should be made and should be offered to the United States Rubber Co. upon their guaranty of a sufficient financial provision, if it should decide to accept the same upon the terms offered by them.

On December 10, 1909, your president made a preliminary contract with Mr. Williams which, upon December 17, was offered to and was accepted and adopted by your board of directors, and on or before December 24, substantially all of the Revere Rubber Co. stock had been acquired by or for the United States Rubber Co.

TREASURER'S REPORT.

UNITED STATES RUBBER CO. AND SUBSIDIARY COMPANIES.

[Not including Assets or Liabilities of Rubber Goods Manufacturing Co. and certain other Companies owned in part by United States Rubber Co.]

CONSOLIDATED GENERAL BALANCE SHEET, MARCH 31, 1910.

ASSETS.

Property and plants (including shares of R. G. M. Co., Canadian Consolidated Rubber Co., Ltd., and Revere Rubber Co.)	\$82,968,768.84
Inventories, manufactured goods and materials	\$16,016,985.86
Cash	3,599,555.96
Bills and loans receivable	2,136,417.42
Accounts receivable	11,080,361.84
Stock owned in General Rubber Co.	2,000,000.00
Securities, including stock of United States Rubber Co. held by a subsidiary company	2,991,473.15
Miscellaneous assets	138,366.40
	37,963,160.63
Total assets	\$120,931,929.47

LIABILITIES.

Capital stock, first preferred	\$40,000,000.00
Capital stock, second preferred	10,000,000.00
Capital stock, common	25,000,000.00
Ten-year 6% collateral trust sinking fund gold bonds*	\$19,500,000.00
Less bonds unsold	2,500,000.00
Advance on \$2,500,000 of said bonds	2,500,000.00
Loans and notes payable	4,947,077.55
Merchandise accounts payable	710,256.53
Accrued interest, taxes, etc.	422,480.24
Due General Rubber Co.	2,830,425.09
Reserve for federal excise tax, if upheld	37,243.39
Reserve for doubtful accounts	100,000.00
Reserve for contingencies	500,000.00
Reserve for dividend	950,000.00
Fixed surplus (subsidiary companies)	8,134,849.37
Surplus	7,799,597.30
	11,410,239.41
Total liabilities	\$120,931,929.47

The contingent liability for certain guarantees, which are offset by corresponding contingent assets, is not included.

*\$500,000.00 of the original issue of \$20,000,000.00 bonds have been canceled under sinking fund provision.

CONSOLIDATED INCOME STATEMENT FOR YEAR ENDING MARCH 31, 1910.

Gross sales, boots and shoes and miscellaneous	\$56,305,017.00
Net sales, boots and shoes and miscellaneous	\$38,711,051.43
Cost of goods sold	29,884,457.31
Manufacturing profits	\$8,826,594.12
Freight, taxes, insurance, general and selling expenses	1,831,722.40
Operating profits	\$6,994,871.72
Other income (net), including dividends received on stock of certain other companies owned by United States Rubber Co.	1,024,950.31
Total income	\$8,019,822.03
Less:	
Interest on borrowed money	\$394,977.41
Interest allowed customers for pre-payments	447,266.83
	842,244.24
Net income	\$7,177,577.79
Deductions for bad debts, etc.	53,497.97
Profits	\$7,124,079.82
Coupons and interest paid on Ten-Year 6% gold bonds	988,916.67
	\$6,135,163.15
Reserve for doubtful accounts	\$100,000.00
Reserve for contingencies	500,000.00
	600,000.00
Net profits	\$5,535,163.15
Dividends	3,574,205.00
Surplus for period	\$1,960,958.15
Surplus April 1, 1909	5,838,639.15
Surplus March 31, 1910	\$7,799,597.30

JOHN J. WATSON, JR., Treasurer.

* * *

THE certificate of audit of the company's accounts is signed by Haskins & Sells, certified accountants.

On January 5, 1910, Mr. Elisha S. Williams was elected to the office and assumed the duties of president of the Rubber Goods Manufacturing Co.

ISSUE OF CAPITAL STOCK AND BONDS.

To finance the acquisition of this stock of the Revere Rubber Co. and outstanding shares of the Canadian Consolidated Rubber Co., Limited, as well as to provide additional working capital needed for the growing business of the United States Rubber Co., the most available resources were the unissued 35,614 shares of First Preferred stock and \$5,000,000 6 per cent. bonds of this company. The syndicate which was formed, comprising your president and some of the directors, undertook to purchase at \$110 a share all of the preferred stock which should be offered to stockholders and not taken by them at that price, to purchase outright at par \$2,500,000 bonds, and, at the option of the company at any time before December 20, 1910, to purchase at par the other \$2,500,000 bonds, in the meantime lending thereon the full amount thereof at 6 per cent. interest, the terms being more fully stated in the circulars of December 23, 1909, and December 29, 1909, which were issued to every stockholder.

In addition the syndicate was to receive the net profits of the Revere Rubber Co. until December 31, 1911, but any excess above \$700,000 was to be divided between the syndicate and the United States Rubber Co. In this way the company was to receive about \$9,000,000 cash, in consideration of the issue of its stock and bonds at a price in the aggregate exceeding any ever received by it therefor, and also the profits, after December 31, 1911, of the Revere Rubber Co., which, if yielding the stated profit to the syndicate, would demonstrate the very great value of its acquisition by the United States Rubber Co.

Upon the offer of December, 1909, the stockholders took 27,997 shares of First Preferred stock and the syndicate took the remaining 7,617 shares at 110. It also took \$2,500,000 bonds at par and loaned the company \$2,500,000 on the remaining bonds, which it must take at par at the option of the company. Thus there was provided about \$9,000,000, of which \$4,000,000 were used for the purchase of stock of the Revere Rubber Co., \$1,000,000 were used for purchase of stock of the Canadian Consolidated Rubber Co., and about \$4,000,000 cash was added to the working capital of the company. Information as to these matters and opportunity to examine the contract with the syndicate were offered to stockholders in the circular of December 23, 1909, and are now open to stockholders upon application at the office of the company, No. 42 Broadway, New York. The entire transaction will be submitted to the stockholders for approval at the annual meeting.

ADDITIONAL DIRECTORS.

In connection with the acquiring of a larger interest in the Canadian Consolidated Rubber Co., Limited, the president of that company, Mr. D. Lorne McGibbon, was on March 3, 1910, elected a director of the United States Rubber Co., which election brought a most valuable addition to the board.

On March 3, 1910, the directors also voted (there being no other vacancy upon the board) to recommend to the stockholders at the approaching annual meeting the election of Mr. Elisha S. Williams, president of the Rubber Goods Manufacturing Co., as a director of the United States Rubber Co.

COMMON STOCK DIVIDENDS.

The earnings of the company the past year, considered by themselves, would seem to warrant some division to the common stockholders, and, were it not for the abnormally high price of crude rubber existing, and the consequent requirement of a much larger sum of money to purchase and carry the same, your president would feel warranted in recommending a dividend upon the common stock at the present time.

CONCLUSIONS.

All things considered, while there is yet much to do to bring our company to that degree of efficiency in all its departments for which we are striving, your president feels that important progress towards that end has been made during the past year, and that, with the securing of our crude rubber at reasonable prices, the outlook for the growth and prosperity of the company is very gratifying.

New uses for rubber as an article of manufacture are arising nearly every day. As an illustration, ten years ago rubber tires, that now alone consume one-half of the raw product, were not an important factor in the trade. For this reason, every step of the business, from the gathering of the crude rubber from the Amazon and its tributaries, from Mexico and Africa and from the plantations of the Far East, to the manufacture and sale of the great variety of the finished product, possesses new and ever increasing interest.

Your president returned at the end of last summer's vacation, with renewed health and vigor. He takes pleasure in acknowledging the loyal and efficient services of the officers and employees of the company and its subsidiary companies. Respectfully submitted,

SAMUEL P. COLT, President.

New Brunswick, New Jersey, May 17, 1910.

THE ANNUAL ELECTION.

THREE new names appear in the list of directors chosen this year. John J. Watson, Jr., for several years a member of the board and of the executive committee and treasurer of the corporation, tendered his resignation to the directors just prior to the annual meeting. Two other resignations from the board were Messrs. William H. Moore and Francis Lynde Stetson, of New York. The number of directors this year is the same as last—twenty—and the three new names are (1) Elisha S. Williams, who was general manager of the Revere Rubber Co., recently acquired, and is now president of the Rubber Goods Manufacturing Co., and is named as succeeding Mr. Watson; (2) James Deshler, some time secretary of the New Jersey Rubber Shoe Co., later president of the New Brunswick Rubber Co., and now general manager of the Jersey factory of the United States Rubber Co., and mentioned as the successor to Judge Moore, who retires in view of a projected long visit to Europe; and (3) D. Lorne McGibbon, president of the Canadian Consolidated Rubber Co., Limited, already a member of the board, filling a vacancy caused by the retirement of Francis Lynde Stetson as a director, but remaining general counsel of the United States Rubber Co. The board is now composed as follows, the figures indicating the number of successive annual elections of the respective directors:

Walter S. Ballou, Providence, Rhode Island. [8.]
 Elias C. Benedict, No. 80 Broadway, New York. [9.]
 Anthony N. Brady, No. 54 Wall street, New York. [7.]
 Samuel P. Colt, Bristol, Rhode Island. [19.]
 Harry E. Converse, Boston, Massachusetts. [13.]
 James Deshler, New Brunswick, New Jersey. [1.]
 James B. Ford, No. 42 Broadway, New York. [19.]
 J. Howard Ford, No. 42 Broadway, New York. [10.]
 Frank S. Hastings, No. 80 Broadway, New York. [6.]
 Francis L. Hine, No. 2 Wall street, New York. [8.]
 Henry L. Hotchkiss, New Haven, Connecticut. [19.]
 Arthur L. Kelley, Providence, Rhode Island. [5.]
 Lester Leland, Boston, Massachusetts. [12.]
 D. Lorne McGibbon, Montreal, Canada. [1.]
 Edward R. Rice, No. 42 Broadway, New York. [2.]
 Homer E. Sawyer, No. 42 Broadway, New York. [15.]
 Frederick M. Shepard, No. 787 Broadway, New York. [19.]
 William H. Truesdale, No. 26 Exchange place, New York. [6.]
 John D. Vermeule, No. 503 Broadway, New York. [14.]
 Elisha S. Williams, No. 42 Broadway, New York. [1.]

It may be noted that Mr. Deshler has served already upon the board, under elections on October 15, 1892, and April 18, 1893.

The newly elected board met in New York and after organizing elected the following officers and executive committee:

- President—SAMUEL P. COLT.
- Vice President—JAMES B. FORD.
- Second Vice President—LESTER LELAND.
- Treasurer—JAMES B. FORD (succeeding John J. Watson, Jr.).
- Assistant Treasurer—W. G. PARSONS.
- Secretary—SAMUEL NORRIS.
- Assistant Secretary—JOHN D. CABBERRY.
- Executive Committee—Samuel P. Colt, James B. Ford, Lester Leland, E. C. Benedict, Walter S. Ballou, Anthony N. Brady, Elisha S. Williams (succeeding John J. Watson Jr.).

AMENDMENT OF BY-LAWS.

Among the various amendments to the by-laws of the company voted upon by the stockholders was the following, which was adopted:

Resolved, that Article II of the by-laws be amended by adding thereto the following section 7:

SECTION 7.—*Contracts.* Inasmuch as the directors of this company are men of large and diversified business interests, and are likely to be connected with other corporations with which from time to time this company may have business dealings, no contract or other transaction between this company and any corporation, the majority of whose stock is directly or indirectly owned or controlled by this company, shall be affected by the fact that the directors of this company voting in favor of such contract or transaction, are also interested in or are directors or officers of such other corporation; nor shall any such contract or other transaction with any other corporation be so affected in any case by reason of the fact that directors of this company are interested in or are directors in or officers of such other corporation, if, at the meeting of the board or committee of this company making, authorizing, or confirming such contract or transaction, there shall be present a quorum not so interested, provided a majority of such quorum shall vote in favor of such contract or transaction; and any director of this company may individually for his own account be a party to or be or become interested in any contract or transaction of this company, provided that such contract or transaction shall be authorized, approved or ratified by the affirmative vote of at least ten directors not so interested.

At any meeting of the board, or of a committee of this company at which a contract or transaction is made, authorized, or ratified, any director who is interested therein, either individually or as a director of another corporation which is interested therein, shall disclose the nature of his interest therein and withdraw from the meeting while such contract or transaction is under discussion, and the remaining directors shall cause to be entered on the minutes of the meeting the statement that they are informed as to such interest of such other directors, and that at that time they themselves neither have nor intend to have any such interest therein.

The board of directors in its discretion may submit any contract or act for approval or ratification at any annual meeting of the stockholders, or at any meeting of the stockholders called for the purpose of considering any such act or contract; and any contract or act that shall be approved or be ratified by the vote of the holders of a majority of the capital stock of the company which is represented in person or by proxy at such meeting (provided that a lawful quorum of stockholders be there represented in person or by proxy) shall be as valid and as binding upon the corporation and upon each and all of the stockholders as though it had been authorized, approved or ratified by every stockholder of the corporation.

BUSINESS OF THE COMPANY.

The following table, showing the amount of net profits of the United States Rubber Co. and the amounts disbursed in dividends since the organization of the company, has been compiled from the printed reports of the successive treasurers of the corporation:

YEAR ENDING—	Net Profits.	Dividends.
March 31, 1893.....	[Not Published.]	
March 31, 1894.....		
March 31, 1895.....	\$2,176,370.00	\$2,056,190.00
March 31, 1896.....	2,339,790.60	1,552,040.00
March 31, 1897.....	1,999,611.34	1,552,040.00
March 31, 1898.....	2,070,750.41	1,552,040.00
March 31, 1899.....	3,226,513.46	1,882,040.00

YEAR ENDING—	Net Profits.	Dividends.
March 31, 1900.....	\$3,007,887.54	\$2,828,680.00
March 31, 1901.....	62,605.57	705,765.00
March 31, 1902.....	deficit	none
March 31, 1903.....	1,594,908.16	none
March 31, 1904.....	1,575,641.29	none
March 31, 1905.....	3,761,922.63	1,882,040.00
March 31, 1906.....	3,881,270.23	2,846,092.00
March 31, 1907.....	4,590,382.72	3,485,956.00
March 31, 1908.....	3,553,556.14	3,495,448.00
March 31, 1909.....	4,507,055.39	3,498,940.00
March 31, 1910.....	5,535,163.15	3,574,205.00

CANADIAN CONSOLIDATED RUBBER CO., LIMITED.

The figures which follow represent the financial condition of this company at the end of the calendar year 1909:

ASSETS.	
Cash	\$1,811.47
Accounts receivable	71,148.68
Furniture and fixtures.....	4,240.29
Investments in the capital stock of subsidiary companies	7,296,950.00
[Being 97 per cent. of the capital of The Canadian Rubber Co. of Montreal, Limited, and 100 per cent. of the capital stock of the Granby Rubber Co., Limited; the Maple Leaf Rubber Co., Limited; and the Berlin Rubber Co., Limited.]	
Total	\$7,374,150.44

LIABILITIES.	
Six per cent. bonds:	
Authorized	\$2,600,000.00
Less unissued	58,700.00
Preferred capital stock:	
Issued	1,980,000.00
Less in trust (Royal Trust Co.)...	20,545.00
Common capital stock:	
Issued	2,805,500.00
Less in trust (Royal Trust Co.)..	8,805.00
At credit of profit and loss.....	76,700.44
Total	\$7,374,150.44

PROFIT AND LOSS ACCOUNT.	
By balance brought forward	\$33,386.29
By dividends from subsidiary companies. \$313,787.58	
By revenue from other sources.....	193,958.70
Total	\$541,132.57
To bond interest	\$515,296.00
To preferred dividends (7%).....	136,732.75
To common dividends (4%).....	111,741.00
To general expense	64,662.38
Surplus	\$76,700.44

The gross earnings compare with \$356,684 in 1908. The dividends are the same, with the exception of an increase of \$601 in the preference dividend.

* * *

The list of officers of the Canadian Rubber Co. of Montreal, Limited, has undergone some changes of late. Mr. McGibbon remains president and the list as a whole now stands as follows:

- President—D. LORNE MCGIBBON.
- General Manager—F. H. WARD.
- Manager Footwear Department—W. BINMORE.
- Manager Mechanical Goods—F. E. PARTRIDGE.
- Secretary and Treasurer—LEONARD D. SHAW.

ELASTIC or plastic products designed as substitutes for india-rubber or gutta-percha are the subject of the British patent (No. 27,688—1908) issued to Wallace and Reynaud. Gum resins extracted from the Xanthorrhœas or other like trees are added to a bath of vegetable oil heated to a temperature above 200° C. A mixture of equal parts of linseed oil and gum resin is specified.

WOMEN TAPPING RUBBER.—Malay women have now taken to tapping rubber and on an estate, not far from Taiping, some of them can be seen regularly at work. They are said to be quite clever at the job and remarkably clean and swift.—*Pinang Gazette.*

Rubber Goods Manufacturing Co.'s Annual.

THE eleventh annual meeting of the shareholders of the Rubber Goods Manufacturing Co., a corporation of New Jersey, was held at the registered offices of the company in Jersey City, on Thursday, May 19. The annual reports of the officers of the company were read and approved, and are given here in full form.

PRESIDENT WILLIAMS'S REPORT.

TO THE STOCKHOLDERS OF THE RUBBER GOODS MANUFACTURING Co.: Your president did not come into office until January 1, 1910, or at the close of the fiscal year of the company.

The annual report of the treasurer of your company shows a large increase in sales over all preceding years. This increase has applied to all lines of goods manufactured by your company, although much more largely to automobile tires, extraordinary attention having been given to this branch of the business, with the view of bringing about a materially increased demand for our tires. This has been accomplished, but in so doing largely increased expenses, together with increased equipment, have been called for, which has prevented our showing a proportionate increase in net earnings, but from which we shall derive much benefit in the future.

The maintenance of all plants and equipment has received and is receiving the same careful attention as in previous years, and all are in excellent condition.

The increase in bills and accounts payable is the result of high prices for crude rubber and other materials and larger volume of business. It will be noted that inventories show a corresponding increase. Respectfully submitted,

ELISHA S. WILLIAMS, President.
Jersey City, New Jersey, April 14, 1910.

TREASURER'S REPORT.

CONSOLIDATED GENERAL BALANCE SHEET, DECEMBER 31, 1909.

ASSETS.

Property, plants and investments.....	\$24,786,194.24	
Patents and trade marks.....	2,311,621.32	
Inventories, manufactured goods and materials.....	\$12,917,183.90	
Cash	1,121,737.63	
Bills and accounts receivable...	3,611,417.22	17,650,338.75
Securities owned.....	7,822.42	
Stock owned in General Rubber Co.	1,000,000	1,007,822.42
Miscellaneous assets.....	202,743.51	
Total assets.....	\$45,958,720.24	

LIABILITIES.

Capital stock, preferred.....	\$10,351,400.00	
Capital stock, common.....	16,941,700.00	\$27,293,100.00
Bonds of Mechanical Rubber Co. and New York Belting and Packing Co. (less amount owned)	\$983,510.00	
Sinking fund cash in hands of trustee	130,108.27	853,401.73
Reserve for redemption of bonds.....		588,548.53
Bills and accounts payable.....		8,675,780.31
Reserve for new construction.....		523,643.05
Reserve for federal excise tax.....		23,160.74
Fixed surplus (subsidiary companies).....		2,499,218.65
Surplus		5,501,867.23
Total liabilities.....	\$45,958,720.24	

Of the above "surplus" minority stockholders would be entitled to \$127,370.55. Contingent liabilities for certain guarantees which are offset by corresponding contingent assets, are not included.

CONSOLIDATED SUMMARY OF INCOME AND PROFIT AND LOSS FOR YEAR ENDED DECEMBER 31, 1909.

Net sales.....		\$25,629,592.71
Earnings of subsidiary companies.....		\$2,332,920.65
Realized from securities heretofore charged off.....	\$160,000.00	
Less:		
Expenses of home office.....	122,949.04	37,050.96
Net profits.....		\$2,369,971.01
Dividends	\$963,489.00	
Added to reserve for redemption of bonds.....	73,510.06	1,036,999.06
Surplus for the period.....		\$1,332,972.55
Surplus and working capital January 1, 1909..		4,168,894.68
Surplus and working capital December 31, 1909	\$5,501,867.23	

Respectfully submitted,
THOMAS H. LEE, Treasurer.

The annual election resulted in the election of the following directors of whom two are new, Messrs. Williams and Ford. The name of Mr. Watson, previously on the board, does not appear this year. At a meeting of the board held on May 20, at No. 42 Broadway, the election of officers resulted:

President.—ELISHA S. WILLIAMS.
Vice Presidents.—LESTER LELAND and CHARLES A. HUNTER.
Treasurer.—E. J. HATHORNE.
Assistant Treasurer.—JOHN D. CARBERRY.
Secretary.—SAMUEL NORRIS.
Assistant Secretary.—JOHN D. CARBERRY.
Executive Committee.—Elisha S. Williams, Lester Leland, Anthony N. Brady, Samuel P. Colt, Ernest Hopkinson, Charles A. Hunter, and Homer E. Sawyer.

The certificate of audit of the company's accounts is signed by Haskins & Sells, certified accountants.

The following record of the volume of net sales by the Rubber Goods Manufacturing Co. and the subsidiary companies is compiled from the successive annual reports as published:

1900.....	\$13,364,090.00	1905.....	\$17,662,453.00
1901.....	14,348,046.00	1906.....	19,737,120.81
1902.....	13,999,329.00	1907.....	21,473,823.28
1903.....	14,310,752.00	1908.....	18,491,987.90
1904.....	14,556,289.00	1909.....	25,629,592.71

GUTTA-PERCHA IN SURGERY.

WRITING in the *Journal* of the American Medical Association, Dr. Frank speaks of the lack of familiarity with gutta-percha and its surgical uses and the confusion that exists between it and rubber tissue. While there are points of similarity between them, they are very different and are not available for the same purposes. He reviews the history of the substance and its surgical use, and says his own attention was called to it by its unirritating properties. Surgeons, on its first introduction, made rather extensive use of it, but since its supersession by plaster of paris as a splint material very little has appeared in regard to it in medical literature. He speaks especially of its value as an occlusive dressing, for which it has advantages over oiled silk in that it is free from odor, is more pliable, and is not disintegrated by body temperature and moisture. It is also valuable for drainage, and he gives a large number of applications in which it may be useful. He also reports his experiments with the sterilization of this substance and finds that it can be sterilized effectually by a 1 to 1,000 or 1 to 2,000 bichloride of mercury solution, which does not seem to affect its physical properties.

PRICES NOT ELASTIC.—Just now the price of rubber stretches readily, but won't contract.—*New Albany (Indiana) Tribune.*

English Novelties in Rubber Garments.*

THE very practical idea of closing all wholesale houses from Good Friday to the Tuesday after Easter has been customary in England for a number of years. In consequence, millions of people enjoy four holidays, but besides that, Maundy-Thursday is given to a part of the employes, and still others are even excused on the Tuesday after the

festival, while very many principals extend their holidays to the second Monday after Easter. Under these circumstances one can easily imagine what an exodus there is from here to the seaside places. The different railway lines from London, according to the published reports, carried 300,000 pleasure seekers as early as Maundy-Thursday, and over a half million on Good Friday.

*From a report written in London in April by Curt Otto, for the *Gummi-Zeitung* (Berlin).

The daily papers send special reporters to observe the



ENGLISH NOVELTIES IN RUBBER GARMENTS.

extraordinary traffic and concourse of people, and in doing so, several of that wideawake fraternity were struck by the fact that nearly every one of these Easter tourists, whether man or woman, and traveling first or third class, was provided with a rubber mantle, rubber coat, or pelerine. It appears, therefore, that we are rapidly approaching the time when every Englishman will possess his mackintosh. This is all the more remarkable, because naturally the article must be much more expensive now, if the same good quality is insisted upon, than in former times. The manufacturers, however, manage to overcome the difficulty by decreasing the thickness, or increasing the thinness of the stuff, to a hardly diminishable lightness, but in all probability were obliged to do so by the immense business demand. As a matter of fact, the rubber coats of to-day are of such light weight that ladies especially are using them as dust coats.

On the other hand, the cut of rubber garments has been so highly elegant that neither the most aristocratic lady nor the most fastidious gentleman need feel any hesitation about showing herself or himself in them anywhere. The English royal couple, and in their train the princes, princesses, and the whole court, are giving a good example in following this fashion. The different manufacturers produce their own styles, so that variety certainly is not wanting, and though they may differ in style, they are all *chic*. The advance in motor sport has contributed very considerably to render the rubber coats popular with ladies and gentlemen, also the immense growth of the yachting sport.

It is hardly possible to imagine anything better and more practical at sea than an entire rubber suit for gentlemen, or a pelerine for ladies. More than formerly, the rubber dress is being worn in all sorts of outdoor sports, and for fishermen and hunters it is simply ideal. The latter nowadays pursue their pleasure in rubber jackets and trousers of irreproachable cut. More and more the fashion also seems to gain headway of providing the coachman and the lackey with rubber coats, the latter individual even with close fitting rubber coats and trousers.

In our illustrations we show something entirely new and uncommonly practical, the "motor rug." This article was invented by a very experienced motor driver of the London "upper ten," and does not possess the inconveniences of the common motor apron. By a very simple fastening at the neck this front spread is always kept in its proper position and can not slip down, even when the wearer walks, and the "bib" or chest protector, gives complete protection from rain, snow and strong cold winds. This article also recommends itself by its price, which in the giant bazaars of the West End is as low as from 23s. 6d. [= \$5.72] up. The front spread has been patented in the United Kingdom, and, although only recently invented, sells exceedingly well at home and abroad.

Another novelty, coming from Paris, if I am not mistaken, is the "Capuchon," an attachment which can be buttoned under the collar of gentlemen's or ladies' overcoats and drawn up to cover the head.

Our illustration No. 2 shows an elegant double breasted gentleman's overcoat. Illustrations No. 3, 4, and 5 are the latest rubber overdresses for ladies, made by a Paris house, established in London and representing French (more or less Anglicized) models. A few years ago hardly anybody would have even imagined that these drawings represented rubber dresses, while to-day the highly elegant cut is none too good for them.

In illustrations Nos. 6, 7 and 8 we introduce some of a large number of the newest models of purely English origin, which have pleased most through their *chic* quality, combined with simplicity of taste. With the gigantic business which is done in rubber garments for gentlemen, ladies, and

children in the British isles there are always so-called waterproof fabrics appearing which have been made by different chemical processes to resist the rain more or less, and which for short walks or light showers are useful enough, but do not give any protection against a heavy and protracted rain.

The manufacturers try to offset the evident disadvantage by working the stuff up into very pleasing patterns of harmonious colors. After several judicial decisions had been obtained against the manufacturers who advertised waterproof materials without finishing them, the advertisements are now made to read "Waterproof in light rain."

CHEWING GUM TRADE IN ENGLAND.

THE Tutti-Frutti Sen-Sen Co., Limited, was registered in London, on May 4, 1910, with £20,000 capital, to engage in the business of manufacturers of and dealers in American chewing gum and cachouc, bakers, confectioners, etc.; and to acquire and amalgamate the business of the American Chiclet Co., carried on at 56, Newcomen street, London, and the business of the Sen-Sen Chiclets Co., at 9, Farringdon avenue, E. C. The new company, though organized under the incorporation act, is of the class known in England as private companies. The registered office is 56, Newcomen street.

It has been considered hitherto that the manufacture of chewing gum, of which the Mexican chiclet gum is the basis, was a distinctly American institution, though of late the American Chiclet Co. have maintained an important factory in Toronto, Canada. The exports of chewing gum from the United States have been on a very small scale, though the production has been enormous. Such exports as have been made have been particularly to Australia and South Africa. Some time ago the American Chiclet Co. established a branch in England and it would appear from the organization of the new company mentioned above that chewing gum as an article of commerce may become more important than in the past outside of the United States.

The American Chiclet Co., mentioned in this paragraph, was established in 1899 with a capitalization of \$9,000,000, and has been a large dividend payer from the beginning. The dividends for several years past have amounted to \$960,000 a year. This company was based upon a consolidation of half a dozen or more factories. Its success led to the development of several independent companies, which were combined about a year ago under the style Sen-Sen Chiclets Co., with a capital of \$6,700,000.

It is interesting to note that Mr. Charles R. Flint, who was so long prominent in the American rubber trade, and who was the chief promoter of the American Chiclet Co., was active in the organization of the newer American company named. The details given here regarding the new British company would indicate at least a community of interest between the two American corporations.

AMONG the exhibits in the British section at the Brussels International Exhibition a prominent space is occupied by The North British Rubber Co., Limited (Edinburgh). In addition to being manufacturers of the "North British" clincher motor and cycle tires, "North British" aeroplane fabrics, and so on, the company named are among the largest makers of rubber footwear and mechanical and surgical rubber goods. Their exhibit is very complete and representative of the rubber industry in the British empire. The company are distributing at the exhibition an attractive booklet entitled "Golden Opinions," containing testimonials from users of their tires, including a mention of a tire having been run 6,000 miles on a rear wheel of a 25 HP. landaulet weighing nearly two tons.

Some Rubber Interests in Europe.

GOOD PROFITS OF MANDLEBERG.

AT the annual meeting of shareholders of J. Mandleberg & Co., Limited (Manchester, March 31) the reports showed the largest profits for any year in the company's history—£49,519 *3s. 9d.* [= \$240,984.21]. While the subject is not touched upon in the report, it may be mentioned that whereas the business of the Mandleberg company was confined to waterproof goods, they now control factories in other branches of the industry, notably The United Rubber Co., Limited, at Woodley, near Manchester. The company as constituted in 1889 had a capital of £20,000 in 7 per cent. cumulative preference shares, £120,000 in ordinary shares, and £70,000 in 4½ debentures. Two points of interest in the latest report are: (1) The debentures have been reduced to £7,000, and the whole issue is to be retired next year; (2) the ordinary capital has been increased to £180,000 by the issue of 60,000 new shares, as a bonus to the original holders, representing individual profits of the company. The following table shows the distribution of dividends on the ordinary shares for the past fifteen business years:

1895	5 %	1900	15 %	1905	10 %
1896		1901	17½%	1906	12½%
1897	6 %	1902	17½%	1907	12½%
1898	10 %	1903	20 %	1908	12½%
1899	12½%	1904	12½%	1909	12½%

DUNLOP RUBBER CO.—INCREASE OF CAPITAL.

A MEETING of the Dunlop Rubber Co., Limited, was called for April 12, for the purpose of considering a resolution for increasing the capital of the company. It was proposed to transfer £480,000 from the reserves, as a permanent addition to the capital, which has stood at £240,000. The plan was to issue to shareholders new fully paid up shares for an amount equal to double their former holding, thus increasing the paid up capital to £720,000. The proposal was approved.

The directors of the Dunlop Rubber Co., Limited, declared an interim dividend, at the rate of 100 per cent. per year, for the half year ended February 28, 1910.

LATEST NEWS REGARDING "VELVRIL."

F. REDDAWAY & CO., LIMITED (Manchester) have purchased from the liquidator the factories and business of The Velvriil-Bounand Co., Limited, in London. The basis of this latter business was the manufacture of "Velvriil," patented by Walter F. Reid. [See THE INDIA RUBBER WORLD, June 1, 1908—page 294.] The Messrs. Reddaway, according to *The India-Rubber Journal*, mean to carry on the manufacture of the Velvriil product, which is a substitute for leather, on an important scale.

COLONIAL RUBBER CO. IN GERMANY.

KOLN-EHRENFELDER Gummiwerke Aktiengesellschaft, at Cologne-Ehrenfeld, has gone into liquidation. This business originally was the German branch of Coloniale Caoutchouc Société Anonyme, of Brussels, and was devoted principally to working in Germany the Cox ball patent. The company style above mentioned was adopted in the latter part of 1907. After various changes in their business, the works were devoted to the manufacture of mechanical rubber goods, but at the end of last year the decision was reached to go into liquidation.

WASHING CRUDE RUBBER.

THE Crude Rubber Washing Co., Limited, registered in London, March 31, 1910, with a stated capital of £250,000 [= \$1,216,625], has been formed for the purpose of acquiring

as a going concern the rubber washing business of the British Murac Syndicate, Limited (London), together with the rights for using the patent of Morland M. Dessau for purifying and cleaning rubber, and also for the purpose of working in conjunction therewith machinery invented and patented in France and other countries by Leon Guignet, of Lyons, so far as the same relates to the cleaning of rubber. A small inaugural plant has been in operation at the works of the British Murac Syndicate, Limited, since October, 1908, with results referred to as being very satisfactory. In view of the important proportion of the world's rubber production now coming to market containing impurities—often to a very large per cent.—the proposition is to supply central washing stations, so to speak, at which individual manufacturers will be able to buy in a clean condition any grade of rubber which they may desire. The machine invented by Leon Guignet [see THE INDIA RUBBER WORLD, March 1, 1910—page 202] is in use already in the French Congo and arrangements have been made for its use by the recently incorporated Madagascar Rubber Co., Limited. The board of the Crude Rubber Washing Co., Limited, embraces Mr. Maldwin Drummond, chairman of the British Murac Syndicate, Limited, and Mr. R. Phipps Hornby, a director in the Madagascar Rubber Co., Limited. The manager of the new company is Mr. Morland M. Dessau, joint manager of the British Murac Syndicate, Limited.

BRITISH NOTES.

EXTENSIVE damage was done, by fire, on April 6, to the large works of P. Frankenstein & Sons, Limited—Victoria Mills, Newton Heath—Manchester, England. The buildings remain standing, but valuable machines and goods were destroyed.

W. T. Henley's Telegraph Works Co., Limited, report a net profit for 1909 in excess of 1908, although in some respects the year had not been a good one for the trade. The best feature of the year had been the extension of the company's foreign and colonial trade. Dividends were as usual—15 per cent. on £200,000 of ordinary shares and 4½ per cent. on £350,000 of preference shares. Counting as capital the £200,000 of reserves—on which no dividend is paid—the return works out at an average of 6 per cent. on the total capital.

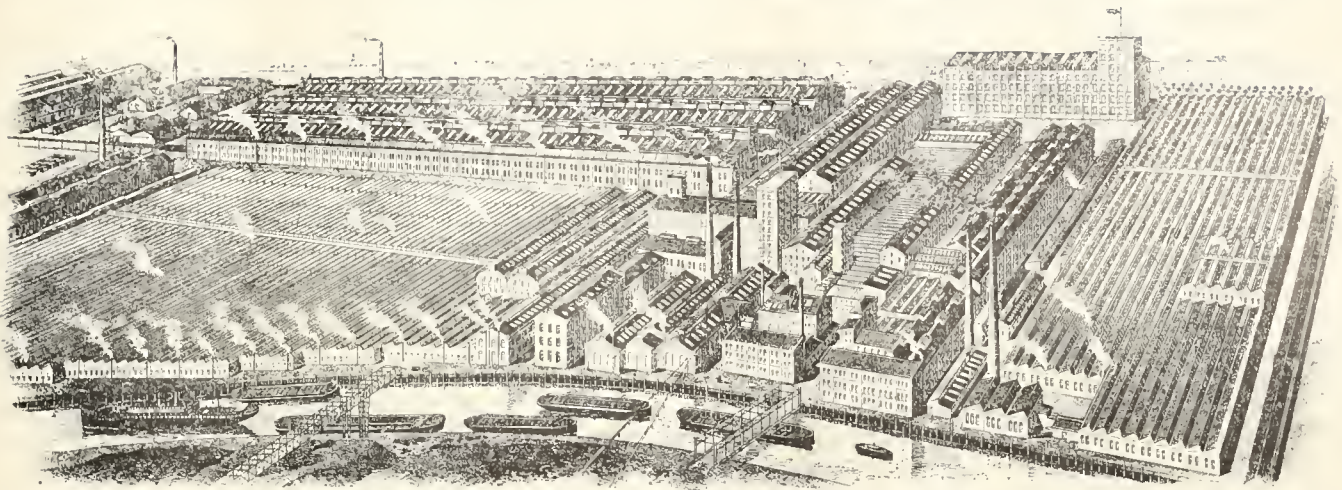
Liverpool Rubber Co., Limited.—Dividends of 5 per cent. on the preference shares and 2 per cent. on the ordinary shares for the business year 1909 have been declared. The ordinary dividend is the same as for the preceding year. For four years before that there was nothing for either class of shares. The capital is £130,000 [= \$632,635.]

W. T. Glover & Co., Limited (Manchester).—At the last annual meeting the payment was authorized of the usual dividend on the 5 per cent. cumulative preference shares and 5 per cent. on the ordinary shares.

The Victoria Rubber Co., Limited (Edinburgh).—The dividend for the business year ended December 31, 1909, is 10 per cent., with a bonus of 2½ per cent.

A ROYAL VISITOR IN A RUBBER WORKS.

PRINCE HENRY of Prussia visited Hanover a few days ago. Shortly after his arrival he proceeded to the home of Director Willy Tischbein, of the Continental-Caoutchouc- und Guttapercha-Compagnie, where he breakfasted. The Prince thereupon paid a visit to the Continental works, where he inspected very thoroughly the various manufacturing departments, under the guidance of Kommerziernrat Seligmann and other members of the board of managers. He appeared to



THE FRENCH-RUSSIAN INDIA-RUBBER FACTORY "PROWODNIK," AT RIGA, RUSSIA.

be intensely interested in all the manufacturing lines, and remained about four hours in the different parts of the works. Having completed his tour of inspection, Prince Henry, in company with the gentlemen of the Continental company, proceeded once more to the residence of Herr Tischbein, where he dined. Later the Prince returned to his hotel.

RUBBER PROFITS IN AUSTRIA-HUNGARY.

THE two principal rubber works of Austria-Hungary will pay the same dividends for the last business year as previously. The Oesterreichisch-Amerikansche Gummifabrik Aktiengesellschaft has declared 28 *kronen* and Ungarische Gummiwaren-Fabriks Aktiengesellschaft 25 *kronen* per share. Both companies are capitalized in shares of 400 *kronen* [= \$81.20], and the rate of dividend paid this year is respectively 7 per cent. and 6½ per cent. for the two companies.

GERMAN RUBBER PROFITS.

THE dividend of Frankfurter Asbestwerke Aktiengesellschaft (vormals Louis Wertheim), at Frankfort o/M., for their twelfth business year—1909—was 4 per cent., against 6 per cent. in 1908 and 7 per cent. in 1907.

At the last annual meeting of shareholders of the Mitteldeutsche Gummiwaren-Fabrik Louis Peter A.-G. (Frankfort o/M.) it was decided to increase the capital by 2,000,000 marks, making the total 5,000,000 marks [= \$1,190,000]. The company are very large producers of rubber tires as well as general rubber goods, having an important export trade. Their dividend for the last business year was 25 per cent., and for the preceding year 22 per cent.

The gross profit of Deutsche Kabelwerke, A.-G., at Rummelsburg, near Berlin, for 1909 was 1,244,005 marks, from which there remained after all deductions a net profit of 474,244 marks [= \$112,870], against 402,158 marks for the previous year. The dividend is 7 per cent., against 6 per cent. last year.

The dividend of Aktieselskabet den Norske Remfabrik, of Christiania, Norway, for 1909 is 6 per cent.

LESS COTTON FROM THE WEST INDIES.

WHILE cotton continues to be grown in many countries besides the United States, the results to date do not encourage any hope of an early increase in the world's production such as to bring prices to a lower level. The United States consul in Barbados reports that the total shipment of cotton from the British West Indies for the calendar year 1909 amounted to 2,242,289 pounds. "This was a decrease of about 500,000 pounds from the preceding year. From the

best information obtainable, the crop for 1910 will show a still farther decrease. The cotton was nearly all sea island. The cultivation of sea-island cotton first became a factor in [Barbados in] 1902. There was a steady increase in acreage up to 1907, when it reached its maximum. Since that year there has been a decrease in acreage in nearly all the islands."

RETURN OF THE BICYCLE.

THE bicycle in the United States appears to have regained much of the popularity which it lost a few years ago in the period when the great bicycle manufacturing combination went to smash. Writing on this subject, *The Bicycling World* (New York) intimates that the demand for bicycles never did decline to the extent supposed by many persons. This paper says that there have been few years since the establishment of the industry when less than a quarter million bicycles have been produced in the United States alone; that there are still factories in this country which produce annually 40,000 or more bicycles each; and that during the present season some of these factories have not been able to cope with the enlarged demand that has arisen.

As for the bicycle interest abroad, it appears never to have fallen off in any year. The exports of bicycles alone—motorcycles not included—from four leading countries last year are stated to have been of the value of \$25,000,000. *The Bicycling World* estimates the total value of the production of bicycles at \$100,000,000 a year, and the production of motorcycles at \$50,000,000. With the production of these vehicles at such a rate it is evident that the demand for tires, which is helping to keep up the price of raw rubber, is not due to automobiles alone.

Speaking of motorcycles, the rapidly growing rural free delivery branch of the United States postal service seems to open a new field for the use of these vehicles. There are already about 40,000 rural letter carriers, and the number has been increasing rapidly of late. The motorcycle is stated to have been used with wholly satisfactory results by a number of carriers. The machines are not expensive, the cost of upkeep is slight, they are convenient to use, and make good time.

ACCORDING to the Detroit (Michigan) *Free Press*, the Mexican Crude Rubber Co. in 1909 made 2,500,000 pounds of guayule rubber, which realized for the company an average of 35 cents a pound, or a total profit of \$341,000. For 1910 the production is estimated at 3,000,000 pounds of rubber, already sold at an average of 54 cents a pound, amounting to a profit for the year of almost \$800,000.

THE RUBBER TRADE AT SAN FRANCISCO.

WITH the approach of summer comes an improved trade for the local dealers in mechanical rubber goods, and even druggists' sundries. The abundant crops, which are now beyond all danger of frosts, are of themselves a safe assurance of good business. The activities in the oil fields of California afford another income which goes to make prosperity for the state. The oil wells have developed to such an extent that this state is supplying more than one-third of all the oil produced in the United States, and this is an item of no small amount when added to one of the live assets of a community. Besides, there has been a tendency to revive activity in the gold mines of California which looks favorable to the dealers in mechanical goods.

* * *

ANOTHER thing which has had a decided tendency to infuse new life into the commercial depression from which San Francisco has lately been emerging, is the assurance that this city will have the United States government's assistance in making the celebration of the completion of the Panama canal in 1915, a World's Fair of great importance. All of the local merchants' organizations got together and raised a sum within a short time of over \$4,000,000, and another million has been practically raised within the past few weeks. Business men figure that there will be between \$40,000,000 and \$50,000,000 spent for purposes of building and celebrating the fair. That means a big circulation of money which in turn means more business for everybody. For these reasons local merchants are hopeful of the future.

* * *

IN the rubber trade it is and has been for a long time very quiet. The high price of crude rubber stands before them always as a bothersome problem, and they have raised prices themselves, but have as yet to learn how the trade will take the new schedules. With so many favorable conditions to offset the disadvantages, however, the merchants are confident of a good business.

* * *

THERE has been a raise in the price of mechanical rubber goods all along the line by the manufacturers of the Pacific coast. This action became an urgent necessity owing to the high price of rubber. The movement on the part of the manufacturers seems to have been universal and the trade will find it necessary to meet the new prices. The prices now quoted are the same as published by the eastern organization known as the Mechanical Rubber Goods Manufacturers' Association.

* * *

THE Pacific Coast Rubber Manufacturers' Association held its monthly banquet and business meeting on the evening of May 11, at the St. Francis Hotel. The meeting was largely attended and proved one of the most successful that has yet been held. The matter of the advanced prices in manufactured goods occupied the principal attention of the speakers and the fact that prices had been raised met with the approval of all the manufacturers.

* * *

MR. JOSEPH V. SELBY, Pacific coast manager for the Boston Woven Hose and Rubber Co., will make his regular annual trip to the factory at the last of May, and will return during the latter part of June. Mr. Herbert Selby, the company's representative in the northwest, will take charge of the San Francisco office during the absence of Mr. Joseph Selby.

* * *

THE Gorham Rubber Co. are starting a branch store in Oakland, California, on Twelfth near Alice street. Harry Carlton, who formerly was taking care of the Oakland business, will have charge of the new branch. This will be one of the prettiest stores of its kind on the coast. George Hand, formerly with the Gorham Rubber Co., is now a salesman and working up some of the city trade.

THE president of the Gutta Percha and Rubber Manufacturing Co. (New York), Mr. Henry Spadone, has been in San Francisco and along the western coast on a visit. He returned east a short time ago. This concern reports a fair business for the past month.

* * *

MR. R. H. PEASE, president of the Goodyear Rubber Co., is optimistic regarding conditions in San Francisco. "We find business improving," he said, "over the business of a year ago, even with the high price of rubber. The list prices have been advanced by the local manufacturers, but we do not think that that will affect the sale of belting. The trade looks more to the discount given on belting than they do to the list price, and this is a good thing for the manufacturers. It remains to be seen what the advance on rubber boots will do. A man is apt to wear something else besides rubber boots if the price goes too high, and so it will naturally affect sales, whereas the advance on rubber shoes will not be noticed so much. We have received more advance orders for boots and shoes than we expected, and if we have early fall rains we will have a big business in that line next year."

* * *

THE Young Sanitary Manufacturing Co. have turned their complete plant, manufacturing and selling rights of the United States, Canada and England, over to the Orca Manufacturing Co. These concerns are both of San Francisco, and the latter corporation was recently organized for the purpose of financing and putting on the market the Young sanitary toilet seat. J. D. McKenzie is president, and U. R. Grant is secretary and manager of the Orca Manufacturing Co. Mr. Grant is well known in the rubber trade in San Francisco and along the coast. The success of the big undertaking seems well assured.

* * *

MR. R. E. JOHNSTON has bought out the Argus Co. on First street. The principal business of this concern is the repair of typewriter plantens.

Mr. Crandley, of the Crandley Rubber and Supply Co., which has recently been organized, states that business has started much better than they expected, the second month being very satisfactory.

Austin Kanzee, of the Phoenix Rubber Co., has just left for a trip to the factories in the east.

The Pacific Coast Rubber Co. have added two new traveling men: Nick Loesch, formerly with the Pacific Hardware and Steel Co., and Ben Ames, formerly with the Ames Supply Co.

The specifications of the San Francisco fire department have been changed so as to permit bids from everybody. Heretofore the bids were open only to local concerns.

THE RUBBER TRADE IN TRENTON.

BY A RESIDENT CORRESPONDENT.

AT a special meeting of the directorate of the United and Globe Rubber Manufacturing Cos., held on May 4, Mr. Charles Y. Flanders, former mayor of Burlington, New Jersey, was elected to the board to fill a vacancy that had existed for some years. This was in recognition of the valuable services which he has given to the company for ten years past, during which he has been a sales agent. The board is at present composed of Watson H. Linburg (president), John S. Broughton (secretary-treasurer), William H. Brokaw, Karl G. Roebing, Wilbur F. Sadler, and Charles Y. Flanders.

General C. Edward Murray, of the Empire Rubber Manufacturing Co., as a member of the Trenton City Hall Building Commission, was instrumental, on May 23, in having the commission adopt a resolution which eliminates from the building any materials made by the Empire company. There is a New Jersey law prohibiting any city official from dealing directly or

indirectly in supplying any municipality with which he may be connected with materials or supplies, and while no question has arisen with regard to the company named, its management considered such a resolution as is referred to here to be proper.

The John E. Thropp's Sons Co. have about a dozen of their new tire wrapping machines on the market, five having been sold during the last month.

Mr. John S. Broughton, of the United and Globe Rubber Manufacturing Cos., has moved to his new home on West State street.

Mr. Welling S. Katzenbach, who for the past two years has acted as manufacturers' agent and broker in chemicals (particularly materials required by the rubber manufacturers) announces the formation, in conjunction with Mr. E. L. Bullock, of New York, of the Katzenbach & Bullock Co., to import and deal in chemicals and allied materials. The new company will maintain offices in the Broad Street Bank building, Trenton, and at No. 100 William street, New York.

The Stamford Rubber Supply Co. (Stamford, Connecticut) are advising their patrons that this is their decennial year, the inference being that their rubber substitutes have been "time proven."

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

IN the chemical laboratory at Buchtel College some features are being developed likely to be of interest to the rubber trade. As already mentioned in THE INDIA RUBBER WORLD, courses in rubber chemistry have been arranged to be taken only by the seniors in the college, as two years' study of general chemistry is necessary to prepare them for the rubber courses. A miniature rubber plant is being erected. A mixer is already in place, later a calender will be installed, and a vulcanizer will be put in position during the summer. It is stated that special attention is to be devoted to the study of reclaimed rubber and reclaiming methods. The new work is in charge of Dr. Charles Knight, of the college faculty, who happens, by the way, to be a member of the rubber section of the American Chemical Society. [See THE INDIA RUBBER WORLD, February 1, 1910—page 178.] As such he is chairman of the committee to organize standard methods of rubber analysis, the committee including representatives of two Akron rubber factories. It is understood that work on the standardization is now in progress.

* * *

THE Goodyear Tire and Rubber Co. have almost completed a good sized factory at Bowmanville, Canada, which is partly in operation and when completed will employ 100 men. The Goodyear company, who have an extensive trade over the border, have been induced to take this step as a means of offsetting the import duties charged in Canada. The new plant for the present will be devoted to the manufacture of tire. The business of the Canadian branch will be conducted under a Dominion charter, with \$250,000 capital stated, the incorporators being D. B. Simpson, W. F. Stearns, Norris Wilson, D. C. Betts, J. S. Moorcraft, A. W. McMillan, and J. H. McMurtry, the address of all of whom is given as Bowmanville.

* * *

CONTROL of the Motz Clincher Tire and Rubber Co. has been transferred through the purchase by the Goodyear Tire and Rubber Co. of the stock held by Charles A. Motz. The Motz company was incorporated April 15, 1905, with \$50,000 capital to market a solid tire invented by Mr. Motz, a lawyer of Akron. These tires have been made under contract and an important business has been done in them.

* * *

THE rubber industry was discussed at the annual banquet of "Group Nine," of the Ohio Bankers' Association, at the Akron Country Club, on May 11. Mr. F. A. Seiberling, president of

The Goodyear Tire and Rubber Co., in presenting figures of the rubber industry here, told the bankers that the par value of capital invested in Akron was \$30,000,000, while the market value is \$75,000,000, against \$100,000 invested in 1870. The volume of business of the local rubber factories, which employ 15,000 men, is \$70,000,000 a year, and the annual payroll amounts to \$10,000,000.

* * *

MR. O. S. HART, who recently retired from the position of cashier of the Diamond Rubber Co., though retaining a directorship in the company, will begin his rest by going to the Pacific coast. Mr. Hart has been connected actively with business life in Akron for many years. An old newspaperman, he entered the Diamond company at its organization, and grew steadily with the company.

* * *

AN innovation in the way of road signs has been established by The B. F. Goodrich Co. During the past month an automobile equipped with facilities to fix the road signs, which indicate distances, dangerous hills and curves, gasoline stations for automobiles, and the like, has been touring in the East. The company will cover the more important roads throughout the country from the Atlantic to the Pacific.

* * *

ANOTHER large building, indicating the growth of the industries of Akron, is being erected by the Pioneer Cereal Co. The city of Cleveland is recognizing how much money is being poured into the city, and the power of the Akron rubber industry. Several Cleveland contracting firms recently have secured large contracts for the erection of additions to the rubber plants.

* * *

THE report of Professor E. W. Bemis, of New York, engaged by the city to investigate the water plant and supply of Akron, values the present plant, owned by a private corporation, at \$1,000,000, and gives \$1,200,000 as the cost to erect an entirely new plant from the ground up. The city council have the matter in hand, and public sentiment seems to be in favor of building the new plant.

THE LATEST ARTIFICIAL RUBBER.

THE specification for an "artificial rubber," for which a British patent (No. 28,450—1908) has been granted to J. Blum, of Belgium, is abridged as follows:

A substance believed to have the composition represented by (C₅H₈)₄ is made by acting upon a material such as peat, containing leaf wax, with a ferment and a reducing agent, and this substance is treated with a red granular substance obtained from rubber, and salts, to produce a material similar to rubber. The ferment is obtained by placing a piece of imperfectly formed caoutchouc of about the size of a walnut in a quart of sugar solution, and exposing to sunlight. A ferment used for producing higher alcohols of the olefines is also suitable. To a ton of peat is added a ton of water, six fluid ounces of ferment, and 5 gallons of warm water containing 1 pound of sugar, and the action proceeds at a temperature of from 140°-160° F. for three weeks, air and light being excluded. Simultaneously or subsequently any alcohol formed is reduced by a reducing agent. The fermented mass is placed in a steam jacketed cylinder, with 2 pounds of a brownish red granular substance obtained by granulating "Haut Congo rouge" rubber, and 17 ounces of sodium carbonate, and the calcium chloride produced from 21½ ounces of chalk, is run in. The cylinder is filled with water, and heated for four hours. The material thus formed floats on the surface of the water, and is transferred to a cylinder containing methylated spirit, which purifies it. The mass is removed and placed in earthenware pots under petrol or the like. Keeping for six months improves the quality.

THE OBITUARY RECORD.

HENRY CLAY BURTON.

THE sad announcement has to be made that Henry Clay Burton, whose retirement from business affairs on account of ill health was reported in the last issue of this journal, failed to gain any relief from his enforced rest, and on May 10 he passed away, at Newfoundland, New Jersey, at the age of 56. Mr. Burton resided in Brooklyn at No. 651 St. Mark's avenue, and funeral services were held on May 12 in that city at the New York Avenue Methodist Episcopal Church, in which Mr. Burton was an active member of the official board. The services were attended by the surviving members of the board and by representatives of the rubber trade, including the officers of the Rubber Sundries Manufacturers' Association, which organization had Mr. Burton's loyal and helpful support from its foundation.

WARNER ARMS.

WARNER ARMS, president of The Republic Rubber Co., of Youngstown, Ohio, died at his residence in that city on May 15. Mr. Arms was born in Youngstown, November 30, 1851, being the eldest son of Myron Israel Arms and Emmeline E. Warner, the family being among the pioneers of Youngstown. His business career began at an early age, in connection with the iron industry, in which he attained success. Purchasing an interest in the Falcon Iron and Nail Co. (Niles, Ohio), he became in time its president. When their mill was absorbed by the American Tin Plate Co., he became vice president of the latter corporation, and took up his residence in Chicago, moving later to New York with the main offices of the company.

Meanwhile a rubber factory had been established in Youngstown—that of the present Republic Rubber Co.—and at the annual meeting in February, 1903, Mr. Arms was offered the presidency, to accept which he resigned his position with the tin plate company. He at once entered actively upon the control of his new business. The career of the company has been a very successful one, and credit for it is due largely to the capacity of Mr. Arms, and his unceasing attention to business. The funeral occurred on May 20, and was attended by the sales agents of the company from all parts of the country.

Mr. Arms was married on February 17, 1875, to Fannie Williamson Wick, daughter of the late Dennick Wick, of Youngstown, who survives, with a son and four daughters. One of the latter is the wife of Leonard J. Lomasney, who for some years has been vice president and general manager of The Republic Rubber Co.

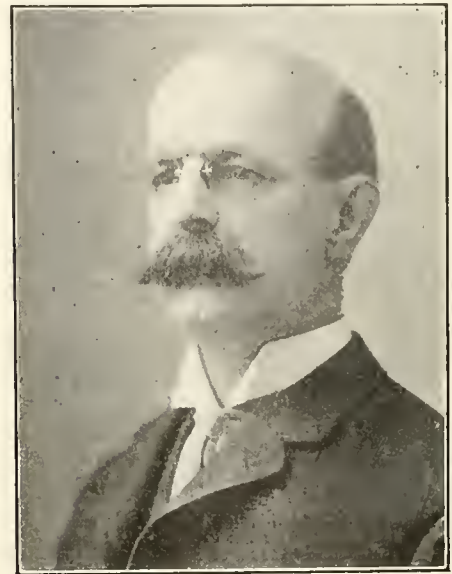
A man who has the respect and love of all his employes generally deserves it. This was notably the case with Mr. Arms. He was a singularly quiet and unassuming man. He was not in the usual sense of the word a talker, but what he said was so clear and concise that it always carried conviction. His business vision was very keen and his knowledge of men and affairs most extensive. He loved accomplishment for its own sake and worked out his business problems with the greatest care, neglecting no details that bore upon them. While he was never effusive, his sympathies were broad and deep, and in a quiet, effective way, he extended many favors and did much good. He was a type of man that the rubber, or indeed, any industry can ill afford to lose.

FRANCIS W. VEAZIE.

FRANCIS W. VEAZIE died at his home in Chelsea, Massachusetts, late in the night of May 2, of heart failure, after an illness of considerable duration. He had been for 40 years connected with one of the large rubber companies, and his whole life, spent in its service, was a record of quiet and unostentatious, but efficient work. While known widely as the superintendent of the Revere Rubber Co., he came into little personal contact with the trade, though a devoted member of the New England Rubber Club.

Mr. Veazie was born in the north end of Boston in 1848,

and in early life removed with his family to Chelsea, where he afterward lived. About the age of 19 he entered the employ of the Boston Elastic Fabric Co., his immediate superior being Charles McBurney. When he entered the company's employ it was just beginning the manufacture of mechanical rubber goods. Under McBurney and other capable managers young Veazie developed rapidly, and in time became superintendent of the works, which meanwhile had become the Revere Rubber Co. This position he held for 30 years, when he retired on account



FRANCIS W. VEAZIE.

of ill health. Mr. Veazie always lived in Chelsea, after his first settlement there, and became one of the best known citizens. He rarely left the city; indeed, it is stated that he had been in the employ of the company 19 years before visiting the Boston office.

While funeral services were in progress, on May 5, all work was suspended at the Revere factory, and many of the employes attended the services. Mr. Veazie was married March 16, 1871, to Miss Emma Pratt, of Chelsea, who survives, together with two married daughters and a son, Francis W. Veazie, Jr.

FRANCIS FLYNN.

FRANCIS FLYNN, who died at his home in Providence, Rhode Island, on May 12, at the age of 74, was during the greater part of his life connected intimately with the rubber footwear industry. Born in County Leitrim, Ireland, he moved to the United States in 1864 and at once entered the employ of the Providence Rubber Shoe Co.—Governor Bourn's factory—where he speedily acquired such a knowledge of the industry as led him to be elected to take charge of the boot and shoe department of the Woonsocket Rubber Co. when that concern was organized. In time Mr. Flynn began to give his whole attention to the manufacture of rubber boots, and when the Woonsocket company's boot mill at Millville was erected Mr. Flynn was put in charge. When the Woonsocket Rubber Co. was amalgamated with the United States Rubber Co., in 1893, Mr. Flynn resigned his position and sold out his stock in the company. Mr. Flynn was the inventor of several improvements in rubber boots, one of which, the "Diamond Tap," brought to him a large sum in royalties. Mr. Flynn is survived by a widow, two sons and two daughters.

ALBERT G. STARKE.

THE death of Albert G. Starke, secretary and treasurer and a director of A. Schrader's Son, Inc., occurred on May 12, at his residence in New York, in his thirty-third year. Representing a company manufacturing tire valves so extensively, he had gained a wide acquaintance in the rubber trade.

News of the American Rubber Trade.

GENERAL RUBBER CO.

AT the annual meeting of the General Rubber Co., at the registered offices in Newark, New Jersey, on May 19, Edgar B. Davis was elected to the vacancy on the board caused by the resignation of John J. Watson, Jr. Three additional positions on the board were created and filled by the election respectively of E. C. Benedict, Ernest Hopkinson, and H. Stuart Hotchkiss. On the next day, in New York, the board elected officers as follows:

President.—LESTER LELAND. (To succeed John J. Watson, Jr.)
Vice President.—WILLIAM F. BASS. (To succeed Lester Leland.)
Second Vice President.—EDGAR B. DAVIS. (To succeed William F. Bass.)
Treasurer.—W. H. BLACKWELL. (To succeed Thomas H. Lee.)
Secretary.—SAMUEL NORRIS.
Assistant Treasurer and Assistant Secretary.—JOHN D. CARBERRY.
Executive Committee.—Lester Leland, William F. Bass, Samuel P. Colt, Anthony N. Brady, Elisha S. Williams, Homer E. Sawyer, and Ernest Hopkinson.

At a special meeting of stockholders, held on May 20, D. Lorne McGibbon, of the Canadian Consolidated Rubber Co., Limited, was elected an additional director.

TYER RUBBER CO. STILL GROWING.

THE Tyer Rubber Co. have purchased a tract of land nearly five acres in extent on Railroad street, Andover, Massachusetts—a tract admirably adapted for carrying out plans which the Tyer company have under way for constructing an entirely new factory. The first building will be erected this year and will be one of a group planned to make within the next two years one of the best equipped rubber factories in existence. This choice of a new location, involving the ultimate abandonment of the Tyer plant, has been made necessary by the fact that further growth on the present site is practically impossible. Within a very few years the Tyer company have erected a new plant complete in all its details, but meanwhile the business of the company has been practically doubled, the annual volume being now stated to be more than \$1,750,000.

FIRE FOLLOWED BY NEW GROWTH.

A FIRE broke out in one of the storehouses of the Safety Insulated Wire and Cable Co., at Bayonne, New Jersey, on April 12. Fortunately it was kept under control and extinguished by the company's fire protection service. While the loss was not large, it necessitated considerable repair work, and as the company were in need of more room it was decided, instead of repairing, to erect instead a new building. In the place of the damaged structure, therefore, will be erected a one-story reinforced concrete building 182 x 45 feet, with a roof of sawtooth design, in two sections of corrugated iron. Adjoining this building is the company's waxing department, in a building where coils of rubber covered insulated wire are finished, ready for electrical testing. A part of the testing department equipment will therefore be transferred to the new building, which will be provided with tanks for soaking, and with two 5 ton electric cranes traveling on opposite sides, for handling heavy coils. The company have under construction also an addition to their blacksmith shop for pipe fitters' use, and a vault for storing office records, both of reinforced concrete.

WALPOLE RUBBER CO. EXPANDING.

THE consolidation is announced of a number of important businesses, under the name of Walpole Rubber Co., at Walpole, Massachusetts. There are included the Massachusetts Chemical Co., doing a successful business since 1891; the Walpole Varnish Works, and the Walpole Shoe Supply Co.; the Valveless Inner Tube Co., of New York; and the Walpole Rubber Co., Limited, of Granby, Quebec. The company is capitalized at \$3,000,000, divided equally between 7 per cent. cumulative pre-

ferred, and common stock. The company now have outstanding \$450,000 of preferred stock, and a new issue of \$500,000 has been underwritten.

The Walpole works are large makers of friction and rubber tapes, having now important contracts with the General Electric Co. The production of rubber heels is also very large, including a contract with the Foster Rubber Co. The company is operating the Gleason fusible core process for water bottles, pneumatic tires, and the like, and this process is to be applied to the making of the valveless inner tubes [see THE INDIA RUBBER WORLD, April 1, 1910, page 255]. The company's reclaiming plant, it is reported, will be largely extended. The board of the Walpole Rubber Co. is composed of men of prominence in important branches of business, in Boston and other leading cities, including Mr. S. H. C. Miner, a Canadian capitalist who is interested particularly in the rubber manufacture.

NORTH BRITISH RUBBER CO. IN CANADA.

MENTION was made in the last issue of this journal of the establishment of a Canadian branch of the North British Rubber Co., Limited (Edinburgh, Scotland), at Toronto. Notice is hereby given of the authorization in the province of Ontario for this corporation to carry on there the manufacture and sale of rubber goods, the capitalization under this license not to exceed \$40,000.

TRADE NEWS NOTES.

WILLIAM SEWARD, JR., who has been representing the Federal Rubber Co. in Chicago, has resigned this connection to become factory manager of the Kelly-Racine Rubber Co., recently organized by C. F. U. Kelly to manufacture tires at Racine, Wisconsin, as reported in the last issue of this paper.

The Federal Rubber Co. (Milwaukee, Wisconsin), on May 20 opened a branch in Atlanta, Georgia, at No. 170 Peachtree street, where they carry a full line of automobile and solid rubber tires as well as their miscellaneous molded goods. The Atlanta branch is in charge of Mr. G. M. Seewald, late of the Alexander Seewald Co., and who for ten years was the local representative of Morgan & Wright.

Picher Lead Co., in view of their growing business in sublimed white and blue leads, litharge and other rubber factory supplies, have opened a warehouse in Cincinnati, at Second and Smith streets, and in San Francisco at No. 585 Mission street.

The G & J Tire Co. (Indianapolis, Indiana) announce that from May 1 the address of their New York branch will be at No. 1924 Broadway, where they have more commodious premises than hitherto in New York. Mr. Marcus Allen, a gentleman of wide experience in the tire business, has accepted the appointment as manager of the company's New York branch.

Ajax-Grieb Rubber Co. (Trenton, New Jersey), a corporation of New Jersey, in which state their capital is \$450,000, have taken out a license to do business in Missouri, under the corporation laws of that state, as a foreign corporation, with headquarters at Kansas City. Their capital in Missouri is \$10,000.

A new waterproof material for covering blasting fuse has been brought out by J. Fitz Brind, managing director of The Isoloid Fuse Co., Limited (Denver, Colorado), a company long engaged in the fuse trade. The new material, which the inventor calls synthite, is referred to as being far less expensive than india-rubber and having greater flexibility than gutta-percha.

The B. F. Goodrich Co. (Akron, Ohio), have taken a long lease on property on Race street, Cincinnati, the owners of which will erect a new building especially adapted for the use of the company. An extensive vulcanizing plant will be installed in the building.



LARGE RUBBER CONVEYOR BELTS.

[Showing Mr. John Forsyth, superintendent of the Boston Belting Co.]

LARGE RUBBER CONVEYOR BELTS

THE high price of crude rubber has not prevented an unusual degree of activity in many branches of the rubber industry. Among the mechanical rubber goods manufacturers who have been filling some large orders of late, particularly in belts and hose, for both of which lines the railroads have been good customers, are the Boston Belting Co. An accompanying illustration relates to two conveyor belts of unusual size lately supplied by them to the Boston and Maine Railroad Co., for use in their Mystic wharf grain elevator in Boston. The two belts are 1,777 and 1,433 feet long, four-ply, and 35 inches wide.

LA CROSSE RUBBER MILLS CO.

WITHIN a year the La Crosse Rubber Mills Co. (La Crosse, Wisconsin), have doubled their producing capacity, adding new machinery and new lasts, and reorganizing the various departments. They have filed a certificate of increase of capital stock to \$400,000, and recently have sold nearly \$100,000 in preferred shares. They are making three grades of rubber goods: "Red Fiber," La Crosse Rubber Mills Co., and Wisconsin Rubber Co.; also a special brand of tennis shoes under the name Badger Rubber Co. One of the distinctive features of the "Red Fiber" brand is the red soling. Maurice C. Clark is general manager, and Charles M. Linthicum manager of sales.

PROFITS OF MANUFACTURED RUBBER CO.

AT the annual meeting of shareholders of the Manufactured Rubber Co. (Philadelphia, May 11) President Clayton E. Platt reported a prosperous condition of business. Instead of reporting accounts for twelve months ending January 31, 1910, the statement closed with December 31, to comply with the new federal law taxing corporations, so that only eleven months were covered. But the profits for this period were \$28,730, against \$11,016 for the twelve months preceding. Dividends were paid regularly during the year. The directors were re-elected, and one addition was made

to the board—the last name on the list here: Clayton E. Platt, John S. Arndt, George G. Peterson, Edward J. Dumee, Isaac R. Penny-packer, Harry S. Plott. The company operate a rubber reclaiming plant at Metuchen, New Jersey.

RUBBER FOR PAPER MILL EQUIPMENT.

THE illustration at the foot of this page is based upon a photograph of six rubber covered paper mill rolls, at the works of the Manhattan Rubber Manufacturing Co. (Passaic, New Jersey), where they are made. They are believed to be the largest rolls ever manufactured for paper mill use. The following dimensions are given: Length of face, 182 inches; length over all, 19½ feet; finished diameter, 26¼ inches; weight of iron, 5½ tons each; weight of rubber, 1,000 pounds each.

TRADE NEWS NOTES.

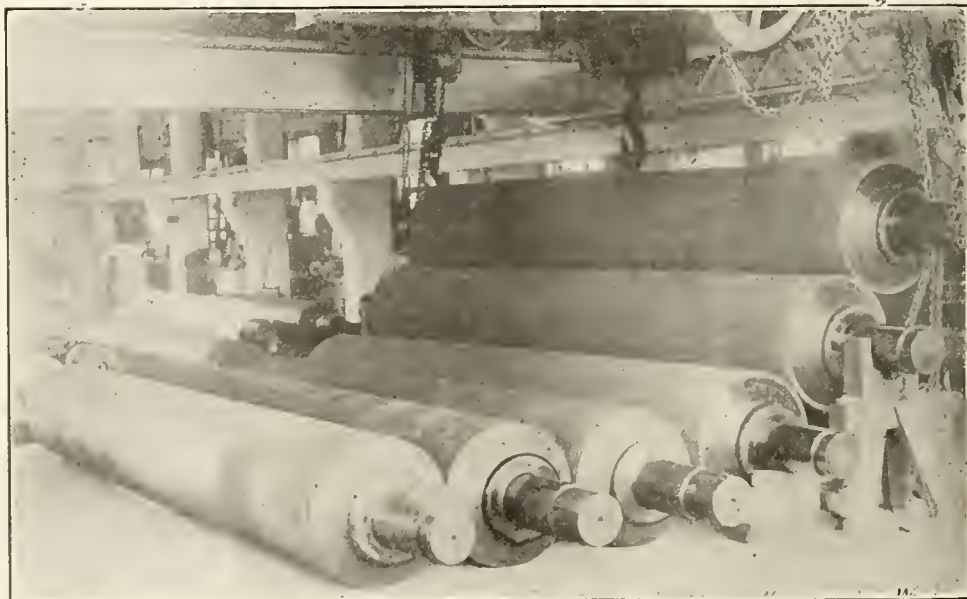
THE directors of the Boston Woven Hose and Rubber Co. have declared a semi-annual dividend of \$3 per share on the preferred stock, common stock, and a quarterly dividend of \$2 per share on the both payable June 15, 1910 to stockholders of record June 6.

It is stated that several large rubber manufacturing companies intend exhibiting at the Ohio Valley Exposition, to be held in Cincinnati during August and September. It is planned to have a miniature rubber factory in operation in one or more of the exhibits. Such a plant, it is known, will be installed by The B. F. Goodrich Co. (Akron).

New Jersey Car Spring and Rubber Co. announce the appointment, as manager of their New York branch, of Mr. Frank Y. Stewart, who for a number of years has been connected prominently with the rubber goods trade in the metropolitan district. The New York branch is located uptown at Columbus Circle.

The Voorhees Rubber Manufacturing Co. (Jersey City, New Jersey) have leased the store, basement, and sub basement at No. 36 Vesey street, New York.

The Bayne Subers Tire and Rubber Co. (Cleveland, Ohio), incorporated in 1907 with \$5,000 capital, which a year later was increased to \$100,000, in view of a projected increase in the scope of their business, on May 10, 1910, filed with the secretary of state of Ohio a certificate of increase of capital to \$250,000.



LARGE RUBBER ROLLS FOR PAPER MILLS.

NEW INCORPORATIONS.

RUBBER Cover Co., February 14, 1910, under the laws of New York; capital, \$4,000. Incorporators: Henry Sallop, No. 214 East Thirteenth street; Samuel A. Kobac, No. 154 Carroll street, and Julius Kaiser, No. 7 Attorney street, all of New York city. To make automobile accessories.

Utah Auto Tire Repair Co., April 4, 1910, under the laws of Utah; capital, \$10,000. Incorporators: W. C. Ewing, A. S. Wright, L. E. Higgins, A. J. Bruneau, and Alice Manning, all of Salt Lake City, Utah.

Ross Rubber Manufacturing Co., April 6, 1910, under the laws of Wisconsin; capital, \$25,000. Incorporators: L. A. Ross, R. G. White, and George N. Graham, all of Mineral Point, Wisconsin. To acquire the business of Badger Rubber Works, Inc., at Mineral Point [see THE INDIA RUBBER WORLD, July 1, 1909—page 333], and carry on the manufacture of rubber goods. It is proposed to make tires and a general line of mechanicals.

James L. Gibney & Bro., April 11, 1910, under the laws of New York; capital, \$100,000. Incorporators: James L. Gibney, John L. Gibney, both of No. 215 North Broad street, Philadelphia; and Joseph H. Fargis, No. 71 Nassau street, New York city. THE INDIA RUBBER WORLD is informed from the Philadelphia house of James L. Gibney & Bro., who are important in the rubber tire trade: "We are opening up a new store on Fifty-fourth street just off Broadway, and we have incorporated in New York city, so as not to be a foreign corporation, and we hope to run our business in New York on the same lines as we have previously done in Philadelphia."

Textile Rubber Co. of New York, April 15, 1910, under the laws of New York; capital, \$50,000. Incorporators: Thomas Hydes, Trenton, New Jersey; Harold A. Andrewes, No. 379 Eighth street, Brooklyn, New York, and Frank E. Sincere, No. 243 West Ninety-eighth street, New York City.

Neverslip Puncture-Proof Tire Co., May 2, 1910, under the laws of Delaware; authorized capital, \$200,000. Incorporators: Howard S. Shafer, H. E. Shafer, and Fred Wunderly, all of Nazareth, Pennsylvania. To acquire letters patent on a pneumatic tire for automobiles.

International Pneumatic Auto Wheel Co., May 3, 1910, under the laws of Delaware; authorized capital, \$1,000,000. Incorporators: Charles M. Saulson, No. 102 Clairmont avenue, and Grover D. Edwards, No. 521 West One Hundred and Eleventh street, New York City, and Harry W. Davis, Wilmington Delaware.

Akron Inner Tube Co., May 5, 1910, under the laws of Ohio; authorized capital, \$10,000. Incorporators: Jesse P. Dice, Thomas E. Raley, Frank J. Mishler, Charles J. Alpeter, and John D. McCoy. Location: Akron, Ohio.

Consolidated Palo Amarillo Rubber Co., May 7, 1910, under the laws of Delaware; authorized capital, \$20,000,000. Incorporators: Harry W. Davis, Wilmington, Delaware; Howard E. Brown, and William S. Allen, No. 32 Nassau street, New York city. A company by the same name was mentioned in THE INDIA RUBBER WORLD March 1, 1909 (page 214), as having been incorporated in one of the western United States, with \$20,000,000 capital, to extract rubber from the Mexican "yellow tree." William H. Ellis was then mentioned as active in connection with the business. Presumably the company has been reincorporated in Delaware.

Raley Rubber Co., May 14, 1910, under the laws of Connecticut; authorized capital, \$25,000. Incorporators: Hiram S. Raley, Charles Hofacker, and C. Henry Hofacker, all of New Haven, Connecticut. The company began business at the first of this year.

Standard Rubber Co., May 12, 1910, under the laws of Maine; authorized capital, \$500,000. Directors: E. M. Leavitt (president and treasurer), Winthrop, Maine; Lewis A. Burleigh (clerk), Ernest L. McLean, M. M. Spinney, and M. F. Sheehan, Augusta, Maine.

NEW INCORPORATIONS.

ACUSHNET Process Co., April 11, 1910, under the laws of Massachusetts; authorized capital \$25,000. Incorporators: Allen T. Weeks, New Bedford, Mass.; Harrison M. Davis and Ralph W. Dunbar, Boston. To deal in rubber goods.

General Tire Co., May 9, 1910, under the laws of Ohio; capital, \$10,000. Incorporators: A. V. Boettes, J. H. Marvin, Phil Eid, A. J. Braunwart, Jr., and John L. Boake. Location: Cincinnati.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for four weeks, ending May 21:

COMMON STOCK, \$25,000,000.

[The treasury of a subsidiary company holds \$1,344,000.]

		Last Dividend, April 30, 1910—1%.			
Week April	30	Sales 4,000 shares	High 42 ³ / ₄	Low	37 ¹ / ₂
Week May	7	Sales 8,900 shares	High 41	Low	38
Week May	14	Sales 10,650 shares	High 46 ¹ / ₄	Low	41
Week May	21	Sales 1,800 shares	High 45 ¹ / ₂	Low	42 ¹ / ₄

For the year—High, 52¹/₂, Jan. 3; Low, 35, Feb. 7.
Last year—High, 57⁵/₈; Low, 27.

FIRST PREFERRED STOCK, \$39,824,400.

		Last Dividend, April 30, 1910—2 ¹ / ₂ %.			
Week April	30	Sales 1,700 shares	High 112	Low	108
Week May	7	Sales 2,380 shares	High 112	Low	109 ³ / ₈
Week May	14	Sales 1,300 shares	High 114	Low	111 ¹ / ₂
Week May	21	Sales 900 shares	High 113 ¹ / ₂	Low	112 ¹ / ₂

For the year—High, 116¹/₂, Jan. 3; Low, 108, Feb. 7.
Last year—High, 123¹/₂; Low, 98.

SECOND PREFERRED STOCK, \$9,965,000.

		Last Dividend, April 30, 1910—1 ¹ / ₂ %.			
Week April	30	Sales 200 shares	High 76 ¹ / ₂	Low	76
Week May	7	Sales 200 shares	High 78	Low	77
Week May	14	Sales 1,100 shares	High 80	Low	79
Week May	21	Sales 700 shares	High 80	Low	75 ⁷ / ₈

For the year—High, 84, Jan. 3; Low, 75⁷/₈, May 19.
Last year—High, 89¹/₂; Low, 67¹/₂.

SIX PER CENT. TRUST GOLD BONDS, \$10,500,000.

Week April	30	Sales 61 bonds	High 103 ³ / ₈	Low	103 ¹ / ₂
Week May	7	Sales 58 bonds	High 103 ³ / ₈	Low	102 ¹ / ₂
Week May	14	Sales 99 bonds	High 103 ³ / ₄	Low	103
Week May	21	Sales 90 bonds	High 103 ¹ / ₄	Low	103

For the year—High, 104¹/₂, Jan. 15; Low, 102¹/₂, May 7.
Last year—High, 106; Low, 102¹/₄.

A PROGRESSIVE BUSINESS.

THE merit of rust proof woven steel armor for rubber hose subjected to high pressures and severe uses in and about shipyards, railroads, machine shops and mines is well illustrated by the success of the Woven Steel Hose and Rubber Co. (Trenton, New Jersey). This company was organized in 1899. Four years later they moved to larger quarters, in South Warren street, where they remained until 1907. During that interval they discovered that their premises would not admit of expansion commensurate with the promised growth of their business, and an advantageous location was selected on the Reading railroad and a new plant erected, several enlargements of which have already been made. The company, organized originally to make the steel armor indicated by its name, has added new lines from time to time, including, in addition to high pressure hose, fibrous packings for steam, air, and water, and so on. The latest addition is their "Autobestine," a brake lining for motor cars and hoisting machinery. There have been on changes in the original officers and management. The machinery employed was perfected by Mr. Karl G. Roebbling, treasurer of the company, and one of the members of John A. Roebbling's Sons Co., of international prominence in the steel industry. J. Russel Kelso, general manager, is largely responsible for the various improvements which have been made and the additions to the lines of products, as well as for the reputation which the company enjoys as manufacturers of high grade goods. A happy

thought in the selection of the company's brands is the adoption of names suggestive of armor, such as "Defender" and "Protector," and as a trade mark, a reproduction of the suit of armor worn by Charles the Bold, of Burgundy, encircled by a piece of armored hose embellishes their literature.

NEW PRESIDENT OF THE AJAX-GRIEB.

THE portrait herewith is that of Mr. William G. Grieb, the new president of the Ajax-Grieb Rubber Co. (Trenton, New



WILLIAM G. GRIEB.

Jersey), makers of the "Ajax" automobile tires and other rubber goods. It was back in 1873 that Mr. Grieb first became identified with rubber in the wholesale rubber footwear business of J. G. Grieb & Sons, in Philadelphia. By 1887 he had become senior partner of this firm. In time they acquired a rubber factory in Trenton for making shoe soles and other specialties for their trade and this led to the incorporation of the Grieb Rubber Co. in New Jersey in 1899 with Mr. W. G.

Grieb as president. In 1906 the Ajax Standard Rubber Co., of New York, was consolidated with the Grieb Rubber Co. and the manufacturing of the two concerns combined at the Trenton works, which were enlarged for the purpose. Mr. Grieb accepted the vice presidency of the consolidated company and has now become president.

CHANGES OF ADDRESS.

G. EDWARD HABICH, broker in crude rubber in Boston, has removed his offices to No. 220 Berkeley street.

Joseph Cantor, dealer in rubber substitutes and rubber manufacturers' supplies, in New York, has removed his offices to Nos. 21-24 State street. Mr. Cantor is the American agent of Typke & King, Limited, London.

TRADE NEWS NOTES.

THE Peerless Rubber Manufacturing Co. (New York) announce new agencies as follows: In Seattle, Washington, Seattle Hardware Co., at First and King streets; in Portland, Oregon, the Gauld Co., Nos. 69-75 North Twelfth street, corner Everett.

Robert Badenhop, broker and importer of crude rubber, has removed his office to No. 82 Beaver street, New York. Owing to the death of a former factor he has transferred his financial arrangement to Messrs. Frederick Probst & Co.

The importance of the trade in Great Britain of The B. F. Goodrich Co. (Akron, Ohio) is indicated by our London contemporary giving a list of their travelling staff in that country, and the territory allotted to each.

The Western Rubber Co. have awarded contracts for two additional buildings, of brick and steel, each one story, and respectively 45 x 125 and 45 x 85 feet, to cost, with their equipment, \$40,000 or more. G. B. Slate is general manager and C. Edward Hyke general superintendent of the factory.

Mr. George Louis Richards, long connected with the Boston Rubber Shoe Co., and more than once mayor of Malden, Massachusetts, is one of the directors of the new Buffalo Shoe Co., formed to take over the business of the Flex-I-Dura Co., of Peppercell, Massachusetts.

PERSONAL MENTION.

CAPTAIN ARTHUR F. TOWNSEND, president and general manager of the Manhattan Rubber Manufacturing Co. (New York), has gone to Fort Riley, Kansas, where he and other militia officers will spend ten days in regular army drill under special order of the United States government.

An announcement has been issued of the marriage, to occur on June 8, at Longwood, Massachusetts, of Mr. Ernest Jacoby and Miss Alice Gardiner Hovey. Mr. Jacoby is in charge of the Boston office of Messrs. A. T. Morse & Co., crude rubber merchants, of New York.

Mr. Charles A. Daniels, of the Quaker City Rubber Co. (Philadelphia), returned recently from a six weeks' vacation, which took him as far south as Havana.

Mr. F. J. Maywald, of New York—a chemist extensively known in the rubber industry—has been appointed by Mayor Gaynor a member of the municipal explosive commission. This body has charge of the regulation of the sale, storage, and so on, of explosive and combustible substances in the city.

Mr. D. Lorne McGibbon, president of the Canadian Consolidated Rubber Co., Limited, was one of the principal speakers at a well attended meeting of the Economic Club, in New York, on the evening of May 18, when the topic of discussion was reciprocity in trade with Canada. The manufacturers of the Dominion, said Mr. McGibbon, were ready for a treaty of reciprocity, but it remained for the government at Washington to take the first steps.

The Hon. L. D. Apsley, president of the Apsley Rubber Co. (Hudson, Massachusetts), accompanied by Mrs. Apsley, sailed about the middle of the month for Europe.

Dr. John C. Willis, director of the royal botanic gardens in Ceylon, since his return home has published an interesting account of his journey around the world, including notes on his experiences in the United States. Dr. Willis is the author of an important treatise on "Agriculture in the Tropics," reviewed in THE INDIA RUBBER WORLD not long since. While in the States Dr. Willis delivered a series of lectures on the same subject at Harvard University.

Mr. Ernest E. Buckleton, secretary and general manager of Northwestern Rubber Co., Limited, of Liverpool, arrived in the United States late in the last month for a brief visit.

Mr. and Mrs. W. J. B. Stokes, of Trenton, New Jersey, have announced the marriage of their daughter Mary Eleanor to Mr. John S. Dunham, also of Trenton, on Wednesday, March 30. Mr. Stokes is interested largely in the rubber industry. Mr. Dunham is a merchant, his father being the founder of what is now the largest retail store in New Jersey. The newly wedded pair are now living in Trenton in the beautiful home given to them as a wedding gift from the bridegroom's father and furnished by Mr. Stokes.

TRADE NEWS NOTES.

THE Federal Rubber Co. (Milwaukee, Wisconsin) announce the change of their New York office to No. 211 West Fifty-eighth street.

Mr. J. W. Culver has been appointed sales agent in St. Louis of the Boston Woven Hose and Rubber Co., in place of Mr. C. W. Barrett, resigned. Mr. Culver was previously connected with the Chicago branch of this company for several years.

The business known as W. J. Williams Co., in Chicago, manufacturers of molded goods, gaskets and so on, have adopted the name The Williams-Bowman Rubber Co., and moved into larger premises, at No. 171 North Green street. They have put in new molds and have otherwise enlarged their facilities.

Gustave Kush, who is in the mechanical rubber goods trade, announces the change of his location from No. 60 to No. 61 Beckman street, New York.

McEWEN'S TIRE VULCANIZER.

THE McEwen patented portable vacuum vulcanizer for rubber tires has for its chief characteristic the absence of steam in its operation but is referred to as being capable of producing a higher heat and a better heat for vulcanizing rubber, fabric,



THE McEWEN VULCANIZER.

leather, or other materials into a homogeneous mass without any injury to any of the materials employed than any of the other systems in use. It is stated that a heat from 1 deg. to 500 degs. F. can be obtained readily in this vulcanizer with positive regulation in a very short space of time. The idea is that this vulcanizer facilitates the re-covering and repairing and also the building of automobile tires, and is cheaper in operation than a steam plant. These vulcanizers are economical in the

amount of space occupied. There is no bolting of any door or cover required in opening or closing the apparatus; either the opening or closing is accomplished with one operation. The inventor and patentee of this apparatus is Mr. Fred E. McEwen, No. 562 West One Hundred and Sixty-fourth street, New York.

THE "IDEAL" SLEEVE FOR TIRES.

A DEVICE of interest to motorists, and one which has proved of much excellence, is illustrated herewith. It is designed to insert on the inner side of a tire tube to remedy a blow out, or, if applied to a weak spot, to keep an old shoe in service. The "Ideal" sleeve is made to conform with the inside of the shoe and completely take the strain from the latter. These



THE IDEAL SLEEVE.

sleeves are made from high grade cotton duck, four to seven plies, according to size, with beveled edges to insure a smooth surface for the tube, and have a flap on each side which passes over the rim to hold the sleeve in place. [Voorhees Rubber Manufacturing Co., Jersey City, New Jersey.]

THE "UNIVERSAL" STEEL CALENDER SHELL.

THE rapidly increasing demand of late years for rubber products made up from sheet stock has so taxed the manufacturers that practically a reorganization of shop practice has been necessary. One drawback has been the matter of getting the sheet stock ready for use after it has been milled, at the same time maintaining the quality of the stock. An improvement has been in the introduction of metal shells instead of wooden rolls, the advantage of the former being manifold.

In the use of metal shells the heat of the stock is removed in

half the time, as the heat from the inner portion of the roll is transmitted through the metal to the hollow interior and then carried away by ventilation, consuming the least possible time in cooling the stock and still procuring a proper "set" to the stock. By this more rapid removal of the heat it was found that blooming, where sulphur is used, has been materially retarded and further, that the all metal shell used in the metal frame work of the calender, forms an immediate ground for the static electricity, generated by the friction of milling, and practically eliminating magnetism of the stock.

In addition to the above consideration has been the question of producing a metal shell that will stand strain, and have a maximum of strength with a minimum of materials. The Universal steel calender stock shell manufactured by W. F. Gammeter (Cadiz, Ohio) is offered to rubber manufacturers as combining the desirable requirements above outlined.

RUBBER READY FOR TAPPING.

THE Tabasco-Campeche Timber and Fruit Co., Inc., with properties in Mexico, are inviting subscriptions to an additional issue of preferred stock, the proceeds of which are to be used for extending their rubber plantation over a large area. They will also acquire an important amount of mahogany timber. The company are in a position to derive revenues at once from the sale of mahogany and of rubber from trees now arrived at a productive age. The headquarters of the company are at Moberly, Missouri, where Mr. Ed. F. Haley, the president, and Mr. James V. O'Leary, the secretary-treasurer, are business men of high standing, with favorable connections elsewhere in the United States and in Mexico.

NEW TRADE PUBLICATIONS.

NEW JERSEY CAR SPRING AND RUBBER Co. (Jersey City, New Jersey), devote their Catalogue No. 20 to Garden Hose, of which they make a number of brands, each adapted to a particular use, and each having special characteristics which are pointed out in this booklet. [3 3/8" x 6". 16 pages.]

STANDARD BRASS AND IRON WORKS (Milwaukee, Wisconsin), issue a catalogue of their "Milwaukee Made Goods"—their products as brass founders and machinists—including various accessories for all kinds of hose. There are included couplings for brewers' hose and hose for other purposes; hose bands, hose cocks, and so on. [6 1/8" x 9 1/4". 12 pages.]

ST. LOUIS RUBBER CEMENT Co. (St. Louis), issue their Catalogue No. 8 of Cements, Tape and Accessories, which covers an unusual number of products under these headings. They make specialties for use in connection with automobiles and bicycles, in leather shoe making, electrical work, and for use by book binders and engravers. [3 1/2" x 6 1/4". 49 pages.]

ALSO RECEIVED.

- Boston Belting Co., Boston=Two Big Rubber Belts. 8 pages.
- Metal Lock Tile Co., Philadelphia.=Colored designs for metal lock tiling on a scale of 1 inch: 1 foot. 13 sheets.
- Barrett Manufacturing Co New York and Philadelphia.=Good Roads: How to Build, Preserve and Make Them Dustless. [Relates to "Tarvia."] 40 pages.
- Central Electric Co., Chicago=May, 1910. Price List. Electrical Supplies. [Applying to 1909 Catalogue No. 26. Products of the Okonite Co. (New York).] 72 pages.
- The Bristol Co., Waterbury, Connecticut.=Bulletin No. 124. Bristol's Atmospheric Recording Thermometer. 4 pages.

RECLAIMED rubber imported into Japan is classified for tariff purposes as "India-rubber not specially mentioned," and dutiable at the rate of 10 per cent. *ad valorem*, if accompanied by a certificate of origin.

THE Inambari Pará Rubber Estates, Limited, operating in Peru, reported the collection of 13,486 pounds of rubber "from November, 1909, to April 8, 1910." For the year ended June 30, 1908, the amount collected was reported at 12,307 pounds.

Review of the Crude Rubber Market.

FROM the beginning of the month just closed the indication has been general of a decline in the rubber market. The cause of the beginning of the decline was enshrouded in doubt, which the developments of the month have failed to dispel. It only remains to be reported that prices today are lower than a month ago for every grade that remains in the market to be traded in. The decline in prices is recorded in the comparative table which forms part of this report.

Holder of rubber, naturally, have exerted themselves to the utmost to prevent a break in price damaging to their interest; consumers, naturally, have abstained as far as possible from contracting for rubber. Meanwhile it is impossible to say how long buying can be refrained from, or how much rubber will be available in the hands of sellers in the last analysis.

Two events late in the month which had an important bearing upon the international rubber market were the fortnightly London auction on May 23 and the monthly inscription at Antwerp on the 26th. Both sales marked a decline, with the effect of emphasizing the weakness already evident in the trade on both sides of the Atlantic.

At the London sale, earlier in the month, much of the plantation rubber on offer was withdrawn at the first indication of a break in prices. A few days later the same rubber found a ready sale at reduced prices. On May 23 the offerings on the whole were not in active demand, though fine crepe fetched as high as 10s. 5¾d. [= \$2.55]—7d. lower than a fortnight before.

Of about 330 tons offered at Antwerp less than 100 tons found buyers, at a decline of 2.50 francs per kilogram [= 22 cents per pound] for the better grades.

Arrivals at Pará (including caucho) during May were on a smaller scale than usual, although the total for the crop year ending June 30 will be somewhat larger than ever before recorded. The inference is the unusually high prices prevailing for sometime past have hastened exports from the Amazon as suggested in an editorial in THE INDIA RUBBER WORLD last month (page 261). It would be unnatural to suppose that any rubber would be withheld from market, that could possibly be put within the reach of buyers, under such market conditions as prevailed for some months. The following figures may be of interest for comparison, showing the Pará arrivals from July 1 to the end of May in four crop years (the figures representing tons):

	1906-07.	1907-08.	1908-09.	1909-10.
July-December	14,720	14,240	15,735	16,710
January	3,780	4,860	5,480	5,490
February	5,060	5,340	5,040	4,760
March	5,830	4,240	4,140	5,210
April	4,400	3,100	3,760	3,600
May	2,625	3,210	2,340	a 1,990
<hr/>				
Total, 11 months	36,505	34,990	36,495	37,760
June	1,500	1,660	1,570	
<hr/>				
Total, crop year	38,005	36,650	38,065	

[a To and including May 29, 1910.]

At the end of the first six months of the current crop year the increase over last year was only 1,000 tons. The above figures for the subsequent months of the crop year, with June figures yet to come, do not indicate a greater gain for the whole year over previous records.

London auction prices for plantation rubber, May 10 [reported by Lewis & Peat]:

<i>Sheet and Biscuits:</i>	
Smoked sheet	11/3 @ 11/5
Good to fine sheet	10/3 @ 10/10
Good to fine biscuits	10/3 @ 10/10

<i>Crepe:</i>	
Very pale	11/9 @ 11/1½
Medium and palish	1/6 @ 10/10
Dark and brown	9/3 @ 9/10
<i>Unwashed Scrap:</i>	
Medium to fine	8/4 @ 8/6
Dark and low	6/6 @ 7/9

Current quotation for hard fine Pará, 10s. 5d. [= \$2.54].

NEW YORK QUOTATIONS.

Following are quotations at New York for Pará grades, one year ago, one month ago, and May 31—the current date:

PARÁ,	June 1, '09.	May 1, '10.	May 31.
Islands, fine, new.....	131@132	275@277	225@226
Islands, fine, old.....	132@133	none here	none here
Upriver, fine, new.....	134@135	281@282	240@241
Upriver, fine, old.....	135@136	none here	242@243
Islands, coarse, new....	66½@ 67	109@110	95@ 96
Islands, coarse, old....	70@ 71	none here	none here
Upriver, coarse, new....	98@ 99	182@185	160@161
Upriver, coarse, old....	none here	none here	none here
Cameté	77@ 78	126@127	109@110
Caucho, ball	87@ 88	180@182	155@156
Caucho, slab	76@ 77	none here	none here
Ceylon, fine sheet.....	135@136	285@288	229@230

AFRICAN.

Lopori, ball, prime....	108@109	none here	none here
Lopori, strip, prime....	none here	none here	none here
Aruwimi	96@ 97	none here	none here
Upper Congo, ball, red.	100@101	190@191	190@191
Ikelemba	none here	none here	none here
Sierra Leone, 1st quality	99@100	188@190	165@168
Massai, red	90@100	188@190	165@168
Sondan niggers	80@ 90	none here	none here
Cameroon, ball	68@ 69	128@130	110@111
Benguela	61@ 62	none here	none here
Madagascar, pinky	92@ 93	125@126	none here
Accra flake	22@ 23	30@ 42	none here

CENTRALS.

Esmeralda, sausage	85@ 86	170@172	133@134
Guayaquil, strip	73@ 74	130@135	106@107
Nicaragua, scrap	81@ 82	167@168	128@129
Panama	67@ 68	none here	none here
Mexican, scrap	82@ 83	170@172	128@129
Mexican, slab	61@ 62	none here	none here
Mangabeira, sheet	55@ 56	none here	none here
Guayule	34@ 35	110@110	95@100

EAST INDIAN.

Assam	95@ 96	none here	none here
Pontianak	43¼@ —	93¼@ 103¼	81½@ 9
Borneo	35@ 45	none here	none here

Late Pará cables quote:

	Per Kilo.	Per Kilo.
Islands, fine	10\$100	Upriver, fine
Islands, coarse	3\$600	Upriver, coarse
		Exchange

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for carload lots, per pound—show a slight decline since last month as follows:

	May 1.	June 1.
Old rubber boots and shoes—domestic.	10¾@ 11	10¾@ 10¾
Old rubber boots and shoes—foreign.	10¼@ 10¾	10¾@ 10¾
Pneumatic bicycle tires.....	7 @ 7¼	7¼@ 7¾
Automobile tires	7¾@ 8	10½@ 10¾
Solid rubber wagon and carriage tires.	9¼@ 9¾	10¼@ 10¾
White trimmed rubber	10 @ 11	10 @ 11
Heavy black rubber	6¼@ 6½	6½@ 6¾
Air brake hose	5¼@ 5½	6 @ 6¼
Garden hose	2¾@ 3	2¾@ 3
Fire and large hose.....	3¾@ 3½	3¾@ 3½
Matting	1¾@ 1¾	1¾@ 1¾

OTHER NEW YORK ARRIVALS.

CENTRALS.

[*This sign, in connection with imports of Centrals, denotes Guayule rubber.]

	POUNDS.
APRIL 21.—By the <i>President Grant</i> =Hamburg: Ed. Maurer.....	*7,000
APRIL 22.—By the <i>Grecian</i> =Bahia: J. H. Rossbach & Bros..... A. Hirsch & Co.....	25,000 5,000 30,000
APRIL 22.—By the <i>Proteus</i> =New Orleans: Manhattan Rubber Co..... Eggers & Heinlein.....	2,500 2,000 4,500
APRIL 23.—By the <i>Esperanza</i> =Mexico: Harburger & Stack..... E. Steiger & Co..... Streebe & Ultze..... E. N. Tibbals & Co..... Rubber Trading Co..... American Trading Co..... H. Marquard & Co..... A. Dumont & Co..... International Products Co..... Mecke & Co..... General Export Co.....	11,500 6,500 3,000 2,500 2,000 3,000 2,500 2,000 2,500 1,000 1,000 37,500
APRIL 23.—By the <i>Sigismund</i> =Colombia: A. Held..... Kunhardt & Co..... Caballero & Blanco.....	5,000 3,500 1,000 9,500
APRIL 25.—By the <i>Amerika</i> =Hamburg: A. T. Morse & Co..... Ed. Maurer.....	*20,000 *20,000 *40,000
APRIL 25.—By the <i>Advance</i> =Colon: Isaac Brandon & Bros..... G. Amsinck & Co..... Herbst Brothers..... Andean Trading Co..... Piza, Nephews & Co..... Lawrence Johnson & Co..... H. Mann & Co.....	9,000 3,500 3,000 2,000 2,000 1,000 1,000 21,500
APRIL 25.—By the <i>Comus</i> =New Orleans: Robinson & Co..... Eggers & Heinlein..... New York Commercial Co.....	3,000 2,000 1,500 6,500
APRIL 25.—By the <i>Cedric</i> =Liverpool: Poel & Arnold.....	*11,000
APRIL 25.—By the <i>Boyamo</i> =Tampico: Continental-Mexican Rubber Co..... New York Commercial Co..... Ed. Maurer..... Poel & Arnold.....	*200,000 *100,000 *60,000 *30,000 *390,000
APRIL 26.—By the <i>Siberia</i> =Greystown: G. Amsinck & Co..... Isaac Brandon & Bros..... Wessels Kulenkampff & Co..... Suzarte & Whitney..... A. Santos & Co..... Jose Julia & Co..... Alexander Latham & Co.....	4,000 2,000 1,500 1,500 1,000 1,000 1,000 12,000
APRIL 26.—By the <i>Kroonland</i> =Antwerp: Poel & Arnold.....	*11,000
APRIL 28.—By the <i>Atrata</i> =Colombia: Maitland, Coppel & Co..... R. del Castillo & Co..... Suzarte & Whitney.....	3,000 2,500 1,000 6,500
APRIL 29.—By the <i>Mexico</i> =Vera Cruz: H. Marquadt & Co..... Mecke & Co..... J. W. Wilson & Co..... In Transit.....	4,000 1,000 1,000 7,000 13,000
APRIL 30.—By <i>El Mar</i> =New Orleans: A. T. Morse & Co..... Manhattan Rubber Co..... Eggers & Heinlein..... A. Klipstein & Co.....	7,000 2,000 1,500 1,000 11,500
APRIL 30.—By the <i>Panama</i> =Colon: General Rubber Co..... G. Amsinck & Co..... J. Sambrada & Co..... Isaac Brandon & Bros..... Dumarest & Bros..... Andean Trading Co..... Mecke & Co..... Fidanque Bros. & Co.....	9,000 6,000 4,000 4,000 1,500 1,500 1,000 1,000 28,000
MAY 2.—By the <i>Alhai</i> =Colombia: J. H. Rossbach & Bros..... Maitland, Coppel & Co..... R. del Castillo & Co..... Isaac Brandon & Bros..... G. Amsinck & Co..... A. Held.....	11,000 5,000 5,000 3,000 1,500 1,500 27,000
MAY 2.—By the <i>Jasea</i> =Honduras: A. Rosenthal & Sons.....	5,500
MAY 2.—By the <i>Arabic</i> =Liverpool: Rubber Import Co.....	11,500

MAY 2.—By the <i>Antelles</i> =New Orleans: A. T. Morse & Co..... Manhattan Rubber Co..... Robinson & Co..... E. N. Gibbals & Co.....	8,500 2,000 1,500 1,500 13,500
MAY 3.—By the <i>Vigilancia</i> =Tampico: Continental-Mexican Rubber Co..... Ed. Maurer..... New York Commercial Co..... Poel & Arnold..... E. S. Churchill.....	*150,000 *105,000 *67,000 *20,000 *11,500 *353,500
MAY 4.—By the <i>Prins Willem</i> =Colon: A. Santos & Co..... G. Amsinck & Co..... Pahlo Calvet & Co..... J. Lambrada & Co..... Graham, Hinkley & Co..... Isaac Brandon & Bros..... Wessels, Kulenkampff & Co.....	3,000 3,000 1,500 1,500 1,500 1,000 1,000 12,500
MAY 5.—By the <i>Vasari</i> =Bahia: Poel & Arnold..... J. H. Rossbach & Bros..... A. Hirsch & Co.....	35,000 16,000 5,500 56,500
MAY 5.—By the <i>Momus</i> =New Orleans: T. N. Morgan Co..... Eggers & Heinlein..... Manhattan Rubber Co..... New York Commercial Co.....	1,500 1,500 1,500 1,500 6,000
MAY 6.—By the <i>Allianza</i> =Colon: G. Amsinck & Co..... Mecke & Co..... Wessels, Kulenkampff & Co..... Piza, Nephews & Co..... A. T. Morse & Co..... Gillespie Bros. & Co..... Isaac Brandon & Bros.....	10,500 4,000 2,500 2,500 1,500 1,500 1,000 22,500
MAY 6.—By the <i>Rio de Janeiro</i> =Bahia: J. R. Rossbach & Bros.....	25,000
MAY 5.—By <i>El Dorado</i> =Galveston: Continental Mexican Rubber Co..... C. T. Wilson & Co.....	*75,000 *20,000 *95,000
MAY 7.—By the <i>Morro Castle</i> =Mexico: H. Marquadt & Co..... E. N. Tibbals & Co..... Harburger & Stack..... E. Steiger & Co..... International Products Co..... A. Dumont & Co..... General Export Co.....	7,000 5,000 3,500 3,500 2,500 2,500 1,000 25,000
MAY 9.—By the <i>Matanzas</i> =Tampico: Continental-Mexican Rubber Co..... Ed. Maurer..... New York Commercial Co..... Poel & Arnold.....	*200,000 *125,000 *67,000 *20,000 *412,000
MAY 10.—By the <i>Sarnia</i> =Colon: Manhattan Rubber Co..... Isaac Brandon & Bros..... Delima Cortisoz & Co..... Suzarte & Whitney..... Isaac Kubie & Co.....	2,000 1,500 1,000 1,000 1,000 6,500
MAY 10.—By <i>El Albo</i> =Galveston: Continental-Mexican Rubber Co..... C. T. Wilson..... E. S. Churchill.....	*75,000 *45,000 *5,000 *125,000
MAY 11.—By the <i>Tagus</i> =Colombia: A. M. Capen's Sons..... Pablo Calvet & Co..... J. Sambrada & Co.....	5,000 1,000 1,000 7,000
MAY 12.—By the <i>Colon</i> =Colon: Isaac Brandon & Bros..... G. Amsinck & Co..... Herbst Brothers..... Mecke & Co..... American Trading Co..... Peza, Nephews & Co..... Andean Trading Co..... Lawrence Johnson & Co..... A. T. Morse & Co..... International Products Co.....	10,000 9,000 3,500 3,500 2,000 2,000 1,500 1,500 1,500 1,000 35,500
MAY 12.—By the <i>Black Prince</i> =Bahia: J. H. Rossbach & Bros..... New York Commercial Co..... Poel & Arnold.....	22,500 22,500 15,000 60,000
MAY 13.—By <i>El Sigle</i> =Galveston: Continental-Mexican Rubber Co.....	*77,000
MAY 13.—By the <i>Comus</i> =New Orleans: Robinson & Co..... Manhattan Rubber Co..... A. N. Rotholz..... A. T. Morse & Co..... New York Commercial Co..... Eggers & Heinlein.....	5,000 3,000 2,500 2,000 1,500 1,000 15,000
MAY 14.—By the <i>Castillian</i> =Bahia: J. H. Rossbach & Bros..... Poel & Arnold.....	30,000 5,000 35,000
MAY 14.—By the <i>Merida</i> =Mexico: H. Marquadt & Co..... Harburger & Stack.....	7,500 6,000

J. W. Wilson & Co..... E. N. Tibbals & Co..... International Products Co..... Mecke & Co..... American Trading Co..... General Export Co.....	3,500 2,500 2,500 1,500 1,500 1,000 26,000
MAY 16.—By the <i>Minneapolis</i> =London: Raw Products Co.....	7,000
MAY 16.—By the <i>Seguranca</i> =Tampico: Continental-Mexican Rubber Co..... Ed. Maurer..... Poel & Arnold..... New York Commercial Co..... R. M. Beaver Co.....	*150,000 *100,000 *40,000 *33,000 *10,000 *333,000
MAY 17.—By the <i>Antilles</i> =New Orleans: Manhattan Rubber Co..... Eggers & Heinlein..... A. N. Rotholz..... A. T. Morse & Co..... Robinson & Co.....	3,000 2,500 2,000 1,500 1,000 10,000
MAY 17.—By the <i>Joachim</i> =Colon: G. Amsinck & Co..... A. Santos & Co..... Mecke & Co..... A. Held..... Isaac Brandon & Bros..... Frank Lapidra..... Delima, Cortisoz & Co.....	5,000 2,500 1,500 1,500 1,000 1,000 1,000 13,500
MAY 21.—By the <i>Esperanza</i> =Mexico: H. Marquardt & Co..... Mecke & Co..... International Products Co..... E. N. Tibbals & Co..... George A. Alden & Co.....	9,000 2,000 2,000 1,500 1,000 15,500
MAY 21.—By the <i>Advance</i> =Colon: G. Amsinck & Co..... Pablo, Calvet & Co.....	8,000 1,000 9,000
MAY 21.—By the <i>Tennyson</i> =Bahia: J. H. Rossbach & Bros..... A. Hirsch & Co.....	50,000 33,000 83,000
MAY 23.—By the <i>Sigismund</i> =Colombia: J. H. Rossbach & Bros..... Delima, Cortisoz & Co..... Caballero & Blanco..... G. Amsinck & Co..... Stanley Jordan & Co..... Isaac Brandon & Bros.....	11,000 1,500 1,500 1,500 1,500 1,000 18,000
MAY 24.—By the <i>Boyamo</i> =Tampico: Continental-Mexican Rubber Co..... Ed. Maurer..... New York Commercial Co..... Pacl & Arnold.....	*150,000 *135,000 *67,000 *33,000 *385,000
MAY 24.—By the <i>Panama</i> =Colon: G. Amsinck & Co..... Piza, Nephew & Co..... J. Sambrada & Co..... Isaac Brandon & Bros..... Lawrence Johnson & Co..... General Rubber Co..... Mecke & Co..... Suzarte & Whitney..... Wessels, Kulenkampff & Co..... A. Rosenthal & Sons..... Demarest Bros. & Co.....	11,000 7,500 8,000 6,000 5,000 5,000 2,000 1,500 1,500 1,000 1,000 49,500
AFRICAN.	
Rubber Trading Co..... Livesey & Co..... Poel & Arnold.....	13,500 5,500 5,000 24,000
APRIL 21.—By the <i>President Grant</i> =Hamburg: George A. Alden & Co..... Poel & Arnold..... W. L. Gough Co..... A. T. Morse & Co..... Livesey & Co.....	22,000 15,000 11,500 10,000 13,500 72,000
APRIL 25.—By the <i>Cedric</i> =Liverpool: George A. Alden & Co..... Robinson & Co..... H. A. Gould Co..... Livesey & Co..... General Rubber Co.....	47,000 25,000 11,500 4,500 2,500 90,500
APRIL 25.—By the <i>Amerika</i> =Hamburg: George A. Alden & Co.....	20,000
APRIL 28.—By the <i>Adriatic</i> =London: Poel & Arnold..... George A. Alden & Co.....	15,000 10,000 25,000
APRIL 26.—By the <i>Kroonland</i> =Antwerp: W. H. Stiles..... Robinson & Co..... W. L. Gough Co.....	15,000 15,000 11,500 41,500
MAY 2.—By the <i>Carmania</i> =Liverpool: George A. Alden & Co..... Raw Products Co..... H. A. Gould Co..... A. T. Morse & Co.....	40,000 9,000 5,500 3,500 58,000

MAY 2.—By the *Arabic*=Liverpool:
 Poel & Arnold..... 44,500
 Livesey & Co..... 13,500 58,000

MAY 5.—By the *Pennsylvania*=Hamburg:
 George A. Alden & Co..... 30,000
 A. T. Morse & Co..... 45,000
 W. L. Gough Co..... 9,000
 Raw Products Co..... 2,000
 Poel & Arnold..... 2,000 88,000

MAY 6.—By the *Carolina*=Havre:
 A. T. Morse & Co..... 11,500

MAY 9.—By the *Baltic*=Liverpool:
 Poel & Arnold..... 11,500
 General Rubber Co..... 5,500 17,000

MAY 9.—By the *Richmond*=Lisbon:
 W. L. Gough Co..... 15,000

MAY 10.—By the *Vaderland*=Antwerp:
 A. T. Morse & Co..... 16,000
 H. A. Gould Co..... 10,000 26,000

MAY 11.—By the *Istria*=Hamburg:
 George A. Alden & Co..... 11,000
 A. T. Morse & Co..... 11,500
 Rubber Trading Co..... 9,000
 Robert Badenhop..... 8,700 40,200

MAY 11.—By the *Oceanic*=London:
 Poel & Arnold..... 33,500
 George A. Alden & Co..... 20,000
 Livesey & Co..... 15,000
 Robinson & Co..... 7,000 75,500

MAY 12.—By the *Graf Waldersee*=Hamburg:
 George A. Alden & Co..... 8,000
 Poel & Arnold..... 7,000 15,000

MAY 14.—By the *Augusta Victoria*=Hamburg:
 George A. Alden & Co..... 70,000
 Poel & Arnold..... 55,000
 A. T. Morse & Co..... 33,000 158,000

MAY 16.—By the *Celtic*=Liverpool:
 George A. Alden & Co..... 45,000
 Robinson & Co..... 22,500
 H. A. Gould Co..... 5,500
 Poel & Arnold..... 5,500 78,000

MAY 18.—By the *Blucher*=Hamburg:
 Poel & Arnold..... 7,000
 George A. Alden & Co..... 7,000
 Schulz & Ruckgaber..... 8,000
 Robert Badenhop..... 1,900 23,900

MAY 21.—By the *Campania*=Liverpool:
 Livesey & Co..... 4,500
 Poel & Arnold..... 3,500 8,000

MAY 23.—By the *St. Paul*=London:
 Livesey & Co..... 11,500
 George A. Alden & Co..... 0,000 20,500

MAY 23.—By the *Chicago*=Havre:
 A. T. Morse & Co..... 13,500

MAY 23.—By the *Cedric*=Liverpool:
 General Rubber Co..... 15,000
 Robinson & Co..... 3,500 18,500

MAY 23.—By the *Minnetonka*=London:
 Poel & Arnold..... 22,500

EAST INDIAN.

[*Denotes plantation rubber.]

APRIL 21.—By the *Majestic*=London:
 Poel & Arnold..... *55,000
 New York Commercial Co..... *35,000 *90,000

APRIL 23.—By the *Campania*=Liverpool:
 A. T. Morse & Co..... *15,000

APRIL 25.—By the *Amerika*=Hamburg:
 George A. Alden & Co..... 15,000

APRIL 25.—By the *St. Paul*=London:
 New York Commercial Co..... *11,500
 Poel & Arnold..... *35,000 *46,500

APRIL 27.—By the *Pathan*=Singapore:
 W. L. Gough Co..... 13,500
 Otto Isenstein & Co..... 5,500
 Daniel A. Shaw & Co..... 3,500 22,500

APRIL 28.—By the *Adriatic*=London:
 Poel & Arnold..... *50,000
 New York Commercial Co..... *22,500 *72,500

MAY 2.—By the *Rabenfels*=Colombo:
 New York Commercial Co..... *25,000
 A. T. Morse & Co..... *15,000 *40,000

MAY 3.—By the *Philadelphia*=London:
 Poel & Arnold..... *8,000

MAY 5.—By the *Muncaster Castle*=Singapore:
 George A. Alden & Co..... 15,000
 Malaysian Rubber Co..... 35,000
 Poel & Arnold..... 9,000 59,000

MAY 9.—By the *Redhall*=Colombo:
 New York Commercial Co..... *22,500
 A. T. Morse & Co..... *3,500 *26,000

MAY 9.—By the *Welsh Prince*=Singapore:
 Heahler & Co..... 30,000
 George A. Alden & Co..... 20,000
 Malaysian Rubber Co..... 10,000
 W. L. Gough Co..... 10,000 70,000

MAY 10.—By the *Minnewaska*=London:
 A. T. Morse & Co..... *11,000
 General Rubber Co..... *10,000
 Robinson & Co..... *9,000 *30,000

MAY 11.—By the *Oceanic*=London:
 Poel & Arnold..... *30,000

MAY 12.—By the *Graf Waldersee*=Hamburg:
 George A. Alden & Co..... 30,000

MAY 16.—By the *New York*=London:
 Poel & Arnold..... *27,000

MAY 16.—By the *Celtic*=Liverpool:
 Poel & Arnold..... 5,000

MAY 17.—By the *Minneapolis*=London:
 Robinson & Co..... *7,000
 A. T. Morse & Co..... *3,500 *10,500

MAY 19.—By the *Majestic*=London:
 New York Commercial Co..... *9,000
 Poel & Arnold..... *3,500 *12,500

MAY 19.—By the *Marienfels*=Colombo:
 New York Commercial Co..... *20,000
 A. T. Morse & Co..... *15,000 *35,000

MAY 19.—By the *Deutschland*=Hamburg:
 George A. Alden & Co..... 17,000

GUTTA-JELUTONG.

APRIL 27.—By the *Pathan*=Singapore:
 L. Littlejohn & Co..... 215,000
 Heahler & Co..... 225,000
 Poel & Arnold..... 100,000
 George A. Alden & Co..... 125,000
 W. L. Gough Co..... 90,000 755,000

MAY 5.—By the *Muncaster Castle*=Singapore:
 George A. Alden & Co..... 155,000
 L. Littlejohn & Co..... 700,000
 Heahler & Co..... 650,000
 Poel & Arnold..... 250,000
 W. L. Gough Co..... 450,000
 Robinson & Co..... 100,000 2,305,000

MAY 9.—By the *Welsh Prince*=Singapore:
 Heahler & Co..... 750,000
 L. Littlejohn & Co..... 700,000
 W. L. Gough & Co..... 350,000
 George A. Alden & Co..... 450,000
 Robinson & Co..... 150,000
 Poel & Arnold..... 250,000 2,650,000

GUTTA-PERCHA.

APRIL 21.—By the *President Grant*=Hamburg:
 E. Oppenheim..... 9,000

APRIL 25.—By the *Cedric*=Liverpool:
 George A. Alden & Co..... 22,500

MAY 5.—By the *Muncaster Castle*=Singapore:
 George A. Alden & Co..... 11,000

MAY 12.—By the *Graf. Waldersee*=Hamburg:
 E. Oppenheim..... 33,000

BALATA.

APRIL 26.—By the *Marowijne*=Trinidad:
 Middleton & Co..... 5,000

MAY 3.—By the *Coppename*=Demerara:
 Ed. Maurer..... 2,500

MAY 9.—By the *Saramac*=Demerara:
 Ed. Maurer..... 2,500
 B. Williamson & Co..... 1,000
 De Sola Lobo & Co..... 1,000 4,500

MAY 14.—By the *Kais. Aug. Victoria*=Hamburg:
 Schulz & Ruckgaber..... 3,500

MAY 17.—By the *Suriname*=Trinidad:
 J. A. Pauli & Co..... 3,000
 Middleton & Co..... 1,500 4,500

MAY 20.—By the *Panna*=Demerara:
 Middleton & Co..... 2,000

MAY 23.—By the *Marawijne*=Trinidad:
 Ed. Maurer..... 2,000

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—APRIL.

Imports.	Pounds.	Value.
India-rubber	6,164,573	\$6,885,194
Balata	24,841	12,203
Gutta-percha	54,432	14,514
Gutta-jelutong (Pontianak)..	1,911,953	7,012,990
Total	8,155,799	\$7,012,990
Exports.		
India-rubber	1,081,520	\$1,894,222
Balata	3,218	2,897
Gutta-percha	1,905	1,393
Reclaimed rubber.....	19,320	2,079
Rubber scrap, imported....	1,064,226	\$102,627

BOSTON ARRIVALS.

APRIL 12.—By the *Kenbec*=Singapore:
 L. Littlejohn & Co. (Jelutong).. 210,000
 George A. Alden & Co. (Jelutong) 75,000
 Poel & Arnold (Jelutong)..... 75,000
 State Rubber Co. (Jelutong).... 160,000 460,000

PARA EXPORTS OF INDIA-RUBBER, MARCH, 1910 (In KILOGRAMS).

EXPORTERS.	NEW YORK.				TOTAL.	EUROPE.				TOTAL.	TOTAL.
	Fine.	Medium.	Coarse.	Cauch.		Fine.	Medium.	Coarse.	Cauch.		
Gruner & Co.....	101,657	20,101	40,706	41,964	204,518	113,031	30,479	53,152	156,076	352,738	557,256
E. Pinto Alves & Co.....	19,040	2,380	72,370	.....	93,790	126,443	17,876	55,061	105,722	306,002	399,702
R. Suarez & Co.....	.....	.....	.....	.....	.....	254,578	8,028	34,754	41,580	338,940	338,940
Y. Carques & Co.....	5,270	.....	9,900	.....	15,170	185,849	25,001	64,055	34,758	310,653	325,823
Adelbert H. Alden, Ltd.	28,555	5,913	35,492	1,980	71,940	21,127	6,753	55,235	33,375	116,490	188,430
Alves Braga Rubber Estates and Trading Co.....	.....	.....	.....	.....	.....	109,820	21,080	6,690	960	141,550	141,550
Scholz, Hartje & Co.....	510	1,020	16,097	1,320	18,947	41,224	8,602	8,894	8,603	67,323	86,270
K. O. Ahlers & Co.....	.....	.....	.....	.....	.....	63,047	.....	7,509	8,089	78,645	78,645
Gordon & Co.....	29,769	3,647	1,113	.....	34,529	9,800	1,981	10,872	3,808	26,461	60,990
Guilherme Augusto de Miranda Filho & Co.....	9,280	4,960	11,580	.....	25,820	3,840	800	10,440	.....	15,080	40,900
Pires Teixeira & Co.....	4,930	.....	14,520	.....	19,450	8,330	.....	10,230	.....	18,560	38,010
De Lagotellerie & Co.....	1,020	.....	990	.....	2,010	.....	.....	.....	.....	.....	2,010
Sundries .....	.....	.....	.....	.....	.....	1,530	170	15,680	.....	17,380	17,380
Itacoatiara direct.....	.....	.....	.....	.....	.....	3,018	208	1,656	153	5,125	5,125
Manaos direct.....	416,946	79,292	125,749	165,508	787,495	680,476	115,374	187,755	510,417	1,494,022	2,281,517
Iniquitos direct.....	.....	.....	.....	.....	.....	14,109	1,907	12,024	18,542	46,582	46,582
Total, March.....	616,977	117,403	328,517	210,772	1,273,660	1,636,222	238,439	538,807	922,083	3,335,551	4,609,220
Total, February.....	1,249,571	259,296	762,781	318,830	2,590,478	1,274,751	155,070	470,983	975,370	2,876,174	5,466,652
Total, January.....	1,540,151	325,343	831,917	400,144	3,097,555	1,119,634	91,349	340,073	565,228	2,116,284	5,213,839



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JUNE 1, 1910.

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Plantation Rubber from the Far East.

EXPORTS of Ceylon grown rubber from January 1 to April 25, in 1909 and 1910. From the Ceylon Chamber of Commerce Price Current.

To—	1909.	1910.
United Kingdom.....pounds	202,076	369,026
United States.....	71,879	352,122
Canada.....		
Belgium.....	6,629	10,593
Germany.....	7,387	6,833
Italy.....	....	452
Australia.....	5,968	....
France.....	1,639	....
Total.....	296,068	740,397

For same period in 1908—208,327 pounds; same period in 1907—146,422.

EXPORTS from the Malay peninsula from January 1 to the dates mentioned, in 1909 and 1910:

	1909.	1910.
Singapore—to March 31.....pounds	574,490	780,912
Penang—to March 16.....	653,107	401,201
Port Swettenham—to March 18.....	....	1,611,184
Total.....	1,227,597	2,793,297

EXPORTS during the first two months of this year of rubber produced in the Federated Malay States amounted to 1,497,201 pounds, against 790,183 pounds for the same period in 1909. These figures are included in the preceding paragraph.

United States Imports of Crude Rubber.

OFFICIAL customs figures for nine months ending March 31:

FROM—	1908.	1909.	1910.
United Kingdom.....pounds	3,323,460	9,438,904	13,041,217
Germany.....	1,866,410	3,316,123	4,767,736
Other Europe.....	4,418,673	5,552,634	8,014,773
Central America and British Honduras.....	786,704	591,280	991,468
Mexico.....	6,326,624	10,985,844	16,905,054
Brazil.....	23,178,885	33,980,709	36,240,532
Other South America.....	1,284,180	1,435,536	1,816,434
East Indies.....	979,995	819,517	1,584,453
Other Countries.....	36,446	23,442	12,243
Total.....	42,201,377	66,743,989	83,373,910
Value.....	\$25,970,172	\$45,128,757	\$82,985,074
Average per pound.....	61.5 cents.	68.2 cents.	99.5 cents.

EXPORTS.....	2,971,340	2,622,588	4,305,860
Net Imports.....	39,230,037	63,521,401	79,068,050

Liverpool.

WILLIAM WRIGHT & Co. report [May 2]:

Fine Para.—During the early part of the month the market was firm and advancing, up to 12s. 6½d. [= \$2.93] paid for distant delivery; within the past few days a reaction has set in, prices declined to 11s. 8d., rose to 11s. 10d., and then reacted to 11s. 4d. to 11s. 5d., at which it seems steady. The reaction has been mainly caused by second hand sellers; once their commitments are liquidated, a further advance in values is probable. News from Brazil continues extremely firm. Closing values: Upriver 11s. 5½d. [= \$2.79]; Islands 11s. 4d. [= \$2.76].

Antwerp.

RUBBER STATISTICS FOR APRIL.

DETAILS.	1910.	1909.	1908.	1907.	1906.
Stocks, March 31.....kilos	499,102	595,855	1,136,892	725,538	641,650
Arrivals in April.....	429,870	330,277	211,549	304,873	392,199
Congo sorts.....	340,456	219,645	175,000	229,927	298,733
Other sorts.....	89,414	110,632	36,549	74,946	93,466
Aggregating.....	928,972	926,132	1,348,441	1,030,411	1,033,849
Sales in April.....	458,504	318,345	630,528	568,838	153,391
Stocks, April 30.....	470,468	607,787	717,913	461,573	880,458
Arrivals since Jan. 1.....	1,469,549	1,458,369	1,729,358	1,637,631	2,071,689
Congo sorts.....	1,171,286	1,001,032	1,522,423	1,381,092	1,573,515
Other sorts.....	298,263	457,337	206,935	256,539	498,174
Sales since Jan. 1.....	1,540,593	1,446,317	2,018,339	1,834,242	1,926,418

THE death of M. Louis Van de Velde, senior partner of L. & W. Van de Velde, rubber and produce merchants, occurred on April 13, at Stresa, Italy.

INDIA RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufacturers of india-rubber and gutta-percha for the month of March, 1910, and of the first nine months of three fiscal years, beginning July 1:

	Belting, Packing and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
MARCH, 1910.....	\$182,745	\$62,518	\$456,865	\$702,128
July-February	\$1,233,910	\$1,437,252	\$3,053,753	\$5,724,915
Total, 1909-10....	\$1,416,655	\$1,499,770	\$3,510,618	\$6,427,043
Total, 1908-09....	1,053,758	1,071,489	2,805,914	4,931,161
Total, 1907-08....	1,040,985	1,342,965	2,802,371	5,186,321

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not only useless, but is injurious to the life of the rubber. Does your product contain?

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RAIN COAT

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INDIA RUBBER WORLD



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JULY 1, 1910.

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Calender Winders and Trimmers	Seamless Pouch Blocks

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AS TO RUBBER OVER PRODUCTION.

QUESTIONS continue to be asked as to the prospects of the over production of india-rubber, either in the near future or later. The question is a most natural one, and calculated to interest the owners of existing plantations and *seringaes* as well as persons who are being invited to invest in new rubber enterprises.

The subject divides itself under two headings—production and demand. It would be unreasonable to suppose that the production of rubber will not be increased very greatly during the next few years. The normal condition of the rubber business in the Amazon valley has been a yearly increase, steadily maintained even if not on a large scale. Each year sees the extension of rubber gathering to wider fields, and wherever new *estradas* are opened care is taken to conserve the trees. Undoubtedly large areas yet unworked will, under improved conditions, become more accessible than at present, while the number of *seringueiros* grows rather than decreases.

As pointed out in these pages many times, there are other regions where the production of forest rubber is on the decline, but there are yet untouched rubber resources in various parts of Africa and perhaps elsewhere, so that on the whole it seems that the world will

yet see a larger production of forest rubber in a single year before it sees less.

The question of over production, however, is asked more frequently in relation to the product of rubber plantations. Considering how rapid has been the development of plantation yields, it would be a simple matter to figure that with the same percentage of yearly increase the world's production of rubber would soon become doubled. Or, if all the plantations formed to date should become as productive as the best now matured, so much rubber might become available as to reduce prices below a profitable level.

Much will depend, however, upon the coming demand for rubber. From the beginning of the industry the market for rubber goods has grown constantly at a rate which has forced a larger production of the raw material, and presented the unusual situation of a raw product going up in price while being produced all the while on a larger scale. At no time have high prices of rubber lessened its consumption except temporarily, and it is possible that just as much rubber has been consumed in the world, from first to last, as if the cost had been only one-half or one-fourth of the prices actually paid for it. But the present price level cannot be looked forward to as permanent, since both plantation and forest rubber can be produced profitably, under favorable conditions, at much less than the present selling prices.

There are yet many people in the world who are not yet users of rubber in any shape, and many more people who are likely to add to the number of their present uses of rubber, so that the total consumption of this material seems likely to continue for a long time to come, and at a rate which seems to make unnecessary, at least for the present, any general fear of rubber over production.

One other point relates to the character of many of the more recent flotations of rubber plantation companies. It must be admitted that for all the capital stated to have been invested in the planting interest since the beginning of the year to yield profits would involve an enormous over production of rubber. But this we do not look for.

In the first place, the more successful of the old companies have been exceptionally well located, managed with skill and sound judgment, and conservatively capitalized. Now if a company less fortunate in the matter of location, management, and so on, should not yield satisfactory results, it is easy to see how it may be difficult after awhile to obtain needed financial support, and it is possible that some plantations once begun may be abandoned. It is more than probable that not a few projected plantations never will be started. It is to be pointed out furthermore that—

Not all of the companies floated in London or elsewhere in the name of rubber are for the purpose of creating or operating plantations. In a number of cases two companies are floated in respect of a single estate: (1) a syndicate to act as a "vendor company," after which it may cease to exist, and (2) the final or purchasing com-

pany. In such a case practically the same capital is mentioned twice.

Many of the new companies formed with a view rather to trading in rubber estates than to developing plantations, and in most cases no doubt but a small proportion of the capital authorized has been paid in. Even in case of the substantial productive companies as a rule not all of the authorized capital has been issued.

These reasons alone seem sufficient to indicate that not every new rubber company floated is bound to add to the world's production of rubber.

ANOTHER NEW RUBBER CONDITION.

ONE of the most interesting items in the rubber trade for some time past is the official announcement by the largest existing rubber manufacturing corporation of arrangements for the control, on a large scale, of sources of crude rubber, both forest and plantation. The amount of this company's consumption of rubber is nowhere stated, but it is several years since, in one of its annual reports, the sum of \$16,000,000 was mentioned as having been paid during a twelvemonth for crude rubber. It is common knowledge that the operations of the company are today on a much greater scale, and meanwhile the pound price for rubber has increased very greatly.

The fact that various projects for the purchase of rubber in primary markets by various manufacturers have not always resulted successfully is no argument against the wisdom of the new enterprise here referred to. Two of the most successful individual rubber manufacturers the United States have known were importers of Pará rubber on their own account something like a score of years ago, and the fact that they conducted business on this basis for a considerable period is evidence that they must have found some profit in so doing. It may be mentioned that while neither of these gentlemen is now living, the businesses which they founded are comprised in the larger company now announced to be acquiring control of forest rubber properties in the Amazon basin, and rubber plantations in the Far East.

This latter feature means a distinct departure from precedent. In other words, whereas comparatively small manufacturers formerly competed with other buyers in the open market at Pará, the new system involves absolute control of important rubber sources, without reference to rubber prices generally or the conditions of the rubber market in which other consumers cover their requirements.

Aside from the fact that the company referred to now control financial resources such as were unknown formerly in connection with any one concern in the rubber industry, various conditions have come about more favorable than in the past for a consumer desiring to become also a producer of raw material. It was only recently that extensive plantations of rubber, systematically conducted, have begun to produce largely, at a cost which

can be calculated closely in advance. Today importers in New York are buying rubber practically direct from plantations, and practically for account of individual customers, and it would be quite as easy for a large consumer to buy in Ceylon, for instance, and import on his own account.

Further than this, there seems no logical reason why a manufacturer having capital at command should not buy or develop a plantation on any scale desired, as well as public companies organized for the purpose in London or Edinburgh. After all, it is a question of managing a plantation by a board of directors acting through a local manager, just as a rubber shoe factory or a rubber tire factory is operated nearer at home by a local superintendent, under direction of a board none of whom is able to make a shoe or a tire.

There are plantation managers today as capable in their lines as any factory superintendent, and the system of plantation production of rubber has been as thoroughly developed as any line of manufacture. In fact, today the production of plantation rubber is largely a manufacturing business, if account be taken of the large part which machinery plays in converting latex into rubber. If the plantation be well chosen and is placed under competent management there seems to be no reason why the result should not be as favorable from a plantation controlled by a board of directors banded together for the manufacture of rubber goods as if the board were chosen for plantation management and had no other bond of union.

Not only has a change taken place in respect of rubber being obtained by planting trees, but the Amazon river rubber situation has become vastly more systematized than formerly, the new condition being more favorable to the satisfactory employment of capital on a large scale by outsiders. As has been outlined in THE INDIA RUBBER WORLD during recent months, new conditions of land ownership have developed in Brazil. Whereas *seringueiros* formerly worked singly or in small groups in an unbusinesslike way, with uncertain results and often without profit, today large areas of rubber land may be acquired by firms, and advantage is being taken of this condition in the collection, preparation, and shipment of rubber on a large scale.

It is true that at various times foreign capital has been invested in forest rubber propositions in South America with unsatisfactory results, but all the while rubber has been shipped from the Amazon in constantly increasing volume, and presumably profits have been made in the business. Here, as in rubber planting or the manufacture of goods, financial capacity and managerial ability are required, and it is not easy to see why these cannot be combined with respect to business in Brazil as well as in any other country.

The tendency in modern industry is toward the control by manufacturers of the raw material which they require, and rubber does not seem to afford an exception

to the rule. But the production on its own account of the rubber required by a single manufacturing company by no means makes a monopoly of the raw rubber market, even if it should give such company an advantage over some of its competitors. There is no other industry in the country which does not afford openings for new beginners or for independent factories, whether large or small, and the same appears to be true of rubber today as at any time since Goodyear.

THE LATEST DEMAND FOR RUBBER.

WHILE Count Zeppelin's exploits in aviation have been preceded by some very notable flights on both sides of the Atlantic, what he has been doing of late, perhaps more than the work of any one individual, points to the practical development of travel in the air. If one man can build an airship and travel in it 250 miles straight away with twelve passengers in less than four hours, landing them safely according to a pre-arranged schedule, it is reasonable to suppose that longer flights can be made, and as many or more passengers carried, under similar conditions. Moreover the doughty Count—and he is only 72 years old—has organized a daily schedule of travel through the air, booking passengers. It is rather expensive travel, to be sure, but not more so than some people with money are willing to pay for by other mediums.

The interest to the rubber trade of this new sport—or means of travel, or warfare, or however ultimately it may be classed—lies in the extensive demand for rubber to which it points. There is enough rubberized cloth in the envelope of the "Zeppelin" to completely cover one of New York's biggest skyscrapers, and it has to be material of the best quality. For the present it does not matter much whether airships and aeroplanes are "practical" or not; it seems that for some time to come, if not for always, there will be people eager for the sensation of flying, and this may be the only means whereby some of them will ever "get up in the world." There is a harvest in sight for the rubber manufacturers who find themselves in a position to supply suitable fabrics for the new vehicles, even though all of these may not be as expansive as the "Zeppelin."

It is singular how small has been the percentage of aeronauts injured in connection with flights, by whatever type of machine used. Not every one of these bold flyers is able to land just as he may wish, but most of them escape personal injuries, whatever may happen to their machines. The danger has been rather to people who remain on the ground. Even the smallest flying machine is apt to produce unpleasant results in case it falls unexpectedly upon a mere pedestrian. This fact alone may do much to encourage aviation, and thereby stimulate a demand for rubber fabrics. It is possible that in time everybody will make a point of riding in the air, to avoid being killed by other peoples' machines falling on them.

RUBBER AND SPECULATION.

AN after effect of the exceedingly high price to which rubber went some time ago is a tendency on the part of the producers to refuse to sell at present lower prices. In other words, they evidently believe the "level" to be \$3 a pound when it is really \$2 a pound or less. The ultimate result of this procedure will be excellent for the rubber manufacturer. Instead of carrying large stocks themselves, others will do it, and eventually that rubber will be put upon the market at the current price and will act to depress prices and to prevent speculation.

Rubber producers are just as human as any other class of business men and betray the same failings. When rubber was very low they laid it to speculative influences, and clamored for help. When the price became so high that it was almost prohibitive they unctuously talked of the law of supply and demand and pocketed the profits. To them low rubber is speculation with the "s" silent. High rubber a normal, business condition.

SPEAKING OF BUBBLES, it is well to remember that the art of bubble blowing has developed wonderfully in the last few years. At the outset soap and water made a mixture that, properly manipulated, produced a small iridescent globe that lasted but a few seconds. Scientists of our day added glycerine and made a bubble larger and more beautiful, that lasted for hours. Then came the rubber bubble, sold at every county fair, that lasted for weeks and months, and the acme of bubble blowing had been accomplished. Reasoning by analogy, therefore, was not the "Mississippi Bubble" like the primitive soap bubble, inherently weak and sure to perish quickly, and is not the "Rubber [Plantation] Bubble," modern, strong, inherently sound, and therefore bound to last a long while?

A MANUFACTURER ON PRICES.

TO THE EDITOR OF THE INDIA RUBBER WORLD: A paper such as yours that is in business to serve the interests of the rubber manufacturer should incite a public impression that the present situation is only temporary, that it is speedily going to be corrected, and that there is no immediate disaster ahead for either the manufacturer of the rubber article or the purchaser of same.

A MANUFACTURER.

June 13, 1910.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of india-rubber and gutta-percha for the month of April, 1910, and the first ten months of five fiscal years, beginning July 1:

MONTHS.	Belting, Packing and Hose.	Boots and Shoes.	All Other Rubbers.	TOTAL.
April, 1910	\$163,433	\$93,926	\$571,809	\$829,168
July-March	1,416,655	1,499,770	3,510,618	6,427,043
Total, 1909-10....	\$1,580,088	\$1,593,606	\$4,082,427	\$7,256,211
Total, 1908-09....	1,225,882	1,139,271	3,165,096	5,530,249
Total, 1907-08....	1,141,634	1,365,616	3,122,544	5,629,794
Total, 1906-07....	1,040,560	1,007,935	3,015,802	5,064,387
Total, 1905-06....	1,035,705	1,360,346	2,369,480	4,765,531

The Editor's Book Table.

GOLD COAST. REPORT ON FORESTS. BY H. N. THOMPSON, conservator of forests, Southern Nigeria. (Colonial Reports—Miscellaneous No. 66.) London: His Majesty's Stationery Office. 1910. [Paper. 8vo. Pp. 238 + 24 plates. Price, 1s. 1d.]

THE forest resources of the Gold Coast Colony, a British possession in West Africa, lately have been studied with great thoroughness by the expert whose name appears on the title page of this report. The colony embraces upwards of 40,000 square miles, and is almost wholly covered by forests which are rich in woods of value, but what is of particular interest in this place is the fact that rubber yielding species are found in every part of the colony. Rubber was first exported from the Gold Coast in 1880, when 1,200 pounds were shipped from Accra, which port gave a commercial designation for Gold Coast rubber which is still recognized more or less in the trade.

The export increased steadily until 1898, when no less than 5,984,984 pounds were recorded by the customs. So large a figure has not been recorded in any subsequent year, the export falling to 1,520,009 pounds in 1901. Later, however, the exports have averaged about 3,600,000 pounds a year. This must be regarded as a well sustained yield of forest rubber. The maintenance of the trade is due to a gradual advance of the rubber collectors in the hinterland, and the bringing under European control of regions like Ashanti, which only a few years ago were savagely opposed to the entrance of white men.

Another element in the perpetuation of the Gold Coast rubber trade is the fact that the product is largely tree rubber, derived from the *Funtumia elastica*, known in different localities by such native names as "ire," "ireh," "ireye," "ireyi," and so on. The product has been known widely as "silk rubber." Mr. Thompson finds that the adulteration of *Funtumia* rubber with less valuable sorts and even with latices containing no rubber at all is common among the natives, and among the regulations which the government has considered for the benefit of the rubber trade is a prohibition of mixing the latices of the different trees and plants. The enforcement of such regulation is difficult, however, owing to the fact that even inferior grades of rubber are readily saleable though at a reduced price, and the suggestion is made that a small export tax be placed upon rubber with the view to affording funds for paying an official staff to supervise the collection of rubber.

The cultivation of *Funtumia* has been undertaken with success, and experiments have been made with various exotic rubbers, notably *Hevea*. Regarding this species it is stated that as regards growth and yield of rubber, it is superior to the native *Funtumia*, besides being a more hardy type, but there is still the uncertainty as to a sustained annual yield of latex. Another native rubber tree in the Gold Coast is the *Ficus Vogelii*, the product of which realizes in the markets about 80 per cent. of the prices paid for *Funtumia* rubber. *Ficus elastica* has been introduced to some extent but with disappointing results, the yield being small and containing more resin than rubber from the same species in the Far East. There are various species of vine rubber in the colony, that which has proved most valuable being *Landolphia owariensis*.

RUBBER SHARE HANDBOOK. DETAILS OF COMPANIES OWNING Rubber and Other Produce Companies in Ceylon, the Malay Peninsula, British North Borneo, Sumatra, Java, Africa, and South America. With special chapters dealing with the development of the plantation industry. London: The Financier and Bullionist, Limited. 1910. [Boards. 12mo. Pp. xxviii + 500. Price 2 shillings, net.]

THE sixth edition of this useful and very complete book of reference brings its record of rubber companies up to April of the present year. The number of companies of which statistics are given in the book is 467. The directors are named of the companies registered in England and capitalized in sterling, and to a certain extent those of the "rupee"

companies in the Far East. The list of directors embraces 776 names, many of the names being repeated; in fact a single director in some cases will be found on the boards of from ten to fifteen companies. An interesting feature of the more recent development of plantation companies shown in this handbook is the activity with which plantations are being promoted in the Dutch East Indies. Java and Sumatra appear to be no less attractive to the British for rubber investment purposes than to Amsterdam and other centers on the continent.

THE A B C TO RUBBER PLANTING COMPANIES IN MALAYA, their possible production, profits, and dividends for seven years. By M. S. Parry, director Kuala Lumpur Rubber Co., Société Financière des Caoutchouc, etc., and E. M. Muraour. London: Fred'c. C. Mathieson & Sons. 1910. [Boards. 12mo. Pp. xv + 140. Price, 2 shillings net.]

THE principal feature of this book, which, by the way, is not meant to compete with other directories of planting companies, but rather to supplement them, is a series of forecasts as to production, profits, and dividends for 140 companies, carried out for seven years, or up to 1917. It might seem, at first thought, a rash piece of business to predict the profits of any business for even one year ahead, but the gentlemen named on the title page have made an extensive study of their subject, and in their introductory pages make a plausible argument in behalf of the system on which their forecasts are based. These appear to be conservative at least, being based upon a maximum net price per pound of 5s. and a maximum yield of 400 pounds per acre, even from the oldest trees. Yet with these limitations we see predicted for some of the larger companies for the current year such dividends as 340 per cent., 169 per cent., 130 per cent., 173 per cent., 167 per cent., 135 per cent., 137 per cent., and so on. It can at least be said for the book that it is interesting.

SAFEGUARDS FOR THE PREVENTION OF INDUSTRIAL ACCIDENTS. Edited by David Van Schaack. Hartford: Aetna Life Insurance Co. [1910.] [Paper. 8vo. Pp. 174. Price, 50 cents.]

IT appears to us to be most reasonable that a company engaged in insuring working men and others against accidents should promote the study of safety devices and safeguards against mishaps, both by employers and those who have to do with mechanical devices involving danger. It is evident from a study of this handbook, which, by the way, does not claim to be complete, that very many employes in factories endanger their own safety by lack of proper care of themselves. So that it is incumbent upon employers of labor to put such safeguards about the machinery which they employ as to guard workingmen from their own lack of caution. This book relates not only to the proper installation and safeguarding of machinery, but to the proper sanitation of works and other means of protecting the health of employes. There are also suggestions as to what to do in case of accidents. There is little in this book relating to rubber mill equipment, beyond the treatment of safety clutches for calender rolls, but there is much of general application which may well be worth reading in rubber factories, including, for instance, the boxing in of driving belts.

CAOUTCHOUCS BRESILIENS. LA "PARA FINE" D'AMAZONIE (*Hevea Brasiliensis*). Par Gustave Van den Kerekhove, expert in caoutchouc. Brussels: Ballieu, 1910. [Paper. 8vo. Pp. 23.]

A COMPARISON of conditions of production of *Hevea* rubber on the Amazon and in the Far East, with a favorable showing for the former region.

REPORTS ON THE BOTANIC STATION, EXPERIMENT PLOTS, and Agricultural School, Dominica. 1908-09. Barbados: Imperial Commissioner of Agriculture for the West Indies. 1909. [Paper. Fol. Pp. 41.]

EMBRACES comprehensive notes on experiments with india-rubber of various species, under cultivation.



RUBBER LIGHTERS AND FRONTAGE OF THE CITY OF PARA.

Para, Manáos and the Amazon.

By the Editor of "The India Rubber World."

FOURTH LETTER.

The Life of the Rubber Collector and His Relation to the Seringal Owner.—A Visit to Onças Island.—Dr. Huber and the Musée Goeldi.—Alleged Perils of the Amazon which Do Not Always Materialize on a Trip Upriver.—The Approach to Manáos.

THE first thing the laborers on a *seringal* are set at, when a new season begins, is the cleaning of the old *estradas*. Five or six months in a tropical forest bring great changes. Huge trees have fallen across the paths, dragging others in their fall and often making impassable barriers around which a way must be cut. Vines and young trees have sprung up and grown enormously, and everything that nature could do to efface man's work has been done. So that the cleaning of the *estradas* is no light task. It means not only reopening the path, but cutting a circle about two feet wide around each rubber tree, so that there will be room to work. Then comes the opening of new *estradas*, if there are laborers enough to work them. And next in order is the tapping.

This starts very early in the morning. The *seringueiro* rises at 4 o'clock, boils some coffee which he hurriedly drinks, and, provided with a *machadinha*, or little tapping ax, and several hundred tin cups, starts barefooted for his *estrada*. When he reaches the first rubber tree he attaches as many cups as the size of the trees warrants, usually in a circle as high up as he can conveniently cut. These cups are attached directly under the cuts, and catch the latex as it flows out. There is a great difference in trees as far as the production of latex goes. Some bleed freely, others reluctantly; some furnish thick, creamy latex, others thin latex, and occasionally one gives none at all.

Although alone in the jungle that shelters many wild beasts and venomous snakes, the rubber worker is very rarely molested. The wild creatures all get out of the way of man when they can. To be sure, if the tree tapper should leave his pile of tin cups for a short time, a trouble seeking monkey might swing down from the branches above, lift the stack, and throw it high in the air just for the delight of seeing the cups scatter.

From tree to tree goes the rubber tapper until all on his *estrada* have their girdle of cups. He now discards the tapping tool and, taking some vessel, very frequently an empty kerosene can, begins the collection of the latex. His first visit is to the tree first tapped, where the latex has probably ceased running, and the cups may be a quarter, a half, or nearly full, depending on the productiveness of the tree. By the time he has finished

this round and collected all of the latex it is 9 or 10 o'clock, and he is ready for breakfast. This he prepares himself and it usually consists of dried beef and beans, always accompanied by *farinha*.

THE SMOKING OF RUBBER.

The rubber worker is now ready to do the day's smoking. On the fire smoldering in his hut he heaps some of the heavy oily nuts that are borne abundantly by the "urucuri" palm (*Attalea excelsa*). Over this, if he has it, he places a funnel that is like a truncated cone open at each end, part of the lower edge being cut away to make a draught. Until recently these cones were made of earthenware and were heavy and rather fragile. To-day the *aviadores* supply them in sheet iron with handles on the side. These are much more portable and not breakable, but the *seringueiros*, that is, the old expert ones, detest them. They complain that the iron throws off so much heat that their work is much more disagreeable than when they used clay cones.

When the smoke is coming thick and hot from the funnel, the *seringueiro* winds a bit of freshly coagulated rubber about a piece of wood shaped something like a broom handle, and thoroughly dries it in the smoke. Then he dips this in the latex and holds it again over the smoke until that film is dried. Over and over again he repeats this process, the ball growing in size with every dipping. Where large balls are to be made that cannot easily be handled, a rest is made by driving two forked sticks into the ground with a cross piece connecting them. In the middle of this cross piece is a loop of bush rope into which one end of the pole holding the rubber ball is thrust. The *seringueiro*, grasping the other end, swings the ball over the smoke and turns it easily. As a further assistance a loop of bush rope coming down from the roof of the hut helps the laborer to hold his end of the smoking pole.

At the beginning of the smoking process the core of the *pelle* is dipped into the latex, drained, and the film smoked. As the ball grows larger and heavier the latex is carefully poured over it as it turns. Much of the latex coagulates in the air. This is in the form of thin films on the sides of the vessels, drippings in various parts of the camp, and latex that started to coagulate before there was time to smoke it. This forms the grade known as coarse Pará.

Day after day until Saturday the *seringueiro* pursues his monotonous task. On that day, he, with the half dozen others or



DWELLING OF RUBBER GATHERERS ON THE AMAZON.

[Built on poles for protection against the rise which annually takes place in the rivers. Hammocks are covered with mosquito nets—a very necessary precaution.]

more whose *estradas* join his, take their balls of rubber to the *seringal*, where they are credited with the number of pounds gathered, at say 50 per cent. of the market value as they know it. The other 50 per cent. is to indemnify the owner of the *seringal* for shrinkage, freight, and so on. The rubber ball is then branded with the mark of the *aciador* and stored awaiting shipment. Oftentimes too it is sunned that it may not dry out too rapidly.

His week's work finished, the *seringueiro* goes to the store, gets supplies of provisions for the next week, not forgetting plenty of "caçaca," which are debited to him at about 100 per cent. above the cost price.

The owner of the *seringal* makes his profit almost entirely out of what he sells to the *seringueiro*. The latter is obliged to buy goods only at the store, or else hunt some other *seringal*, the owner of which must assume his debt, which always exists, with a 20 per cent. increase for the transfer.

SIDE LIGHTS ON RUBBER GATHERING.

The tree tappers are not careful of the trees. Naturally improvident they would destroy them in one year if it meant more rubber, but fortunately more rubber cannot be gotten in this way from the *Hevea*, and so the trees survive and continue to produce year after year. There are stories of rubber gatherers on the upper reaches of the river who build fires about the bases of the great trees to stimulate the flow of latex, but no one seems able to verify such tales.

The tapping season may last from three to six months. This depends on location, and on the size and condition of the trees. Sometimes the trees are tapped daily, sometimes every other day. Often they are given a rest for a year. The amount of rubber secured per tree is difficult to estimate, but it probably does not exceed two or three pounds, and in some districts that have been constantly worked for a number of years even less than that. Old rubber men tell stories of *estradas* of a hundred trees that would turn in 20 to 30 pounds of rubber a day, but they agree that the time of such production is long past.

The actual extent of the rubber forests in the Amazon country is unknown, but according to those who have done a good deal of exploring only the fringe has been touched. The *seringaes* and temporary rubber camps are all located along the waterways.



TAPPING "HEVEA BRASILIENSIS."

[The *seringueiro* in one hand holds a hatchet and in the other a latex cup; several cups have been attached to the tree already; he carries also a can for collecting latex, and a gun.]

This means working the territory about a mile inland. The rest of the forest, comprising thousands of square miles, is as yet untouched. This is true not only in Amazonas and the other great interior states, but of the state of Pará as well. With labor and proper exploitation four times as much rubber could come out of the Amazon as is obtained at present.



SERINGUEIRO COMING TO CAMP WITH LATEX.

[The trunk of a fallen tree serves as a bridge over a stream.]



SMOKING RUBBER ON A SERINGAL IN THE AMAZON COUNTRY.

[IN THE FOREGROUND ARE SHOWN SOME LARGE PELLETS OF RUBBER, JUST SMOKED.]

The securing of laborers is the most difficult part of the undertaking. To get a rubber estate in the Amazon valley is easy. Million of acres of land with rubber trees are without owners. The land costs nothing, the government exacting a fee only when it is registered.

A VISIT TO ONCAS ISLAND.

One of the leading exporters in Pará is a wonderful producer of artistic photographs. It is natural that he should have taken boat journeys through the islands and up and down the great rivers, not only in search of rubber knowledge but in pursuit of his own particular fad. It was most gratefully, therefore, that I accepted his invitation to take a launch trip to Isla des Oncas, the great island that lies some miles to the south of the city. This island is cut in two by a narrow natural canal which at high water is navigable by canoes and rowboats. To catch the tide meant an early start. So I awoke the Yankee Consul and the Visiting Manufacturer at 4 o'clock, and after coffee we hastened down to the water front, arriving just as the Exporter appeared, with several porters laden with eatables and drinkables.

To cross to the island we embarked in a little three-cylinder kerosene launch and soon were chuff-chuffing across the bay for the "Island of Tiger Cats." Once over to the mangrove fringed shore we coasted up and down until finally the sharp eyes of our pilot detected the little opening of the channel. We were then transferred to the rowboat that had been trailing behind.

The launch turned back and we entered the dim tree shaded channel. In some places it was so narrow that there was barely room for the oars; in other places it was from 10 to 20 feet wide. The water was the same yellow brown tint that the whole

Amazon affects. From the start we saw rubber trees—old settlers that had been tapped for generations, their trunks swollen, scarred and disfigured by thousand of *machadinho* strokes. Often pole stagings had been erected about them, crude contrivances to allow the rubber gatherer to reach hitherto untapped surfaces.

Here I saw for the first time the curious little surface swimming fish, with a pair of bulging eyes in the top of the head to view the upper world, and another pair underneath to view the nether world.

As we got further into the island the waterway broadened. We passed many little river huts, and occasionally met a canoe whose occupants courteously and gravely bade us *bom dia*. The curving stream, fringed with palms, huge "mocco-mocco" plants



STEAMER "RIO ITUKY," ON THE JURUPARY.



MUSEE GOELDI—ADMINISTRATION BUILDING.



MUSEE GOELDI—RESERVOIR.

with white calla like blossoms, and great ceiba trees, was wonderfully beautiful.

Of animal life we saw little; of birds there were parrots and hawks; of animals, one black monkey; and of insects, great blue butterflies, and one huge bird catching spider as big as a saucer.

As we were emerging into the river on the other side of the island a sudden shower fell, and we all held a tarpaulin above our heads until it was over. It was then that my Companion exclaimed that a wasp had stung him. The wound didn't look like a bee sting, as there were two little punctures, close together. Being on the back of his hand he was advised to suck it as a precaution, which he did, and no inflammation followed.

The rain having ceased, the tarpaulin was put away, when somebody said, "There goes a centipede," and we caught a fleeting glimpse of something that looked like an elongated earwig which ran into the Visiting Manufacturer's pocket. It was rather a trying experience, but he never turned hair and sat perfectly calm, while the Exporter with a pair of small scissors very gingerly turned the pocket inside out, but did not find a cent or a pede, either. A moment later the insect was discovered in the fold in his trousers, and very dexterously nipped with the scissors and thrown overboard. Then we all breathed a sigh of relief, for the bite, though not dangerous, is apt to give one fever for a few days.

DR. HUBER AND THE MUSEE GOELDI.

I had visited the Museu Goeldi many times while in Pará, and each time was more and more impressed with the natural wonders of Brazil. The museum is crowded with birds, insects, reptiles, animals—or, rather, their carefully preserved cadavers—and a week of careful looking would not enable one to observe in detail a half of what is there. The result is the visitor goes away with a misty and mixed recollection of moths as big as shingles, flies the size of one's hand, beetles bigger than mice, great lizards, monstrous alligators, and snakes of all sizes, colored in infinite variety. Birds grotesque, birds beautiful; animals unbelievably strange, and fish of such infinite variety that imagination itself pauses helpless in stunned surprise.

In cages, dens, and enclosures surrounding the museum buildings are also housed a goodly number of living representatives of those in the cases inside. Not that I spent all of my time either in the museum or the zoological garden, for there is the botanic garden also. And furthermore, there is Dr. Jacques Huber, who knows more about the *Hevea* species than any one else in the world, who has gathered many of the typical sorts about him, and is steadily observing them day by day as they develop into mature trees.

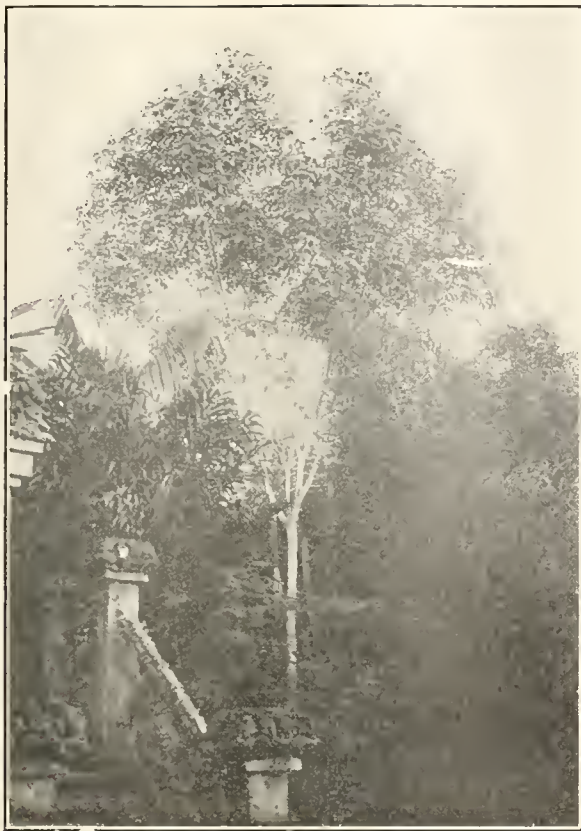
The doctor, by the way, in the course of our many conversations, suggested a new theory for the greater "nerve" in smoked rubber than appears in the unsmoked. He explained that a

pelle, from the time it is formed, undergoes a natural, continuous, solidifying pressure, caused by the evaporation of the water from the outside layers and their consequent contraction. Unsmoked rubber, on the other hand, put up either in sheet or rectangular block form, experiences no such pressure. The theory seemed to me worthy of note. I remember that in Panama, in gathering *Castilloa* rubber, we rigged some crude presses to get the water out, and in some instances, where the rubber was left for a long time, its strength was greatly enhanced.

As I have said, the worthy Doctor knows the *Heveas*. He has quietly, patiently, and persistently specialized on them for years. And it was with exceeding interest that I heard him state that the *Hevea Brasiliensis* is, after all, the one producer of really high-grade rubber. He knew them all from the *Brasiliensis* to the *Spruceana*, and named twenty varieties and their characteristics off hand. One that was new to me was the *Randiana*, named after the orchid collector Rand whom New Englanders will remember and regret. A very thrifty specimen of this is in the gardens, but it gives no latex. It is this eminent botanist's opinion that many other *Heveas* will be discovered, and he is ever on the outlook for them.



DR. JACQUES HUBER AND HIS TAPPING KNIFE.



“HEVEA RANDIANA” (HUBER).
[In Pará Botanic Garden; thirteen years old.]



“CASTILLOA ULEI” IN PARÁ GARDENS.

Nor is his attention concentrated upon the trees that produce fine Pará rubber. The *Sapiums*, which are most plentiful throughout the Amazon country, are known to him equally well, and he has gathered ten varieties into the garden for observation. Most of them produce a latex that is exceeding resinous. One or two species, however, give a good grade of rubber, and were labor plenty they would be well worth exploitation.

I had many samples of balata from the Amazon region and took occasion to ask him of the *Minusops* in the Brazils. Just as much at home on that topic as on *Hevea*, he named a dozen varieties and told of sections where the trees are abundant, although the gum is not gathered or valued at present in Brazil.

The learned Doctor has worked for many years in Brazil, oftentimes I fear without the appreciation that his energy and industry have deserved. At last, however, both the government and the world at large seem to be awakening to his value. What he had long wished for, an experiment station, has been established about 150 kilometers from the city, situated on the railroad that runs down to Bragança, and he is much encouraged. By the by, he has invented a tapping tool that looked pretty good to me. I went out to the gardens at daybreak and saw him “herringbone” some *Hevea Brasiliensis* trees with it. It is interesting to note that they gave exactly the same product for their size as *Hevea* trees in the Far East.

The rubber known as “caucho” had been on the market years before the tree that produces it was identified botanically. For a long time it was claimed that it was an *Hevea* product. In 1898, however, Dr. Huber visited the Ucayali river and, after much searching, was able to find a few caucho trees. The difficulty in finding them was due to the fact that those that remained were growing in dense forests far removed from the waterways. It will be remembered that the tree is cut down in every instance to secure the rubber; hence its scarcity. At the

time of his visit it was not blossoming or fruiting, and only leaves and twigs could be secured, but these proved it to be a *Castilloa*. Dr. Huber and the Italian botanist Dr. Buscalioni agreed that it must be the *Castilloa elastica*, and it was not until some years later that it was identified as a different species, *Castilloa Ulei*.

To those who are interested in the sources of rubber, caucho was for a long time thought of as existing only on the upper waters of the Amazon, notably in Peru. Dr. Huber and his colleagues, however, found it in practically the whole region of the lower Amazon, the Trombetas, Tapajos, Xingu, and Tocantins rivers. Indeed, it is becoming evident that where *Heveas* flourish *Castilloas* grow equally well, and the reverse is also true. During the year 1909 the state of Pará shipped nearly 1,000 tons of caucho.

ALLEGED PERILS OF THE AMAZON.

I dislike exceedingly to confess it, but I got badly frightened in Pará and came very near taking boat back to Barbados and sending the usual excuses to friends in Manáos, such as “important cables,” “business complications,” or the like. It came about this way. The friendly Americans and English resident there are delighted to receive and entertain fellow countrymen. Many of their visitors, however, are woefully unfitted for tropical life and make ideal “fever food.” Others pay no attention to cautions, but go out and hunt for fever, and find it. Then resident friends are obliged to answer frantic cables, furnish physicians and nurses, and stand the brunt of all the worry. Oftentimes, too, they supply the funds necessary for cure or decent interment. They are perfectly willing to do this—that is the former—and their kindness and generosity is spontaneous and without limit, but the strain tells.

If they are somewhat fearful for a visiting friend in Pará, they are doubly so for one who goes to Manáos. When, therefore, one after another showed me cables and letters full of

fever stories from the upriver rubber center it began to make an impression, and I found myself formulating reasons for dodging. But if one will only dose oneself with a sufficiency of forebodings, a reaction is sure to come, and courage returns. This was my case. And of a sudden I found myself determined

to discover what Manáos would do to me. Further than that came the belief that with common sense and care I should probably get through all right. They were exceedingly nice, these friends of mine, when I rendered my decision. One, with a whimsical smile, said:

"It's sure to be interesting anyhow. Say your prayers and trust in casaca."

Another secured for me the *cabin de luxe* on a fine Hamburg-American boat and outlined a river journey princely in its comfort and very speedy. This I refused, although with real regret. I had my eye on one of the smaller Booth boats that had accommodations for only sixteen passengers and would carry on that trip only two, myself and Companion. It was a freight boat, going upriver almost empty, which

The anchor came up about 5 in the afternoon and, facing a pleasant breeze, with half of the propeller out of water, "grinding air," we started out through the tangle of low, heavily wooded islands that cluster about the mouths of the Pará and Tocantins rivers, heading for the "Narrows" in the care of two Indian pilots who knew the many channels day or night by instinct. Unless it came on to rain very heavily we would run all night. It was soon too dark to see much, so I turned in.

SCENERY ON THE AMAZON.

Every one asserts that there is no need of mosquito bars going up or down the Amazon, but I had mine adjusted in spite of the pitying smile on the face of my Companion, who didn't unpack his. I had an extremely self satisfied feeling when I awoke about midnight and heard him at work hastily getting his protector into position. Not that the mosquitos were bad or numerous, but they were aboard.

I was up at light and, after a bath in the alluvial soup the river furnishes, went on deck. The boat was plowing through a lakelike expanse of water, with islands in all directions. It is difficult for one who has not studied this subject particularly to appreciate how many thousands of islands big and little are crowded into the lower Amazon. The subject is usually dismissed with the time worn statement that Marajó is "twice the size of Massachusetts." Why not say that if all the islands, with Marajó for a base, were piled one upon the other, they would form a pyramid so high that a cannon ball, dropped from the top at half past 7 in the morning, and falling at the rate of 5,280 feet a second, would not reach the base until late in December?

As the river was rising we passed through and by acres of floating grasses, weeds and logs, the larger masses being easily avoided. About 10 o'clock we entered the Narrows, our channel being perhaps 300 yards wide. On either side the low lying alluvial shores were thick with palms of various kinds, together with Spanish cedars, rubber trees, acacias, and a great variety of hard woods, over which ran a riot of vines big and little, every inch of land far out into the water being crowded with luxuriant vegetation.



HERRING BONE TAPPING.

[Herca at Musee Goeldi.]

would mean hugging the shores to avoid the current. It was a rubber boat, and its captain had been making the river journey for 30 years. There would be no shuffleboard, no pleasantly wasted hours in the smoking room, no fascinating acquaintances. All of which would give me added time and opportunity for observation and work.

We bearded the boat in the early afternoon and the Captain promptly gave us the run of the ship. There was no social hall and the chart house deck, above which was the bridge, was roomy, high above the water, screened from sun and rain, and, although the Captain's private domain, he made it ours for the river voyage. If I had outfitted a swell ocean going yacht the equipment would not have been as practical as that afforded by this steady, roomy, matronly freighter.



THE PICNIC PARTY AT ONCAS ISLAND.



ONCAS ISLAND—INLAND WATERWAY.



BUNGALOW ON ONCAS ISLAND.

Many of the vines and trees were masses of beautiful flowers, and while the epiphytes and orchids that clung to and clustered on trunks and branches did not show many blooms, they added to the decorative effect wonderfully. We looked here for the manatee, or sea cow, which lives in these waters, suckles its young, and lives out its quiet uneventful life, shyly avoiding everything animate but its own kin. But we had no luck.

Every now and then we passed a *seringueiro's* hut, or *barracão* close to the water's edge, built on posts above the rise of the river, while in front of it were tethered one or more canoes, the only means of transport, and indeed of refuge, when the water is very high. These huts were simple in construction, made of poles lashed together with bush rope, the sloping roofs covered with broad palm leaves. The floors were of rough hewn logs, with a pile of clay or earth for a fireplace and no chimney. Oftentimes the whole front of a hut was open.

So close did we run to the shore that we could see the owners idling in their hammocks and many times surprised coveys of naked children, who promptly fled to cover, only to venture out when we got by. Some of the older ones, to be sure, would jump into canoes and paddle toward us, coming close to the stern as we passed so that the wash of the steamer tossed their frail craft up and down most perilously, which adventure they hailed with shrill squeals of delight.

We saw many such huts and it is from them that the impression often is gained that the whole population of the Amazon valley is made up of hut dwellers. Such is far from being the fact. On the rising ground away from the river bank are some magnificent estates, or *fazendas*, with fine buildings, great herds of cattle and horses, and very considerable plantations. Vast areas of the country are, of course, not only unsettled but unexplored. And these *fazendas*, widely scattered as they are, do not make the showing they deserve.

As we ran close to the shores we were constantly flushing flocks of birds that looked like short tailed pheasants. They were very striking in their brown and red plumage, and as they flew along the margin of the stream alighting often and balancing themselves on swaying branches near at hand, it looked as if sportsmen were few. We put them down as Brazilian partridges, but learned later that they were a sort of gilded buzzard unfit for food, and altogether despicable. It was a disappointment, for all the way to Manáos they persisted, sometimes in flocks of a hundred or more.

Of alligators we saw not one. Not that this saurian had disappeared permanently, but the high water had driven it into the smaller waterways somewhat removed from the river proper.

In the afternoon of the first day the ship's doctor, net in hand, came to our deck and talked very interestingly of his



ON THE BOOTH LINER—THE DOCTOR.



ON THE BOOTH LINER—THE EDITOR.

ambitions as a butterfly hunter. It was his first visit to the tropics and he was gathering everything insectivorous that he could catch. Like a wise man, he had secured the help of the crew, and it was an object lesson to those who venture upriver without mosquito bars to review a night's accumulation. There were enormous beetles, moths, gigantic praying mantis, ichneumon flies, and bugs unclassified by the score. Then in the daytime came the sly, quick moving butterflies in blue, yellow, and green, and thin waisted wasps and hornets, all of which kept him busy.

The course for many years was by Breves, the principal settlement on the island of Marajó, at one time the center of the rubber trade. There the channel was so narrow that an anchor was let go and the boat swung round before it could head right to go on. One of the river pilots, however, once asked permission to take a boat through another channel that he had discovered—the one we were in—and since then the old passage had been abandoned.

Almost from the start we secured the use of a pair of powerful glasses, the property of the Captain, which gave us glimpses into the jungle that were fascinating. We could pick out rubber trees nearly every time, particularly where they had been tapped. I had long been wondering why it was that the *Hevea*

THE COURSE FROM PARÁ TO MANAOS.

I do not feel that in the foregoing I have given a clear idea of our course, or what we saw before we emerged into the Amazon. Let me put it briefly.

We went north from Pará, with Onças island on the left, heading for Point Musqueiro on the mainland, then west and south in the Pará river, passing Caprin light on the southwest. Next came Mandilhy, which also has a light; then through Jaraca channel, with Muru-Muru island on the left, where one out of every three steamers gets stuck in the mud; by the village of Antonio Lemos, where is situated the cable station; past the village of Gurupa, by Baxio Grande island, and at last we were in the Amazon.

The river was now three miles wide, instead of a few hundred yards. The jungle was more open, the clearings larger, and off to the north the eye was delighted by the tree crowned heights of the Sierra Jutahy. One wondered why those broad *mesas* were not the site of a healthy breeze swept city. We still kept close to the shore, sometimes on one side, then on the other, to avoid great shoals that form and disappear almost overnight. Occasionally there was a break in the forest wall



PANORAMA OF "VILLA NOBRE," A BEAUTIFUL FAZENDA NEAR BREVES.

was able to withstand the inundations and still be thrifty. A very cursory examination of the Amazonian soil tells the whole story. It is an almost impervious, waterproof, clay, which would take months to saturate, and then would not be waterlogged.

That afternoon we ran through an extremely heavy shower and looked back on the biggest, most gorgeous, double rainbow I have ever seen. With nightfall came the great frog concert, varied by the screaming of nightbirds and the chirping of innumerable insects. Sitting on deck, pajama clad, enjoying the gentle breeze caused by the boat's progress, with the dusky loom of the jungle on either side and the "gorgeous Southern Cross" above us, the scene was, in tourists' phrase, "one to inspire sentiments of awe." I always admired this last phrase until I actually saw the Southern Cross. I had read of it as a blazing aggregation of stars of the first magnitude, holding the center of the Cerulean dome. The "intermediate" geography that I first studied had a half page illuminated picture of it. When finally, after much searching, I saw it, I was filled with awe at the imagination that could see beauty in that little shrinking, out-of-plumb collection of bleary eyed stars, let alone making a constellation of it. It is an insult to Orion and all of his family.

and we would see vast savannahs, grass covered, their light green surface standing out in bold relief against the dark green background of the forest.

Speaking of floating debris, the bow of our boat caught a log which jammed crosswise and held in that position, and we pushed it upstream. It gathered everything that came its way, and the result was that in a couple of hours the sturdy engineers were not only forcing the boat upstream, but a floating island a quarter of an acre in extent, made up of logs, driftwood, grasses and floating wreckage of all sorts. After a time it grew to be such a burden that the engines were reversed and we ran backwards until clear of it to avoid making an island that might dam the river.

The banks of the river were now strongly marked and from 6 to 10 feet high above the water level. On every tree that fringed the edge, and indeed on the thick growing shrubs and vines, could be seen the distinct highwater mark of the previous season in the shape of mud stains. This line showed that the river had still 10 feet more of rise to reach last year's level, and by the way it was coming up it would undoubtedly do it. More and more we saw the work of the floods. Great stretches of devastated forest, covered with rank reeds and grasses, huge



BREVES, ON THE LOWER AMAZON.



SANTAREM, ON THE AMAZON.

dead trees piled in picturesque confusion upon the river's edge.

On a small map the river looks straight and its channel is well defined. In fact it pursues a sinuous course and is everywhere interrupted by islands big and little, so much so that unless one refers to a chart it is difficult to know when one is really passing the mainland.

We saw many large birds, water turkeys, blue herons, egrets, and thousands of parrots. We passed the confluence of the Xingu river, then the little settlement of Prainha, a town of some 300 inhabitants, its houses painted blue and white with red tiled roofs, its fleet of canoes and its excellent river wall, with buttresses for strength and steps down at the water's edge at each end. Above the town were extensive cornfields and pastures where many horses and cattle were grazing.

The current was decidedly swift along there, and we moved up stream slowly. Once fairly by the village we lost touch with mankind, the river broadened to about eight miles, and except for the rounded peak of Serra Urubucoara all that we could see was great forest covered plains. A great river like the Amazon, subject to floods, always builds banks for itself even if it tears them down again. The larger and heavier materials brought down by the floods are piled on the "near" banks and promptly covered with verdure. For miles we passed banks 10 or 12 feet above the water level and the impression was that the land sloped gently up from them. But when a break came in the forest wall great meadows would be shown a trifle lower than the river bank, these meadows in turn sloping up into grass lands where cattle fed by the thousand, shoulder deep in the luxuriant growth.

I had heard many say that the journey up the river, except



PLANTED "HEVEA" (32 MONTHS OLD).
[Estate of David Riker, at Santarem.]

as one passed through the Narrows, was uninteresting and dreary. My mental picture had been of an expanse of water so broad that the shores dimly seen offered nothing of interest. Perhaps I didn't question the right men. I once knew a man in the gas stove business who visited England in the summer time and all he could describe on his return were the thousands of chimney pots on London dwellings. Maybe I had taken the view of a chimney pot traveler. Actually every waking minute disclosed something worth seeing. The river is from 5 to 15 miles wide and the scenery constantly changes. The stories that for example, in one place it is 900 feet deep, are exaggeration. I followed the charts closely and the greatest depth recorded is 300 odd feet, which of course is good.

The third night out it was very dark and as we worked slowly upstream we saw a winking light far ahead. Soon we learned that the speedy Hamburg-American boat, on which we so nearly took passage, was fast in a mud bank. We solemnly took her mails and went on through the darkness, promising to report her at Manaus.

We got to bed late that night because of the excitement, but were up at daylight as usual and found the surface of the river even more thickly littered with logs—logs that were thickly crowded with passengers. There is a little black and white river gull that exists by the million in the upper river. They love to settle on these floating logs and sail and sail. The way they crowd every available inch of space above the water reminds one of a Hudson river boat on a holiday: there is not room for even one more.

AMERICANS IN AMAZON LAND.

During the night it came on very dark with thunder showers, but we did not stop, the pilot calmly steering by the flashes of lightning. Very early in the morning we passed the Tapajos river and the town of Santarem. Here is a settlement of some 2500 people. Santarem is noted, as far as Americans are concerned, as a place where a body of Confederates from Texas established themselves after the civil war. They believed in slavery and moved to a country where they could own slaves. Somebody in Brazil must have heard of it, for not long after their establishment slavery there was abolished. It is rumored that rather than surrender the right to own and rule others they intend to move to New York city and secure positions on the police force.

More and more the character of the river bank changed. Often it was a palisade of clay, 10 to 20 feet high, its face as smooth as if cut with a spade. Near Obidos this was particularly marked. This town, by the way, shows up very well from the water front. Its public buildings, church, and dwelling houses—many of them of the bungalow type—are all in view, as the town is built on sloping ground. Above the town the river bank is very high, and the clay strata, in lavender, yellow and red, is very striking.



OBIDOS, ON THE LOWER AMAZON.



ITACOATIARA, OR SERPA.

For the first time in the journey our pilot seemed in doubt, and kept the lead going for many hours. Then it was the Captain told us stories about running ashore. It is not particularly dangerous when the river is rising, as one is sure to get off in a few days. He told of one tramp boat that ran aground five times on the journey from Pará to Manáos. His own boat was hung up on a mud bank once for 13 days, and right in a mosquito colony at that. Then there was a Booth boat in the upper river that was fast for six months up on the bank where the floods had left it, and was about to be dismantled when a huge section of the river bank caved in, depositing the boat, right side up, far out in the deep water.

Did I mention that we had some hundreds of crickets aboard, and that they gave nightly concerts? Like the cockroach they ate soiled handkerchiefs, starched collars, and book bindings, but they were not sordid about it. They did stop to fiddle now and then. But the cockroach thinks only of filling his little tin clad belly, and racing across the floor to be stepped on when one is barefooted.

In the upper reaches of the river, at least along the banks, there seemed to be few rubber trees. This in spite of the statement of the ship's doctor that all of the large ones on the bank were rubber trees—some of the crew had told him so. We did not see the Parintins hills above Obidos, which mark the boundary of the states of Pará and Amazonas, because the rain blotted out most of the landscape. When it ceased we were close in shore opposite a great ranch where were cattle and horses by the hundred. It was imported stock too. One huge snow white Indian bull, standing like a statue in white marble, occupied the foreground until we passed out of sight. More and more we saw clayey palisades, riddled with holes like sand martins' nests,

their tops draped with blossoming vines, the body of the bluff often made up of such brilliant colors that it looked like a petrified rainbow.

In the little lagoons and eddies were natives fishing, and oftentimes a turtle hunter, bow and arrow in hand, watching the water for a shot. It was growing warmer all the time, for the breeze was with us, and the smoke of the steamer showed it by drifting upstream a little faster than we could go.

THE APPROACH TO MANAOS.

We got to Serpa, or Itacoatiara, which is situated at the junction of the Madeira, just at nightfall. Here the engineers of the Madeira-Mamoré railroad have their headquarters, and the town is healthy, lively, and interesting. Here also is the home of an American named Stone. He has thousands of acres under cultivation and is prosperous, capable and as much an American as he was when he settled here 40 years ago.

In due time we reached the junction of the Rio Negro and the Amazon, or the Solimões, as it was now called. The Solimões, yellow, muddy, swift, comes resistlessly in from the south, and, meeting the slow, densely black flood of the Rio Negro, holds it back, shoulders by it, crowds what does escape downstream to the northern bank, where for a time it shows a narrow ribbon of black water and then disappears.

Manáos is situated up the Rio Negro, and we therefore turned into that stream. Crossing the water line it was startling to see how plain the demarkation was. On one side a boiling coffee colored flood, on the other a dead black lake. Occasionally an island of coffee colored water appeared boiling and swirling on the inky surface of the Rio Negro, but of blending there seemed to be none.

[TO BE CONTINUED.]

RUBBER IMPORTS AT BOSTON.

It might naturally be supposed that at a port surrounded by so many important rubber goods factories as Boston the importation of raw material there would reach very considerable volume. This happens, however, not to be the case. During the last complete fiscal year, whereas imports of india-rubber into the United States—exclusive of gutta-percha, balata, Pontianak, and the like—amounted to 88,359,895 pounds, the entries at Boston were only 324,348 pounds. THE INDIA RUBBER WORLD'S statistics of rubber imports for the month of May of this year indicate no arrivals at all for the port of Boston. This condition, of course, is due to the fact that, while Boston is an important shipping port, in these days when rubber is transported by the shipload the tendency of the rubber bearing ships is to the larger port of New York, whence the rubber required in the territory of which Boston is the capital is sent by land or water, as may be more convenient or economical.



CAMETA, ON THE AMAZON AND TOCANTINS.

[From the first photograph of the landing.]

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED MAY 3, 1910.

- N**O. 956,592. Tire inflater for automobiles. H. P. Maxim, Hartford, Conn.
 956,625. Joint-tie for cushion tires. F. Buob, Cincinnati.
 956,735. Vehicle wheel tire. [Pneumatic.] A. T. Scaramuzzi, Paterson, N. J.
 956,741. Nursing bottle and nipple. D. B. Smith, Deerfield, N. Y.
 956,884. Inner tube for pneumatic tires. J. H. Brown, West Hoboken, N. J., assignor to Brown Perfection Tube Co.
 956,928. Pneumatic tire. A. Bonnet, Paris, France.
 956,948. Pneumatic tire. H. L. Dazey, Dallas, Texas.
 956,954. Spare tire holder for automobiles. F. E. Fahlstrom, assignor of one-half to C. B. Hickox, both of Bridgeport, Conn.
 957,165. Anti skidding tire. Iva B. Kempshall, Boston.
 957,166. Vehicle tire. [Pneumatic, with special tread.] *Same*.
 957,167. Tire. Iva B. Kempshall, Boston, assignor to Kempshall Tire Co.
 957,168. Tire. *Same*.

Trade Mark.

- 48,853. Bowers Rubber Works, San Francisco. The word *Crackproof*. For rubber belting and hose.

ISSUED MAY 10, 1910.

- 957,309. Tire grip. A. R. Corrington, Hartley, Iowa.
 957,385. Air hose coupling. E. W. Shaw, Weir, Kans.
 957,413. Protecting cover for pneumatic tires. A. Constantin, Hanover, Germany.
 957,492. Hose. R. H. Brown, Los Angeles, Cal.
 957,495. Process of producing rubber. H. O. Chute and F. L. Randel, New York city.
 957,556. Rubber heel. S. Havens, Oakland, Cal.
 957,559. Lacing. A. T. Holt, Columbus, Ohio.
 957,569. Garden hose carriage. A. Low, Newark, N. J.
 957,597. Tire inflating pump. M. L. Bastian, assignor to Olney Automobile Co., Limited, both of Philadelphia.

ISSUED MAY 17, 1910.

- 957,867. Braided hose. H. Z. Cobb, Malden, Mass., assignor to Revere Rubber Co.
 958,053. Tire protector. J. Wilmes, Maquoketa, Iowa.
 958,309. Tire wrapping and unwrapping machine. N. E. Raber, Akron, Ohio.
 958,629. Cushion padded horseshoe. W. N. Gowing, San Augustine, Tex.
 958,693. Tire. W. B. Connell, Chicago.

Trade Mark.

- 47,282. E. T. Horsey, Cleveland, Ohio. The representation of a fox over the letter Y. For pneumatic tire patches.

ISSUED MAY 24, 1910.

- 958,748. External armor for pneumatic tires. J. L. La Driere, Albuquerque, N. Mex.
 958,867. Cap for valve stems for pneumatic tires. G. F. Foss, Los Angeles, Cal.
 959,041. Vehicle tire. J. Allerd, Philadelphia, Pa.
 959,058. Wheel. J. L. Jackson, River Forest, Ill.
 959,152. Automatic train hose coupling. J. F. McElroy, assignor to Consolidated Car Heating Co., both of Albany, N. Y.
 959,176. Resilient wheel. G. A. Spaeth, Columbus, Ohio.
 959,178. Waterproof fabric. G. Streat, New York city.
 959,226. Hose coupling. W. W. Keys, Yonkers, N. Y.
 959,391. Tire case. C. A. Russell, New York city.
 959,376. Elastic bed pan. F. M. Otis, Ann Arbor, Mich.

Trade Mark.

- 49,-94. Boston Rubber Shoe Co., Boston. The word *Sledang*. For overshoes.

ISSUED MAY 31, 1910.

- 959,579. Elastic tire for vehicles. I. S. McGiehan, London, England.
 959,569. Tire remover. P. C. Wiest, York, Pa.
 959,732. Vehicle wheel rim. W. E. Greer, Kenmore, assignor of one-third to W. F. Pfeiffer, Akron, Ohio.
 959,864. Tire pump. W. S. Stapley, Bridgeport, Conn., assignor to The Coe-Stapley Mfg. Co.
 959,657. Protector for pneumatic tires. R. J. Morrison, St. Louis.
 960,001. Wheel tire. B. Dahl, Minneapolis, Minn., assignor to Dahl Punctureless Tire Co.
 960,070. Tire lifter. J. W. Brown, Arroyo Grande, Cal.
 960,119. Automobile tire. H. S. Shafer, Nazareth, Pa.
 960,135. Vehicle tire. J. A. Wright, Brownsville, Pa.
 960,212. Vehicle wheel tire. F. Wiechard, Hanover, Germany.

Trade Mark.

- 48,848. F. F. Rick, Buffalo, New York. The representation of a bison (buffalo). For rubber tires.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the application, which in the case of these listed below was in 1909.

*Denotes Patents for American Inventions.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MAY 4, 1910.]

- 541 (1909). Apparatus for locating punctures in tires. G. E. Dickman, London.
 543 (1909). Pneumatic tire with grooved tread. P. Wienskowitz, Berlin, Germany.
 *546 (1909). Elastic tire formed of taper segments of leather or other material, ranged on a circumferential wire. L. M. Nelson, Douglas, Wyoming.
 722 (1909). Pneumatic tire cover. H. Broomfield, Norley, Cheshire.
 892 (1909). Puncture preventing band for tires. C. L. Bonnet and E. J. A. Lecerf, Paris, France.
 916 (1909). Toe cap for football boots. J. H. Brown and D. A. Berry, Northampton.
 989 (1909). Spring wheel with elastic tire. S. A. Schewerik, Vienna, Austria.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MAY 11, 1910.]

- 1,047 (1909). Tire comprising a tube filled with a resilient material between the air tube and the tread. W. C. Holloway and S. Forster, London.
 1,250 (1909). Lever for replacing pneumatic tires. W. Bobbett and two others, Teignmouth, Devonshire.
 1,433 (1909). Solid rubber tire with transverse cavity between the tread and base. W. J. Teufel, Stuttgart, Germany.
 1,401 (1909). Rim flanges for a pneumatic tire. E. Kempshall, London.
 1,606 (1909). Detachable rim for pneumatic tires. Continental Caoutchouc und Guttapercha Compagnie, Hanover, Germany.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MAY 19, 1909.]

- 1,694 (1909). Attachment of pneumatic tires to the rims. J. S. Clarke, London.
 1,714 (1909). Spring wheel with elastic tire. J. Langebroek and another, The Hague, Holland.
 1,823 (1909). Non slipping tread for twin tires. M. A. Kennedy, Toronto, Canada.
 2,084 (1909). Vulcanizing process for repairing tires without removing them from the wheels. J. Cropper, Chepstow, Monmouthshire.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MAY 25, 1910.]

- 2,457 (1909). Non skid stud for pneumatic tires. H. Baxter and F. Baxter, Birmingham.
 2,644 (1909). Revolving heel pad. H. Lewis, Birmingham.
 2,713 (1909). Flexible packing ring for the pistons of vacuum brake cylinders. J. E. Hopkinson, Para Rubber Mills, West Drayton, Middlesex.
 2,720 (1909). Spring wheel with rubber cushions. J. Dheyne and A. Bovy, Brussels, Belgium.

THE FRENCH REPUBLIC.

PATENTS ISSUED (with Dates of Application).

- 408,784 (Nov. 9). C. J. Watts. Pneumatic tire.
 408,878 (Sept. 15). C. Vrolyk. Process of repairing tire inner tubes.
 408,908 (Oct. 19). J. Muirhead. Tire for automobiles or other vehicles.
 409,046 (Oct. 22). Roze et Cie. Detachable pneumatic tire.
 408,983 (Nov. 12). The British Muras Syndicate, Limited, and M. Dessau. Apparatus for removing materials from caoutchouc and gutta percha.
 409,169 (Nov. 17). F. Bruggimann. Pneumatic tire tread.
 409,260 (Oct. 27). H. A. Palmer. Tire.
 409,467 (Nov. 20). P. J. Viel. Pneumatic tire.
 409,487 (Feb. 18). L. Liais. Tire.
 409,564 (Nov. 24). W. von Nottbeck. Protection tread for tires.
 409,631 (Feb. 22). J. B. Berlier. Leather envelope for tires.
 409,642 (Nov. 26). W. G. Y. Jones. Pneumatic tire.
 409,482 (Nov. 22). A. L. Chodorowski. Process for reclaiming rubber from waste.
 409,679 (Sept. 8, 1909). E. C. Gaillard. Changeable tread for tire covers.
 409,693 (Nov. 6). G. Giachero. Vulcanizing apparatus.
 409,729 (Nov. 23). J. S. Clarke. Tire and rim for automobiles.
 409,737 (Nov. 25). A. Metz. Process for the manufacture of products having as a base natural or artificial caoutchouc.
 409,771 (Nov. 29). L. Valour. Separation of caoutchouc from the barks of various plants.
 409,818 (Nov. 30). A. Pilard. Tire.
 409,841 (Feb. 26). A. de Monturen. Elastic tire.
 409,854 (Dec. 1). T. L. Carbone. Elastic tire.
 409,871 (Dec. 2). Etablissements Falconnet-Perodeaud. Elastic tire.
 409,704 (Dec. 3). O. Preusser. Protective tire tread.
 409,887 (Dec. 2). Madame R. Koch, Suspendier.
 409,885 (Dec. 2). J. Olivet. Shoe for pneumatic tire.
 410,031 (March 4). Francois Grellon et Cie. Pneumatic tire envelope.

- 410,047 (Dec. 6). Chaulange. Elastic tire.
 410,108 (Dec. 7). R. Beien. Elastic tire.
 410,086 (Dec. 6). B. C. Swinehart. Device for holding rubber tires on wheels.
 410,109 (Dec. 7). Same. Elastic tire.
 410,124 (Dec. 7). A. Loiseleur. Fastening for tire air tubes.
 410,202 (Dec. 10). E. Janik. Elastic tire.
 410,274 (Nov. 16). E. Greiner. Elastic tire.
 410,312 (Dec. 11). R. Miessen and G. Piron. Pneumatic tire.
 410,344 (Dec. 14). A. de Laski and P. D. Thropp. Machine for weaving tire fabrics.
 410,366 (Dec. 15). A. Boerner. Elastic tire.
 410,370 (Dec. 15). P. J. Viel. Manufacture of metallic cables for tires.

[NOTE.—Printed copies of specifications of French patents can be obtained from R. Robet, Ingenieur-Conseil, 16 avenue de Villier, Paris, at 50 cents each, postpaid.]

"RUBBERWOCKEY."

THE flotation of rubber plantation companies to operate in the British dominions beyond the seas, with names sometimes so strangely unfamiliar to London ears, has prompted a correspondent of an English exchange to the production of the following jingle, with apologies to "Lewis Carroll," whose "Jabberwock" lines have amused so many youngsters of all ages:

'Tis bullig and the rubberspees
 Do sweeze and shamble on the stange;
 All freasy are the boromex,
 And the sharket booms outrange.

Beware the Chempedaks, my son,
 The shares that rise, that cannot lose;
 Beware the Karan bird and shun
 The moistrous Semambus.

He took his Lauulang in his hand,
 Long time he Kota Bahrose sought;
 So'vested he all in Seekee,
 Then stood awhile in thought.

And as in Woodthorpe thought he stood,
 The Senawangs with wings of flame
 Came Semeling through the Padang wood
 And Tebonged as they came.

Too soon. Too soon. 'Twas after June
 The rubber boom went flicker flack;
 Before 'twas off, he with his proff
 Came Kalumponging back.

And hast thou slain the rubbershorts?
 Come to my arms, by boomish boy!
 O wild Para! My footer car
 Shall smell of rubberjoy!

TOO MUCH RUBBER AUCTION.

[FROM "THE FINANCIAL NEWS," LONDON.]

NERVOUS holders of Rubber shares are inclined to attach too much importance to the fluctuations in prices paid for raw rubber at the fortnightly sales in London. The [world's] estimated output of rubber for 1908 was 70,000 tons, and that for 1909 was 75,000 tons. Assuming that 200 tons are sold at each of the 26 fortnightly sales in the year at Mincing lane, this disposes of 5,200 tons per annum in these auction sales, thus leaving some 70,000 tons to be sold outside the auctions.

Large quantities of rubber are sold at Antwerp, at Liverpool, and elsewhere. Large lots are also sold forward by the various producing companies themselves—*e. g.*, the Mabira company have sold forward 36 tons for 1910, the Anglo-Malay company have sold forward 30 tons for 1911; and these are not the only ones. Consequently, it is easy to see that a very small fraction of the rubber used by the world in a year is sold at the Mincing lane auctions. Indeed, it is probable that 26 fortnightly fiascos at the auctions would hardly affect the output of motors at Buffalo (New York), Toledo (Ohio), and Indianapolis (Indiana), to say nothing of the other important industries—taxicabs, cables,

surgical appliances, snow-shoes, waterproofs, etc., in which large quantities of the raw material are now employed.

SOME HEATED IMAGINATIONS.

THE approach of the "silly season" in London, usually most evident in the letters written to the daily newspapers (and printed in them) about midsummer, has been preceded this year by the extraordinary rubber craze, which seems to have permeated every walk of life. This has led to the appearance in the whole British press—daily and otherwise—before the approach of summer, of "news" and comments relating to rubber most amazing to those who know the difference between rubber and the musical glasses, for example, or the law of gravitation. Here is an editorial article from *The Rubber Investor*:

AKRON.

A paragraph has been carefully distributed through the usual telegraphic agencies to the effect that there is a boom on in rubber in the United States. This no one will deny. It is further stated that the town of Akron, which is the home of the tire industry, is using 15,000 tons of rubber a year. People believe these silly stories. If one town in the United States used 15,000 tons of rubber a year, then the whole consumption of rubber in that country would amount to about 60,000 tons a year, if not more. This we know to be absurd. The United States takes a great deal more rubber than any other country, but it uses most of its fine hard cured Para in the manufacture of overshoes. English people call them goloshes, and avoid them as they would the devil. But then English people do not suffer from the same winter climate as the Yankee. No American ever dreams of going outside the house without his rubbers. They are just as indispensable to the Russian as they are to the Yankee, and the United States Rubber Co. has the practical monopoly of the manufacture in both countries. Its consumption of rubber is about 10,000 tons a year. It is just as well to mention this, and so pour a little cold water over the heated imaginations of the journalist who writes scare pars [paragraphs] for the press agencies.

There are no authentic statistics of Akron's consumption of rubber, but the figure is very large, due to the astonishing recent increase in the demand for tires, largely manufactured there, which is the explanation of the great advance in the price of crude rubber everywhere. The total consumption of rubber in America in 1909 was about 30,000 metric tons, but since July 1 of that year (the beginning of the government fiscal year) imports of rubber have been at the rate of 50,000 tons, and the rate has been vastly larger during the past three or four months. And the increased imports cannot be explained by any evident growth in the footwear trade.

By the way, it is news to America that any monopoly exists here of the Russian trade in rubber footwear. The United States Rubber Co. do not manufacture any goods abroad, and the total exports of "goloshes" from America to Russia last year, by all producers, were recorded by the customs as 1,676 pairs, of the value of \$997 [= about £204]. Whose "heated imaginations" do these figures "pour a little cold water over"?

And here is the beginning of a prominently placed article in *The India-Rubber Journal*, which, by reason of its venerable age, should know better:

THE BRAZILIAN END OF THE BOOM.

Our latest advices from Para mention the state of affairs there as somewhat resembling the plight of the Australian coastal towns in the times of the gold rush. Local facilities are suffering from the absorption of a large part of the able bodied working population by the rubber collecting camps. Wages are higher than was ever known before, and so great is the excitement that even the tram drivers, and conductors at Para have deserted. The populace have signified their displeasure by instituting a holocaust of tramcars!

The Para newspapers reaching North America evidently have been censored, since no reference occurs in them to the destruction of their street railway service. By the way, does our contemporary, in mentioning a "holocaust," use the word in the sense of a religious burnt offering, or of a great sacrifice of life by accident, or in some other sense not recorded in the dictionaries?

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

DESPITE the difficult situation caused by the continued high price of raw rubber, it cannot be said that there is any falling off in trade. Indeed, quite the opposite is the case. In one important works I visited lately there are more hands employed than at any period during the last 20 years, while over time is general, and all night work by no means uncommon. I am told by a prominent proofing firm that they are regularly working over time, and altogether there are no signs of slackness. Government contracts have a good deal to do with the activity in some cases, this being a busy season, and a mere matter of price not interfering with this class of business. Hearing a rumor to the effect that if the price of rubber went much higher a certain rubber manufacturer had decided to close his works, I made inquiries and found that the matter had been exaggerated. I was informed, however, that the question of limiting work to four days a week had been seriously considered by some of the firms, though in the present state of activity it would need very concerted action unless individual firms are to suffer by any such move. The recent fall of 2s. 6d. or more a pound in the price of fine Pará instead of the talked-of rise to 15 shillings [=£3.65] no doubt caused any negotiations of the sort to be suspended if not abandoned.

STATE OF TRADE.

The abstention from bidding at recent London sales was described in the financial press as the silly conduct of the manufacturers who would soon be brought to their senses. That the action in London was merely an echo of what had occurred the previous week in Liverpool, when only a few hundredweight were sold out of 150 tons of African rubber on offer, was ignored by the London critics. Of course the fall in price has proved very disappointing to the City company promoter, and the last few weeks have shown a decided setback in the issue of new companies. The wild rush on the part of all and sundry to get shares has now subsided, and the revelations at the statutory meetings of three or four of the new companies will tend to frighten people off new issues.

The man who looks with mixed feelings on the situation of the moment is the rubber manufacturer who is prominently connected with some plantation or other. In his works he is considerably hampered by the necessity of notifying his customers of an advance in goods, while at the meetings of his plantation company he points with exultation to the continued rise in rubber. The fortunes that have been made are in the bulk of cases by men quite unconnected with the manufacture. It is only in the last few months that employes in rubber factories have begun to speculate in 2 shilling shares, and not always with success. It certainly must be somewhat falling for a work's manager of long experience when he has at last invested in a plantation to find the shares falling every day. Cases of this sort have recently reached my sympathetic ears, and of course to the man who has made his investment there is nothing soothing in the fact that raw rubber is getting cheaper.

THIS is one of the recent London flotations of more particular interest. Further, it is the first prospectus I have come across

UNITED MALAYSIAN RUBBER CO., LIMITED.

quoting THE INDIA RUBBER WORLD in support of some of its statements. The fact that an American company had put

up a factory in Sarawak for the extraction of rubber from jelutong has been already noted elsewhere in THE INDIA RUBBER WORLD, but this European flotation came somewhat as a surprise. Presumably London was considered the best place to get £2,000,000, rather a large figure in connection with a process which is not patented. Some of our papers commented upon the

absence of a patent, and it was also remarked that an American process or project was usually sold at a good profit. With regard to the business of the company, which is shortly to enlarge the field of its energies, a good deal would seem to depend upon the demand for the extracted rubber. At present it is not easy to come to terms with the rubber manufacturers. Two or three qualities are on offer, with prices varying according to the amount of resin present. As crude rubber is not yet brought and sold by analysis in England, this method of doing business has not jumped into favor at once. Of course when fine Pará becomes cheaper—as is inevitable—the profits of the Malaysian company must decline, as working expenses can hardly, I imagine, be reduced appreciably. As regards the process itself, I gather that the main difference between the new plant and that which was formerly operated in one or two places in Europe is the great reduction in the loss of the volatile solvent employed. Of course the European extractors have also to pay at a much higher rate for their raw material. The main result so far of the new operations in the East has been to raise the price of jelutong to about three times what it was formerly sold at, and as the new company has a virtual monopoly of the production it seems as if the price would remain up. This may not suit the book of those who bought jelutong in the raw, because it was cheap and answered certain purposes. An important point is that the coagulation is now to be carried out by an improved method, though whether the improvement consists in an increased quantity of rubber in the crude jelutong or in a higher grade of rubber is not stated. In a recent patent of V. Scholtz the resins from bodies such as jelutong are extracted by hot carbolic or cresylic acid.

I DON'T remember having previously given any details regarding the English Card Clothing Co., Limited, recently organized.

CARD CLOTHING COMBINATION.

Competition between several firms led some years ago to the fusing of five or six works, all situated in the West Riding of Yorkshire. The Halifax firm of Patchett, however, remained outside, as also did the important Manchester firm of Horsfall & Bickham. The main production of all these works, I may say, is the card clothing used on the rotary carding machines of cotton and woolen mills, this clothing consisting briefly of fine bent steel points inserted in a base of pure cut sheet Pará rubber, which rubber forms the surface of canvas formed of two or more plies, which have been made adhesive by being coated with Pará rubber on the spreading machine. Although the rubber department forms only part of a card clothing factory, I think I am right in saying it is the most important part, not only as regards its details of manufacture, but at the present time, at any rate, with regard to the expenditure. In this trade no cheap rubbers, reclaimed rubbers, or substitutes are used—nothing but fine Pará—and the travelers in the commodities just mentioned are always sent away with nothing to recompense them for time and expenses. The business done is nearly all with the cotton and woolen trades, leather cards being found the most suitable for the strong flax fiber. But to speak more particularly of the Yorkshire works—it may be mentioned that, as is not uncommon in the case of combines, two or three works have been closed, and the English Card Clothing Co., Limited, now consists of the following branch works:

- John Whiteley & Sons, Brunswick Mills.....Halifax.
- Charles Cain, Son & Greenwood, Croft Mills.....Halifax.
- Joseph Sykes Brothers.....Lindley, Huddersfield.
- Wilson & Ingham.....Mirfield.
- Samuel Law & Sons.....Cleckheaton.

The same class of work is not carried on at all these factories; for instance, Whiteley & Sons make the pure rubber cards for the cotton trade, while Law & Sons make a specialty of the vulcanized rubber cards so largely used in the woolen and worsted mills of the Bradford district. A great deal of card clothing is sold both in England and abroad in the unfinished state—that is, without the steel points, this finishing process being carried out in many small factories by other firms who finally market the goods. John Whiteley & Sons are the largest producers of card clothing foundation in the world independent of their production of the finished cards. Their commodious mills include cotton weaving sheds, as they weave all their requirements of cloth. Some of the machinery used in connection with rubber block making was locally designed and is not to be seen figured in the catalogues of the increasing number of rubber machinery makers. That it has proved its efficiency is testified to by the reputation which the firm's products has attained the world over.

The chairman of the combine is Mr. Sykes, J. P., of the Huddersfield branch, a gentleman who has paid several visits to the cotton spinning districts of America. At one time he was closely identified with cotton spinning in England, and is considered an authority on the industry. Two other directors of the combine, who have the control of the Whiteley & Sons' works, are Mr. Whitley Thomson, late M. P. for the Skipton division, and Mr. J. R. Rawnsley. Mr. Thomson is the present mayor of Halifax.

The mottled cut sheet used for these cards is made in a different manner to the ordinary cut sheet of the rubber works. The masticator is dispensed with, the block being formed from small particles of rubber which have had no more "working" than the previous washing necessitates. At one of the branches there is a plant for the manufacture of emery wheels, which are largely used for sharpening the steel points, and in various other ways the company fills its own requirements. To conclude with a reference to the topic of the hour there can be no doubt that the high price of rubber is somewhat threatening the continued prosperity of the industry, in that it is causing users of rubber cards to turn their attention to the composition cards which are cheaper and which for certain purposes, more particularly where contact with oil is unavoidable, have already an established reputation.

A SERIES of general papers on various industries is being given before the London Section of the Society of Chemical Industry, and on April 5 the subject was "The india-rubber industry," by Dr. P. Schidrowitz. I was unable to be present, and base my few comments on the report of the proceedings in the society's *Journal*. Whether it is advisable to attempt to cover the ramification of a whole industry in the course of an hour or so seems somewhat open to question; anyhow it leaves plenty of scope for those joining in the discussion to refer to points which have been passed over.

It is not always easy to condense a description of a technical process into a few lines so as to make it intelligible to the uninitiated, and the author in this case must be considered to have achieved success with the exception, if I may say so, of the reference to proofing, where one or two slips are noticeable. The resumé of the raw rubber industry will probably prove most interesting to the bulk of readers of the *Journal*, as it brings up to date a topic closely touching the pockets of so many.

If I started to refer in detail to the paper I should require more space than can be allotted here, and I must confine myself to one or two points raised in the discussion. Colonel Richard K. Birley seems to have been the only rubber manufacturer who spoke, and the bulk of the speakers approached the paper from the point of view of their own particular interests. The author's references to re-formed rubber were amplified by Mr. F. L.

Rawson, of the Premier Co., Limited, and later on Mr. Philip, chief Admiralty chemist, inquired how to distinguish re-formed rubber from ordinary rubber. Dr. Schidrowitz's answer to this was that he did not know whether they could be distinguished—an answer which may or may not have been of a diplomatic nature. I suppose Mr. Philip is getting nervous about the Admiralty contracts.

Mr. Walter Reid, of Velvrl fame, said that it was a pity that rubber was used for waterproof sheeting, as it produced an inferior article which lasted a year at the utmost. This must be news to contractors for Army ground sheets, and in his reply the author disagreed with the statement. Mr. Herbert Wright prefaced some important observations on the state of the plantation industry by a query as to whether the recent researches of Harries on the chemistry of rubber had any technical signification. The answer to this was in the negative. Of course the topic of synthetic rubber cropped up and the chairman, Dr. Lewskowitsch, said that synthetic rubber should be compared with synthetic camphor, scientifically a success but commercially a failure, rather than with synthetic indigo. It all depended upon how cheaply the product could be grown.

A GERMAN VIEW OF JAPAN.

[FROM THE "GUMMI-ZEITUNG" (BERLIN), JUNE 3.]

THE possibility of Japan becoming of constantly increasing importance as an outlet for the products of our industry is as generally recognized as the fact that the said country is attempting to make itself more and more independent in providing for its requirements, and to close its borders to the import trade. For this reason we may with considerable certainty expect that notice of the discontinuance of the commercial treaty now in force between Germany and Japan will be given in the near future, whereupon the said treaty will become ineffective in July, 1911. New negotiations will undoubtedly be opened at once, but it is an urgent necessity for our industry to insist most vigorously on the protection of its interests in this connection. As a basis for its future commercial treaties, Japan has recently adopted an entirely new customs tariff, showing very material increases in the duty on important articles. We publish in this issue such items, taken from the said tariff, as are of interest to our trade, and have added for purposes of comparison the duty to which the goods are subject under the present tariff. It would be very gratifying to have these new customs modified very considerably in the new commercial treaty with Japan.

GOOD TIMES ON THE AMAZON.

WHILE on a recent visit to the United States Mr. Waldemar Scholz, president of the Manáos Commercial Association, in speaking of the present conditions in the Amazon country, said:

"The high prices for crude rubber, taken as a whole, have been an excellent thing for every one in Brazil. Hundreds of rubber gatherers and outfitters that for years have only made a bare living or were deeply in debt are today prosperous. Then, too, the high price of rubber is already attracting both capital and labor, so that the state will profit as well as the individual. This is true not only of Amazonas, but of the whole valley. Our present governor is a serious, able and popular man, very much interested in building up the state. He is actively encouraging the planting of rubber, and in many ways planning help in the way of cheaper production and greater output. He is determined that capital invested in Amazonas shall not only have the same protection that it would enjoy anywhere else in the world, but that it shall have every chance to be as remunerative."

A BOOK for rubber planters—Mr. Pearson's "What I saw in the Tropics."

Some Rubber Interests in Europe.

SEMI-CENTENNIAL AT ST. PETERSBURG.

ONE of the most widely known Russian manufacturing concerns, the Russian-American India-Rubber Co., of St. Petersburg, celebrated its fiftieth anniversary on May 9-22. On this occasion the workmen received very liberal gifts in money, while the foremen were presented, in addition to such gifts, with commemorative medals. The company's officials also received medals, partly ornamented with precious stones. The company gave a festival for the officials and foremen, and an entertainment had likewise been provided for the foremen and workmen. At all these festivities the president of the company, Baron von Krauskopf, was the recipient of special honors.

In a review of the history of this important company, the *Gummi-Zeitung* points out that the business was founded by Mr. Ferdinand Krauskopf. When the first American rubber shoes appeared in the German market he at once foresaw that an important outlet for rubber shoes might be provided, especially in Russia, in view of the quite large rainfall in many parts of that country. He therefore went to America to study the details of rubber shoe manufacturing, and erected in St. Petersburg, in partnership with Mr. Leendert Smith, of Hamburg, and with Messrs. L. Heyse and Ch. Dryssen, the works which were under his management until his death in 1875.

His successor was Mr. Gustav Heyse, who died in 1909. Since 1874 unusually important services have been rendered to the works by the chairman of the board of directors, Baron F. von Krauskopf, son of the founder of the concern. He devoted his especial attention to the development of the institutions for the benefit of employes, among which are a day nursery for 300 children of workmen, a school for the workmen's children, and a recreation home for workmen. All of these institutions were still further enlarged on the occasion of the celebration of the company's fiftieth anniversary. Since 1909 the president has been assisted by Mr. F. Uthemann in the capacity of business manager and by Mr. Arthur Kraack, who entered the company's employ in 1886, as chief confidential clerk.

At the present time the ground space covered by the buildings is more than 228,500 square meters [=nearly 2,500,000 square feet], most of the buildings being four-story structures. The total length of all the stories would be about 16,000 meters in a straight line. The operating machinery requires at present 12,500 HP., and 60 steam boilers, with a total heating surface of about 69,000 square meters, generate the necessary volume of steam. The number of workmen, expressed in round figures, is 8,000. A large number of German chemists and engineers are employed in these extensive works.

NORTH BRITISH RUBBER CO. GOING TO PARIS.

THE Edinburgh *Scotsman* says: "It is announced that the North British Rubber Co., Limited, of Castle Mills, have just completed the purchase of a fully-equipped india-rubber factory in the outskirts of Paris, and that they will commence operations there almost immediately. The new works have a capacity for the employment of 1,000 or more hands, and provide ample room for large extensions.

"The North British Rubber Co., Limited, as is well known, are the largest rubber manufacturers in the British empire, employing as they do some 4,000 to 5,000 workpeople. This move has been made following on the recent increase in the French tariff, which has raised the duties on motor tires, cycle tires, cab tires, and other classes of rubber goods, in which this company do a very extensive trade, not only in France but in all other parts of the Continent.

"This event will be regarded as an object lesson in the relative

value of the systems of free trade and protection. It is possible that unless some relief is given in the way of reduced duties that the North British Rubber Co. will open factories in the other principal continental countries."

This announcement is all the more interesting in that it follows the organization in Germany of an independent joint stock company by the North British Rubber Co., Limited, with a view ultimately to manufacturing. [See THE INDIA RUBBER WORLD, August 1, 1909—page 388.]

A GERMAN RUBBER MANUFACTURER HONORED.

AMONG the birthday honors distributed by the King of Saxony recently was a signal distinction accorded to an important representative of the German rubber industry. It was the conferment of the royal Saxon title *Kommerzienrat* (counsellor of commerce) upon Herr Heinrich Brück, general director of Leipziger Gummiwaren Fabrik A.-G., vormalis Julius Marx, Heine



KOMMERZIENRAT HEINRICH BRÜCK.
[General Director Leipziger Rubber Co.]

& Co. This gentleman ranks not only among the most important representatives of the rubber industry in the German empire, but also among the most popular. For 46 years he has devoted his energies to the Leipziger concern, so that he has become one of the senior members of the trade, entitled to preside by right of seniority particularly over the councils of the surgical rubber goods industry.

FIFTY YEARS OF HONORABLE SERVICE.

OVER the building of the rubber manufacturing firm Dr. Heine. Traun & Söhne, in Hamburg and Harburg, on April 24, the private flags of the company were waving in connection with the celebration of special interest to the firm and its employes. It was in honor of the fiftieth anniversary of the employment by the firm of Mr. Gustav Friebeck, stock superintendent. On the date mentioned he was retired with full pay as an acknowledgment of his merits, and as he is still vigorous many years of quiet repose doubtless are in store for him. As the doorkeeper of the same factory in Harburg, Carl Meyer celebrated his fiftieth anniversary on April 16. Christian Winkelmann, a laborer, expects to follow suit on July 19, when the living employes of the company retired with full pay after 50 years of service with the company will number 13. During the present year honors will be conferred upon 20 employes who have been in the service of

the company for 25 years, and 52 employes who have been with them for 10 years.

A VISIT TO A RUBBER FACTORY.

An interesting event was a visit paid on May 4 to the works of the North British Rubber Co., Limited (Edinburgh), by about 40 members of the Maatschappij van Nijverheid (Society for Promotion of Industry) of Amsterdam, who had left home mainly for an inspection of these works. The visitors were headed by their president, Mr. Ch. E. H. Bossevain, and were received by Mr. A. C. Baker, the general manager, and Mr. Alexander Johnston, the superintendent and general works manager. In connection with this visit the management of the company issued an attractive souvenir in the shape of an illustrated booklet descriptive of Edinburgh and the rubber factory. As indicating somewhat the extent of the rubber works, it may be mentioned that the visitors were shown in the stores raw material valued at \$1,500,000.

ARTIFICIAL RUBBER IN GERMANY.

The *Neueste Nachrichten*, of Munich, Germany, for May 1, contained the following:

"At the general meeting of the Farbenfabriken, F. Bayer, of Elberfeld, it was decided to declare and immediately pay a dividend of 24 per cent. and distribute a bonus of 213 marks [= \$40.69] per share. A report read at the meeting stated that the long continued researches for the production of artificial caoutchous had been successful. It could not at that date be stated when the new product would be put on the market. In view of the fact that raw rubber can be obtained at a comparatively low figure, it will be necessary to overcome many obstacles." In other words it will be necessary to lower the cost of production considerably.

RUSSIAN EXPORTS OF RUBBER.

The figures herewith, for which we are indebted to the *Gummi-Zeitung*, indicate the exports under the headings given from Russia during the calendar year 1907, American equivalents being given for the Russian weights and values:

	Pounds.	Value.
Waste rubber	11,054,664	\$618,728.73
Rubber footwear	4,098,672	1,970,692.82
Other rubber goods.....	1,358,604	523,015.46

BETTER DUNLOP BUSINESS IN GERMANY.

The Dunlop Pneumatic Tyre Co., A.-G., at Hanau a/M., in the business year 1909, made gross profits of 1,074,534 marks, comparing with 870,460 marks in the preceding year and 829,846 marks in 1907. The net profits (including carry over) were 299,238 marks, against 233,018 marks in 1908 and 105,526 marks in 1907. The capital stock figures at 3,000,000 marks [= \$714,000].

SWEDEN.

The Kautschuks- & Guttaperchavaru-Aktiebolaget Kuntze & Comp., at Stockholm, manufacturers of and wholesale dealers in rubber goods, at the annual meeting on May 14, adopted a resolution to distribute for 1909—as for five years preceding—a dividend of 10 per cent. on the capital stock of 300,000 kroner [= \$80,400].

GREAT BRITAIN.

Rom Tyre and Rubber Co., Limited, registered in London December 11, 1908, with £5,000 capital, has been acquired by a new company, The Rom Tyre and Rubber Co. (1909), Limited, registered in London April 10, 1910, with £50,000 capital. The new company purposes combining with the manufacture of pneumatic tires the planting of rubber, cotton, and other crops in the Gold Coast Colony.

The North British Rubber Co., Limited, have been granted a warrant by the authorities of Edinburgh for constructing a subway at Viewforth to connect their Castle Mills with the recently acquired premises of the Scottish Vulcanite Co. [See THE INDIA RUBBER WORLD, March 1, 1910—page 207.]

THE PAN-AMERICAN CAPITAL.

A NOTABLE event was the dedication of the new building of the International Bureau of American Republics, at Washington, on April 26. The desirability of a permanent home for the Bureau had long been recognized, and contributions toward a building fund had been made by the United States and the Latin American republics, but the sum was not regarded by the director of the Bureau as sufficient for such a building as was needed. This was the situation when a gift of \$750,000 by Mr. Andrew Carnegie made it possible to plan a stately and artistic building ample for the purposes of the Bureau, and this has been completed and is now occupied by the Bureau.

This institution, the outgrowth of the first International American Conference, called by Mr. Blaine in 1889, has been of great service already in the promotion of a better understanding between the various American republics and a closer relation between them. With the passing of misunderstandings has come progress in the industries and commerce, and increasing wealth and intelligence. Mention of this institution is particularly fitting in THE INDIA RUBBER WORLD, on account of the fact that india-rubber is produced in nearly every one of the republics represented in the Bureau. Their combined production amounts probably to two-thirds of the total for the world.

The Bureau of American Republics not only affords the official representatives and likewise private citizens of the various republics an opportunity for intercourse, but an important special library is maintained, and a *Bulletin* published which has performed a valuable service in disseminating information regarding the various countries of North and South America. It would be well for every business man, particularly if engaged in international trade, to become familiar with the *Bulletin*.

THE ALLEGED OUTRAGES IN PERU.

CONDITIONS in the rubber producing districts of the upper Amazon, and particularly above Iquitos, continue to receive public attention in England, in connection with the affairs of the Peruvian Amazon Co., Limited. Some months ago a lengthy article in the important London weekly paper *Truth* was in the nature of a serious indictment of the company named, with respect to the treatment of the natives employed in rubber gathering by the company's agents. [See THE INDIA RUBBER WORLD, November 1, 1909—page 44.] The charges made in Mr. Labouchere's journal were at once denied categorically from the Peruvian legation in London. Inquiries regarding the matter were at once made in the House of Commons, regarding conditions in Peru but without eliciting any definite statements.

During the past month some interesting correspondence has been made public from the offices of the Peruvian company. For instance, the Dean of Hereford made a public address in which he asserted that the treatment of the company's employes had been "abominable and horrible." On receipt of a letter from the company's solicitors, the very reverend gentleman offered his apologies for having made such statements, while "misinformed on the subject." The secretary of the Peruvian company has made public a copy of a letter addressed from his office to the British government, stating that the very employes against whom the accusations had been brought had written to the chief authorities at Iquitos asking for a judicial inquiry.

THE British patent (No. 27,567—1908) issued to G. Capelle, of Belgium, relates to reclaiming rubber. Vulcanized or unvulcanized rubber is regenerated by mixing it with the product obtained by distilling rubber under reduced pressure, or *in vacuo*, or with the product obtained by polymerizing or condensing the distillate from rubber, whether obtained under normal or reduced pressure, or *in vacuo*. Soda may be added to reduce the amount of free sulphur.

LIVERPOOL RUBBER CO. CHANGES.

AN occasional correspondent who for some years was connected with the Liverpool Rubber Co., Limited, favors us with the following details of the history of that company, which are of especial interest in view of the change of control of the company reported in THE INDIA RUBBER WORLD, April 1, 1910 (page 245):

"I attended last week [The letter is dated May 11] at the funeral of the Liverpool Rubber Co., Limited. The business has been sold to another company who will continue to carry it on, but unlike the old the new company will be a private affair.

"It frequently occurs that a business in the old country establishes a branch manufacturing in the new, but the reverse was the case here; the new company was the root, the old country the branch. The Canadian Rubber Co. of Montreal had built a works and had begun business, but they found they had cut a bigger chunk than they could chew. The output of the works was larger than Canada in that day could absorb, and with a view of selling their surplus production, they sent a traveler over to Europe. His name was William Somerville, and the name still remains in the firm known as William Somerville's Sons.

"The man came here and did a fair business—so good, in fact, that the Canadian company resolved to start a branch works on this side. Liverpool was selected, land was purchased and a works was erected, the works manager of the Canadian company, a Mr. Hibbert, coming over and planning them out. By this time, however, the Canadian company had changed its mind. They found trade at home took all their attention and they resigned the works.

"Mr. Somerville, however, determined to continue them. He completed the works, got a man named Burnham, who understood manufacturing, from America, and began operations. He was stopped by a difficulty which in the light of today is interesting. The Hayward Rubber Co., of America, had disposed of their patents on this side to Messrs. Charles Macintosh & Co., and the patents included the making of shoes. [Now, over fifty years after, Charles Macintosh & Co. become practically the owners of the works they then tried to stop.] Happily the patents had nearly expired, and progress was delayed until they were out, when work was begun in earnest and has never since ceased.

"Mr. Somerville, finding that the business was beyond his means, applied to wealthy Liverpool capitalists and a limited company was begun in 1862, being one of the first under the new "limited companies" act. The sole business at first was shoes, but it was soon determined to extend operations. A large new building was put up and the making of mechanicals, hose, belting and thread was commenced. It was thought necessary to have a man of more general manufacturing experience than Mr. Burnham, and Mr. Robert Storey was induced to come from the Russian-American India-Rubber Co., at St. Petersburg, and take charge in Mr. Burnham's place. Mr. Storey continued to be manager of the company until 1874, when he resigned in favor of his son who was manager until 1886.

"To revert back, about 1865 Mr. Somerville and the directors of the limited company had some disagreements and he resigned all active oversight over the business. A new board had been appointed, and the chairman of this new board took the control of the commercial side of the business and retained it until his death in 1886. His health latterly not having been good a deputy had been appointed in 1884 and on Mr. Taylor's death he continued to control the commercial side until he resigned in 1895.

"Mr. Henry G. Tippet, who had been elected to the board in 1886 and made chairman in 1888, became sole business

manager in 1895. The company was reconstructed, on a broader basis, in 1894, new articles of association being registered on June 16, in that year. About 1903 Mr. Tippet gave up all detail work, though remaining chairman, to Mr. Lace, one of the staff to whom succeeded Mr. Eccles. After the resignation of Mr. Storey, Jr., in 1886, the manufacturing was in the hands of Mr. S. H. Foden until 1897, when he resigned and was made a member of the board. An American succeeded him for a short time, but in 1899 Mr. Wild was appointed and remained until 1909. Mr. Davis is now in charge of the works.

"Financially the early years of the business were poor. Much money was lost in getting the work in order, and from the bad debts which so often fall to the lot of a new concern trying to push trade. About 1870 matters had, however, settled down, and from then until about 1897, with one or two slight breaks, very fair dividends—7½ or 10 per cent.—were paid. From 1898 the record has been poor. The dividend on the ordinary shares has never been above 2 per cent. and usually nothing. The shares fell till from being at a premium of about 40 per cent. they touched a discount of about 75 per cent.

"By the present sale, which means a discount of 20 per cent., some of the recent buyers will have done well. One block of about 400 shares was bought for about £500 not three years ago, and will now realize about £1,600. The older shareholders will suffer, but the sale is on the whole a wise one. Under new control better days equal to anything in the past may be before it."

[NOTE.—A report from another source is to the effect that the terms under which the new company gains control of the old is the for each ordinary £1 share a preferred share of £1, debenture stock of £1, and about £1 in cash, or a total of nearly £4.]

GERMAN RUBBER GOODS PRICES HIGHER.

[FROM THE "GUMMI-ZEITUNG," BERLIN, APRIL 29.]

ADVANCES in the prices of automobile pneumatic tires are the most recent result of the continued rise in the crude rubber market. After a more or less considerable advance in the prices of nearly all rubber goods, manufacturers were likewise compelled to decide on an advance of from 5 per cent. to 10 per cent. in the prices of automobile tires. It was to be expected that such a step would be necessary and it appears rather surprising, in fact, that the advance was restricted to the above mentioned small figures. The reason, may, perhaps, be found in the desire of manufacturers not to deal too harshly with the automobile sport, now in a flourishing state of development, and with the automobile industry which is at present slowly recovering from the effects of the recent financial and commercial panic.

The manufacturers of rubber covered canvas and flax woven hose have also recently joined in the advance in the prices of rubber goods. The latest issue of their discount lists show the advance to amount to about 5 per cent. to 10 per cent.

An announcement issued by the various works engaged in making insulating tape proves that an advance in the prices of all rubber goods is at the present time an imperative necessity, unless goods of inferior quality are substituted for the standard goods sold in the past. The price of insulating tape, which was exceptionally unfavorable for manufacturers, has been advanced 10 per cent.

Hard rubber is likewise advancing, prices of hard rubber goods having advanced 10 per cent. since the middle of April. Advances of 10 per cent. to be in force on and after April 15, have also been announced for cycle fittings and materials for cycle repairs, solid rubber tires, and the like. The advance consequently extends to all lines of the rubber goods trade, and although it was of course, to be expected, there has never before been such a general advance in the rubber trade.

GARE'S WASTE RUBBER PROCESS.

THE process brought out in England by Gare for utilizing rubber waste is now protected by patents both at home and abroad. In Great Britain and in Germany the grant of the patents was strongly though ineffectually opposed. More recently a patent has been granted in the United States, to obtain which a visit was made to the country by Mr. C. J. Grist, of London.

Mr. Thomas Gare, the inventor of the new process, is well known in England as a clever and indefatigable worker in the direction of the utilization of wastes. Some years ago he turned his attention to waste rubber and came to the conclusion that "reclaiming" is not necessary. Mr. Gare is not a chemist, nor had he at that time experience in rubber, but he started experimenting which culminated in this process.

The Gare process, in short, consist in taking waste rubber, grinding it by means of special grinders, which he has invented, into the condition of a very fine and homogeneous powder. Afterwards this powder is placed in a *cold* mold; then pressure is applied for the purpose of expelling all air. Finally the mold and the powdered rubber waste contained are heated up to a temperature of about 400° F.

The difference between the above methods and those known



CHARLES J. GRIST.

to rubber manufacturers (except the high temperature) will not be apparent at first sight; but there is one very great difference—*i. e.*, the applying of pressure to the mold *before* the application of heat. Up to the introduction of Mr. Gare's process all rubber manufacturers had looked upon the reheating of waste rubber as a vulcanizing process and considered that nothing but a vulcanizing action—*i. e.*, some chemical action between the sulphur and the rubber—could take place.

The vulcanizing process is very little understood even by the foremost chemists. Mr. Gare heated waste rubber far above the vulcanizing temperature—*i. e.*, 400 to 450° F.—and yet the goods made by his process show no signs of over-vulcanization, and are as good and in some cases even better than they were when first compounded and vulcanized.

The proof of this is that there is now a company of £150,000 capital in England which has more orders for mechanical rubber goods, such as tires, valves and the like, than it can turn out. Besides there exist two smaller companies, licensed by this company, operating successfully. A powerful German syndicate has obtained the control of the Gare patents for continental Europe.

Some eighteen months ago Mr. C. J. Grist, who has had nearly a quarter of a century's experience in rubber and vegetable oils, and who is a Fellow of the Chemical Society of Great Britain, was asked by a strong financial group in England to investigate the process and he reported that he considered the inventor had by his systematic and untrammelled line of experiments hit upon a method by which waste rubber could be remade into goods without being revulcanized, or in fact, any chemical action taking place between the sulphur and rubber contained in the waste, although the material was raised to a temperature far above the vulcanizing period.

He stated as his opinion that this was caused by the fact that Mr. Gare pressed out all air from the material and the mold before heat was applied. Mr. Grist analyzed the powdered waste and the finished goods and found no chemical difference between them, although the temperature had been raised to over 400° F., thereby establishing the fact, in his opinion, that chemical action between sulphur and rubber could not take place except where free oxygen was present.

The effect of the heat during the process is to accomplish the perfect mechanical fusion of the particles of powdered vulcanized waste rubber. This he maintains is new to the manufacturer, and also to the chemist. That it opens up a fresh field of industry is obvious, and its importance at the present time, when rubber is at such a high price, cannot be gainsaid.

Mr. Grist's opinion has during the last few months been backed by that of the well-known German chemical rubber expert, Dr. Fritz Frank, of Berlin, after a most thorough investigation. Mr. Grist having not only chemical but also practical and commercial knowledge of rubber, is peculiarly well suited to conduct negotiations for the working in the United States of the process here described.

GUTTA-JELUTONG IN BORNEO.

IN *De Indische Mercur* appears this note regarding jelutong, which in the Dutch is spelled djeloetoeng: "The journey to the southern and eastern Districts of Borneo, made in accordance with a previous announcement in the *Java Bode* ("Java Messenger"), by the chief of the agricultural chemical laboratory of the department of agriculture, Dr. W. R. Tromp de Haas, and the inspector of the forestry department, A. Th. L. Salverda, has made it appear advisable to take such measures immediately as will prevent the native population from continuing their present destructive methods of working the djeloetoeng trees. The terms on which the Dutch resident is to grant to the Nederlandsch-Indische Boschproducten Maatschappij (Dutch East Indies Forest Products Co.) of Amsterdam the concession to gather this product, have now been finally determined. The operations of this company will presumably also benefit the native population.

"In addition to the supervising force to be employed by the company, the government probably will also appoint inspectors whose duty it will be to guard against the use of injudicious methods of gathering gutta-percha on the part of the Dyaks. The first-named official has also visited Sarawak, where the aforesaid company is already engaged in working the djeloetoeng trees, which are not found in groves in that territory and South Borneo, but interspersed among other growths."

A writer in an earlier number of *De Indische Mercur*, in an article on the Malaysian Rubber Co.—which company has been reported on in THE INDIA RUBBER WORLD—doubted whether the use of any coagulant for gutta-jelutong could be monopolized in Dutch Borneo. The editor of *Mercur* comments: "If a constant supply [of jelutong] is to be insured, the only available means will be planting. However, if such cultivation is to be a paying enterprise, the market price of the product will have to advance quite considerably."

Vulcanized Carriage Cloth.

RUBBER covered cloth for upholstering seats and covering the tops of automobiles and other carriages, as it comes from the calender, is of a dull dead black or brown color, similar to the finish found usually on rubber boots and rubber blankets. While this sort of finish is suitable for some classes of work, most users require cloth with a small raised design or impression, to add to the appearance of the made up article. In compliance with these requirements, four styles of impressions are rolled in, from which to choose.

1. The pinhead pebble. The name describes it quite well. The cloth looks as though it were just covered with pinheads scattered every way about 1-32 inch apart.

2. Long grain. This grain is quite popular with the automobile body manufacturers, and it looks as though marked all over with the point of a pin, apparently no regular design being carried out.

3. English. The English grain is gaining rapidly in popularity. The raised lines are about 1-16 inch wide by 3-4 inch long, and all run one way; that is, no two lines cross. It might remind one living near salt water of the rills left in the sand by the action of the waves when the tide falls.

4. Flat grain. This is the hardest of all to describe. The lines are about 1-16 inch wide and very short and crooked, being scattered over the cloth close together and running every way.

In order to give the cloth this finished appearance it is run

through a mill having two steel rolls about 18 inches in diameter and about 5 feet long. The top roll is engraved the reverse of the design that is to be desired on the cloth. Generally this is rolled in with a knurling tool, but sometimes a secret process is used, the main point of which is that the work is done by an etching acid that eats that part of the steel roll that is not covered with wax.

The bottom roll is of the same diameter as the top one, but the surface is a layer of compressed paper. To make the bottom roll have impressions that will just match the top roll is imperative; therefore the top roll is heated and the two rolls squeezed together, rolling the impressions into the lower or paper covered roll. This paper impression is called the matrix.

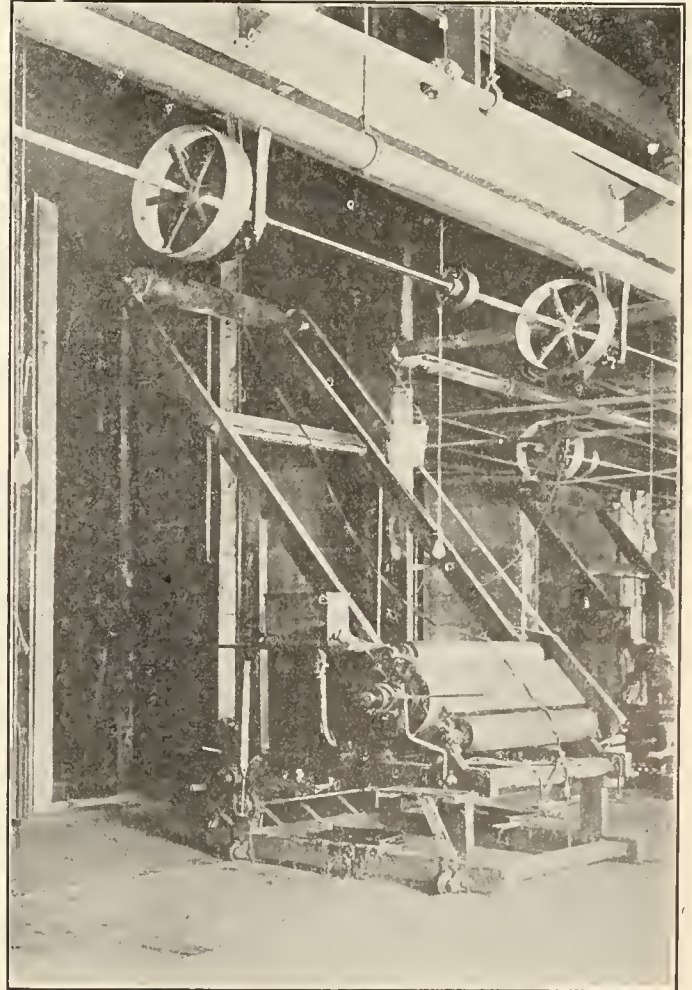
The cloth in 100 yard lengths taken from the calender is put on an arbor in the front of the machine and then fed through, automatically winding up on an arbor at the back of the rolls. Although the compressed paper covered roll is nearly as hard as the steel one, still when the cloth comes out the impression is on the rubber side only, leaving the cloth back perfectly smooth.

As for the vulcanizing process: The rolls of impressed cloth are loaded upon a truck made especially to carry six rolls—three on each side, supporting them by the ends of the arbor through each roll—and taken to the vulcanizing room.

The two machines shown in this room are for varnishing and



DRY HEATER FOR CARRIAGE CLOTH.



VARNISHING AND FESTOONING MACHINE.

carrying the rubber cloth to the vulcanizer. The cloth goes under the varnish rolls, then up to the top of the machine. Here it is transferred to a traveler that carries it into the vulcanizing oven. The cloth then goes over the edge of the machine, and when near the floor is again caught up by the traveler and a second loop carried into the vulcanizer. This is continued until that section of the oven is full. The machine is then pushed to the next section, and the same operations are continued.

At the extreme left corner of the room is the door that opens to the vulcanizing room, and as there is a fireproof wall between the two departments the danger of destroying the finished cloth, should fire break out in the vulcanizers, is practically nil.

FRANK B. LUCAS.

Bridgeport, Connecticut, June 4, 1910.

ANOTHER AMERICAN BALATA FACTORY.

THE growing employment of balata belting in the United States, in which country, by the way, this class of goods did not come into use to an important extent until several years after its merit had become recognized in Europe, has led recently to plans for the manufacture of such belting on this side of the Atlantic. In spite of the high duty on imports, it is stated that at least \$1,000,000 worth of balata belting is sold annually by European manufacturers in the United States. These imports are mainly from Great Britain and Germany.

Announcement is made of a combination of German and American capital for the establishment of a great balata belting factory in the United States, under the corporate style of Victor-Balata and Textile Belting Co., with the idea of putting up buildings and equipment, at an expenditure of \$500,000, at Easton, Pennsylvania, located about 67 miles north of Philadelphia, on the Delaware river, and connected with the outside world by four important railway lines.

The American interest in the new corporation is represented by Charles E. Aaron and John R. Stein, respectively president and treasurer of the New York Leather Belting Co. (No. 51 Beekman street, New York), pioneer importers of balata belting into the United States. The German interest is represented by members of the important firm C. Vollrath & Sohn, manufacturers of balata and other machinery belting at Blankenburg (Saxe-Weimar), Germany, among the largest manufacturers in the world of textile machinery belting, and making a specialty of balata belts. The proprietors of the last named firm are Wilhelm and Albert Vollrath. These gentlemen will be interested in the new undertaking, together with Edwin Vollrath, a son of the first named, who will make his home permanently in the United States and become the active head of the company. The installation of the Easton plant will be under the personal supervision of Mr. Wilhelm Vollrath.

The officers of the new company are Charles E. Aaron, president; Edwin Vollrath, secretary; and John R. Stein, treasurer. It is expected that the installation of machinery in the new plant will be begun in September and that the same will be in operation by the end of October.

All the machinery for the operation of the important Vollrath

factory in Germany has been constructed behind closed doors in that establishment. Workmen who know the secrets live and die in the employ of the concern. Specially woven cotton duck is also made in this plant, on looms and by processes which never have been seen by visitors under any pretext. The machinery complete for the manufacture of balata belting, as well as for the weaving of the duck, is being constructed in Germany for shipment to the United States at the earliest possible date. The first printed reference to this new American enterprise appeared in THE INDIA RUBBER WORLD, January 1, 1910 (page 113).

CHUTE'S NEW DERESINATING PROCESS.

THE chief feature of a newly patented process for extracting rubber, particularly from such plants as the Mexican guayule, is the deresination of the shrub after grinding it dry and subsequently extracting the rubber from the wood in the usual way by grinding in water.

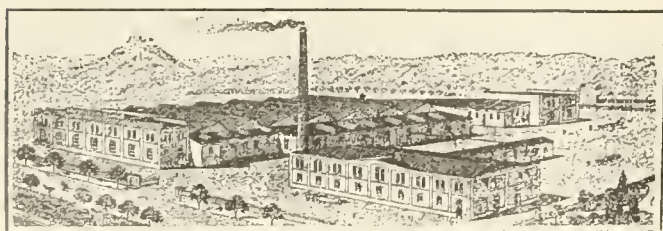
It is claimed that by first extracting the resin from the wood by the use of solvents for resin which do not attack the rubber, such for instance as alcohol, ethyl acetate, and acetone, the subsequent separation of the wood and rubber is facilitated, as the resin adheres to both gum and wood, while the rubber will cohere together and easily separate from the wood if not made to adhere to it by the presence of resin. The resin and solvent are recovered and to completely do this the water with which the wood is ground may be distilled for the recovery of the solvent after the fiber and rubber are separated. The wood is ground dry and solvent applied in a tightly closed receptacle. After the resin is removed the wood is placed in the usual pebble mill.

The United States patent for this invention, granted to Harry O. Chute and Frank L. Randel, of New York (No. 957,495—May 10, 1910), comprises in its specification twelve claims, of which the most comprehensive is—

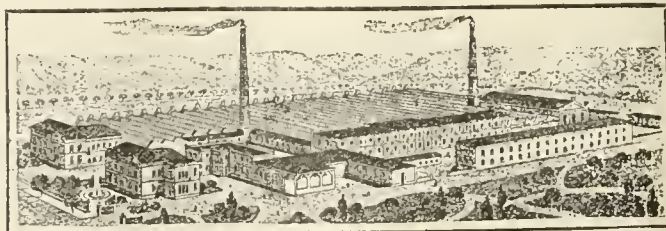
9. The process of preparing rubber which comprises deresinating a crude vegetable material of the character described containing rubber by a volatile solvent adapted to extract resin, but having substantially no solvent power for rubber, separating the rubber from such material by maceration in the presence of water, and thereafter recovering the solvents by fractional distillation.

Other claims relate to the deresination only, and others specify ethyl acetate and alcohol as the solvents, but all seem to contemplate grinding the wood dry, putting into an airtight extracting vessel, extracting the resins with alcohol or similar resin solvents, then placing the ground wood in the ordinary pebble mill to extract rubber in the ordinary way. The claim is made that by this method the extraction of the rubber from the wood is facilitated and a rubber free from resin is produced which is of high grade.

The same process is covered by the Mexican patent, issued to the same parties, No. 9441, dated August 5, 1909, the date of application for the Mexican patent being the same as in the United States.



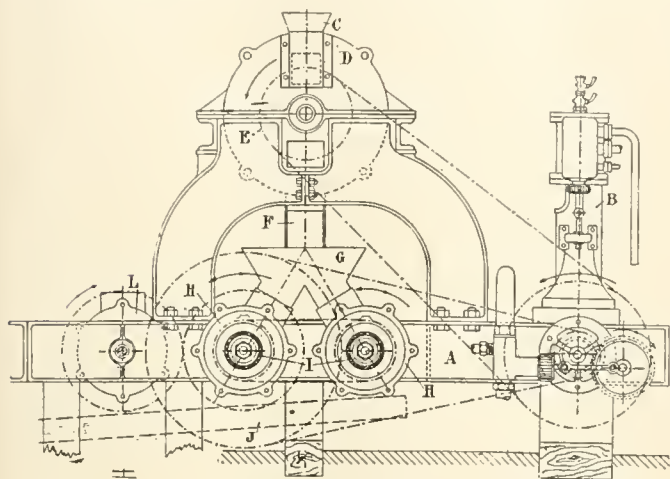
WORKS OF C. VOLLRATH & SOHN, BLANKENBURG.
[The Balata belting factory proper.]



WORKS OF C. VOLLRATH & SOHN, BLANKENBURG.
[Textile belting plant and weaving department.]

RUBBER EXTRACTING MACHINES.

THE recent utilization to an important extent of rubber yielding species formerly not recognized as having commercial value has been due to the discovery of processes of securing their latex and its coagulation differing from those employed, for example, on the Brazilian *Heveas*. If the production of rubber from the Mexican guayule depended upon such methods as are employed on the Amazon, the trade would yet be without any general knowledge of the merits of guayule. There are on



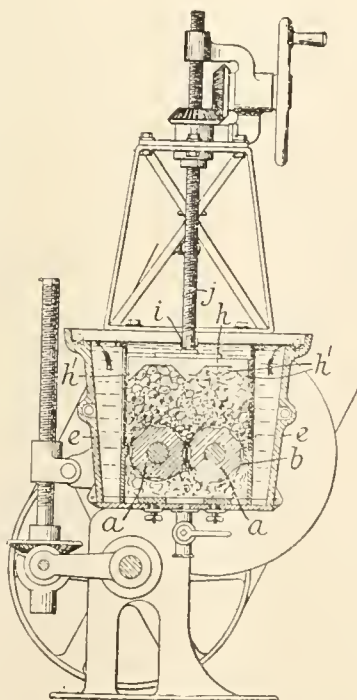
THE GUIGNET MACHINE.

[Invented by Leon Guignet, of Lyons, France. French patent No. 399,896 (July 9, 1909) granted to Société pour Exploitation du Caoutchouc au Congo.]

other continents many plants containing rubber, but not always capable of being worked at a profit, which of late have been the subject of much study by inventors, with the result that new mechanical devices have been developed that have appealed strongly to investors. Among the references to such devices that have been published may be mentioned articles in THE INDIA RUBBER WORLD March 1, 1910 (page 202), and June 1, 1910 (page 312). The following inventions may be mentioned as having specific interest just now.

* * *

THE machine devised by Leon Guignet is designed particularly for extracting rubber from vines, but further for purifying the rubber. The machine is planned for use in the localities where the vines and shrubs grow. Described briefly, it is a crusher which reduces the rubber containing wood or bark to a paste; then a machine for tearing and agglomerating the particles that make up the paste to free the bits of wood. This done, any water and other particles are



MURAC-DESSAU MACHINE.

[British patent 24,438—1908, to British Murac Syndicate and Morland M. Dessau, of London.]

floated away. This agglomerating machine is a drum in which revolves a core shaped like a truncate cone. This core is provided with screw shaped teeth and the sides of the drum in which it revolves are corrugated. The idea is that by alternately pressing the paste together and then tearing it apart while it is subjected to the curing of water, it is purified.

* * *

In the line of washing lower grades of crude rubber for the market is a machine which is the invention of M. M. Dessau, of the British Murac Syndicate, of London. It is something like the two roll rubber washer, with the addition of an enclosing watertight frame into which is fitted a platen or piston operated by a screw which forced the rubber into the rolls, the platen being arranged so that it oscillates and thereby produces a continuous surging in the water, preventing impurities from settling to the bottom of the tank.

RUBBER PRODUCTION OF THE AMAZON.

THE amount of rubber produced in the Amazon region for the last two crop years is stated in detail in a report by the imperial German consul at Pará, from which these figures are compiled:

STATE OF PARA.			
		1907-08.	1908-09.
Rubber	..... tons	9,428	10,457
Caucho	.....	857	1,070
Total	.....	10,285	11,527
STATE OF AMAZONAS.			
[Including the Federal territory of Acre.]			
Rubber	..... tons	16,771	16,587
Caucho	.....	4,969	5,270
Total	.....	21,740	21,857
REPUBLIC OF PERU.			
Rubber	..... tons	3,407	3,176
Caucho	.....	1,720	1,853
Total	.....	5,127	5,029
SUMMARY.			
Rubber	..... tons	29,606	30,220
Caucho	.....	7,546	8,193
Total	..... tons	37,152	38,413
Total	..... pounds	81,905,300	84,685,300

The first point of general interest in these figures is the fact that the yearly increase of production is so slight, while the world's demand for rubber grows more pressing all the while, and prices constantly climb higher.

Another fact worth mentioning is that such increase as is shown is relatively greater in respect of caucho than of *Hevea* rubber. All over the Amazon rubber region caucho trees are being found nowadays, and the *seringueiros* are learning to deal with this product. As will be seen, Peru is now shipping more rubber than caucho, for which reason Pearson's "Crude Rubber and Compounding Ingredients" has discarded the term "Peruvian rubber" as applied to caucho, and used it descriptive of the *Hevea* rubber shipped from Peru.

Over a thousand tons of caucho were produced last year in the state of Pará, where, only a few years ago, this grade of rubber was not known to exist. There is an increasing output likewise up the river, in Brazilian territory.

It speaks well for the persistence of the *Hevea* rubber supply that the yield of Pará state—the region first worked for rubber—not only maintains its output, but shows a notable increase. Amazonas and the Acre, on the contrary, shipped less rubber in 1908-09 than in the preceding crop year.

A BOOK for everybody interested in tires—"Rubber Tires and All About Them"—this office.

THE COMING RUBBER EXHIBITION.

THE International Rubber and Allied Trades Exhibition, 1911, will be held on June 28 in the Royal Agricultural Hall, Islington, London. Not only is this building admirably equipped for exhibition purposes—with spacious club, lecture and dining room—but it is more accessible from all parts of London than the building in which the first great rubber show was held. The suitability of Agricultural Hall for exhibition purposes is shown by the fact that for thirty-one years the Stanley Show—of bicycles and accessories—has been held there.

A matter of first interest in relation to next year's rubber exhibition is that the management is to be the same as that under which the notable success of last year's show was scored. Again the president is to be Sir Henry A. Blake, G. C. M. G., and the chairman of the advisory committee Colonel William J. Bosworth. Mr. A. Staines Manders again is organizing manager.

The show this year is to be under royal patronage, his Majesty George V. while the Prince of Wales, having signified his willingness to become Patron. This is to be taken as a signal expression of the interest that the King takes in the prosperity of the British empire and its colonies.

From every source from which support was derived for the exhibition two years ago evidences of greater interest in the 1911 exhibition are being received. Naturally in the first instance the exhibition was regarded by many as experimental, but the great success achieved proved the wisdom of this enterprise, and the practical results attainable. It appears, therefore, that not only a larger number of exhibits may be looked for next year, but a greater variety of exhibits. In the 1908 show most of those participating were interested in planting, or the production of forest rubber. The organizing manager is able to announce already a very liberal amount of support from the manufacturing interest.

Most of the leading British rubber manufacturers have consented to serve on the exhibition committee, and a number have reserved exhibition spaces. The Central Union of German Rubber manufacturers has officially approved of the exhibition and recommended to the authorities that the German colonies be well represented. In the line of this suggestion the Kolonial-Wirtschaftlichen Komitee have appointed Professor Dr. O. Warburg as commissioner.

The plan of the exhibition, as last year, embraces plantation rubbers of every description and illustrations of processes of production; likewise wild rubber and processes employed in connection with them. Included under these heads are gutta-percha, balata, and the like. These exhibits will embrace botanical specimens and all the various utensils and machines required for the preparation of rubber, together with all of the requisites for rubber estates, wild or cultivated.

The manufacturers' section will be open for machinery, molds, utensils, and so on, employed in making rubber goods of whatever class. Room will be provided also for chemicals and fillers used in the rubber manufacture, including rubber substitutes and reclaimed rubber. Fabrics and all other materials other than rubber used in connection with this industry also will be included.

A separate class will be opened for the literature of the rubber and allied trades. The exhibition offices, from which detailed information may be had, are at 75, Chancery Lane (Holborn), W. C., London.

An interesting exhibit in the way of Amazon rubber will be a single ball (*pelle*) weighing a metric ton [= 2,046 pounds], sent by the Alves Braga Rubber Estates and Trading Co., Limited, of Brazil.

ON June 8 a meeting of shareholders of the Liverpool company was held to comply with the law relating to voluntary liquidation of companies; preliminary to a reorganization of the business, under the name New Liverpool Rubber Co., Limited.

THE GUAYULE PRICE CONVENTION.

EARLY in the past month notice was given of an intended convention of owners of guayule factories, and of growers of guayule on a large scale, to be held at Torreon on June 15, with the object of discussing the best form of grading guayule rubber so as to secure for it a price in proportion to its actual value as compared with other grades of rubber in the world's market. One proposal made was that a commission be named which should fix a minimum price for the sale of guayule rubber, producers being obligated not to sell at a lower price than that named by the commission. There are now thirteen factories engaged in producing guayule in Mexico and of these all but four have their headquarters in Torreon. Respecting the proposed convention, the communication which follows has been received from the office of one of the Torreon companies:

TO THE EDITOR OF THE INDIA RUBBER WORLD: The conference of guayule rubber manufacturers which it was proposed to hold in Torreon on the 15th instant was called by a circular letter from the Compañia Guayulera de Torreón, S. A., one of the smaller companies in Mexico. This circular letter states that in their view guayule rubber has not been paid for in proportion to the percentage of true caoutchouc contained, and that the price has been unduly held down by speculation and by combinations or agreements of manufacturers. These ideas are not so explicitly expressed as here given, but this is the insinuation, especially with regard to combinations. All guayule manufacturers in Mexico were invited to attend the convention in the offices of the above named company, with the object of forming an agreement not to sell their product below a certain figure.

We, and several others, declined the invitation on the ground that it did not agree with our views; that we did not believe that an artificial price could be maintained in view of the competition of other grades of rubber, nor did we believe that there was any combination or agreement of buyers not to pay for guayule rubber all that it is worth in open competition with other grades.

On the 15th instant no one appeared excepting representatives of one or two unimportant factories, though we understand some of the larger factories had signified their intention to take part—that is to say, take part in this preliminary meeting which was to discuss the plan of fixing the price. The date was postponed to the 20th (today), and we are just advised by telephone that only three persons presented themselves, these being, in one case at least, minor employés sent to report. We understand that the Continental company sent a letter saying they had not heard from New York whether or not they would take part, and the Madero interests did not even write, so that it looks as if the matter is not to be taken seriously, though the local papers are giving it some prominence. The three persons present at the meeting decided to send out another circular letter, to call the proposed convention on July 5.

We do not attach any broad significance to this proposal, considering that it emanates from persons of little experience in the trade, who, under the guise of remedying an evil, are merely trying to squeeze the market.

We ask that you do not, on the basis of this letter, say anything condemnatory of the affair; our attitude toward those concerned is entirely friendly, but we think they are "barking up the wrong tree."

Torreón, Mexico, June 20, 1910.

* * *

MENTION has been made in various quarters that July 1 will terminate the period for which a number of contracts were made for the forward sale of guayule, at prices lower than the current quotations for this product for some time past.

It is stated that the plantations of *Hevea* in French Indo-China already amount to about 1,500 hectares [= 3,707 acres].

COAHUILA.

The British Rubber Craze.

THE number of companies in connection with the rubber interest brought out in London during April-May and the amount of their nominal capital exceeded largely the record of any other two months. In fact, the total is greater than for the three months preceding, of which details have appeared in former issues of this paper. What follows is not presented as a complete list of British registrations of rubber companies during these months, but only as a record of those that have come to the notice of this journal in respect of this period. The 163 new companies mentioned in this list have a combined stated capitalization of £22,937,105 [= \$111,623,421.48]. This brings our list for the year up to 294 companies, capitalized at a total of \$176,447,683.50.

It is to be noted that a considerable number of the companies registered lately are for the stated purpose of dealing with oil as well as rubber, and also that several are investment trusts and financial companies rather than planting companies proper. These deserve to be mentioned in the list, however, as their primary object is the investment of capital in rubber in some manner.

CEYLON.

Beverley Tea and Rubber Estates, Limited; April 6....	£50,000
Pindeniya Rubber and Tea Estates, Limited; April 9..	75,000
Tismoda Estates Co., Limited; April 13.....	30,000
Piccadilly (Kelani Valley, Ceylon) Rubber and Tea Estate, Limited; April 15.....	30,000
Hewagam Rubber Co., Limited; April 18.....	240,000
Doranakande Rubber Estates, Limited; April 21.....	100,000
Uva Ceylon Rubber Estates, Limited; April 23.....	60,000
Nehoda (Ceylon) Rubber and Tea Estates, Limited; April 25	200,000
Beau Sejour (Ceylon) Tea and Rubber Co., Limited; April 26.....	80,000
Duckwari Tea and Rubber Estates, Limited; May 26.	50,000

FEDERATED MALAY STATES.

Rubana Rubber Estates, Limited; April 6.....	£250,000
Brooklands Selangor Rubber Co., Limited; April 11....	100,000
Sengat Rubber Estate, Limited; April 13.....	170,000
Madingley (Malay) Rubber Estates, Limited; April 13.	40,000
Anglo-Straits Rubber and General Trust, Limited; April 14	125,000
Ayer Kuning (F. M. S.) Rubber Co., Limited; April 18	140,000
Anglo-Asiatic Rubber and Finance Trust, Limited; April 20	25,000
Klian Kellas Tin and Rubber Co., Limited; April 26..	70,000
Narborough (F. M. S.) Rubber Estate, Limited; April 27	75,000
New Crocodile River (Selangor) Rubber Co.; April 29	80,000
Sembilan Estates Co., Limited; April.....	100,000
British Malay Rubber Co., Limited; April.....	120,000
Harewood Rubber Estates, Limited; May 7.....	25,000
North Perak Rubber Estates, Limited; May 10.....	50,000
Peranang (Selangor) Rubber Plantations, Limited; May 13	70,000
Tanjong Malim Rubber Co., Limited; May 19.....	500,000
Gunong Pari Rubber Estates, Limited; May 28.....	20,000
Caledonian Rubber Estates of Malay, Limited; May 28.	34,000

OTHER MALAY STATES.

United Malaysian Rubber Co., Limited; April 2.....	£100
Pandan (Johore) Rubber Estates, Limited; April 9..	85,000
North Labis (Johore) Rubber and Produce Co., Limited; April 26.....	150,000
Majedie (Johore) Rubber Estates, Limited; April 28.	130,000

STRAITS SETTLEMENTS.

Segari Rubber, Limited, April 2.....	£20,000
Garing (Malacca) Rubber Estate, Limited; April 4.	80,000
Seletar Rubber Estates, Limited; April 6.....	90,000
Atherfield (Hevea) Rubber Estates, Limited; April 8	25,000
Jasin (Malacca) Rubber Estates, Limited; May 6....	60,000

INDIA.

Elak (Southern India) Rubber Co., Limited; April 2	£35,000
Poonmudi Tea and Rubber Co., Limited; May 27.....	60,000

BURMA.

Tenasserim Hevea Plantations, Limited; April 13....	£50,000
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DUTCH EAST INDIES.

Kalijeroek Rubber Co., Limited; in Java; April 2....	£40,000
Dolok Rubber Estates, Limited; in Java; April 4....	200,000
Djaboong (Java) Rubber Estates, Limited; April 4..	60,000
Badek Rubber Estates, Limited; in Java; April 7....	120,000
Daegan (Java) Rubber Estate, Limited; April 7.....	55,000
Eastern Sumatra Rubber Estates, Limited; April 13..	150,000
South Sumatra Rubber Estates, Limited; April 14....	100,000
Anglo-Dutch Plantations of Java, Limited; April 16..	1,500,000
Serdang (Sumatra) Rubber and Produce Estates, Limited; April 19.....	105,000
Java Pará Rubber Estates, Limited; April 20.....	160,000
Insulind (Sumatra) Rubber and Tobacco Estates, Limited; April 26.....	100,000
Loogedee (Central Java) Rubber Estate, Limited; April 27	50,000
Gondang Legi (Java) Rubber Plantations, Limited; April 27	125,000
East Coast Rubber Estates of Sumatra, Limited; April 29	60,000
Waverley Rubber and Produce Estates of Java, Limited; May 3	100,000
British Rubber Estates of Java, Limited; May 5....	95,000
Tempoh (Java) Rubber Plantations, Limited; May 13	150,000
Bila (Sumatra) Rubber Lands, Limited; May 18....	200,000
Mandau (Sumatra) Rubber and Timber Estates, Limited; May 21	150,000
Marawan (Java) Rubber Plantations, Limited; May 23	55,000
Bantam (Java) Rubber Estates, Limited; May 24....	165,000
Bantardawa Rubber Estates, Limited; May 26.....	150,000
Galang Besar Rubber Plantations, Limited; in Rhio; May 27	150,000
Kali Baroe (Java) Rubber Estates, Limited; May 28.	75,000
Kebonso Rubber Estates, Limited; May 31.....	120,000

BORNEO.

Tanah Brunei Rubber Co., Limited; April 14.....	£50,000
British North Borneo Rubber Trust, Limited; April 18	1,000,000
Lamag Rubber Estates, Limited; April 19.....	80,000
Sablas—North Borneo Rubber Co., Limited; April 20.	300,000
Taritipan Rubber Estates, Limited; April 22.....	90,000
Brunei Estates, Limited; April 29.....	75,000
Tampassuk Para Rubber Planters, Limited; May 11.	200,000

SAMOA.

Upolu Rubber and Cacao Estates, Limited; April 19..	£90,000
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WEST AFRICA.

Keraia Rubber Estates, Limited; April 1.....	£100,000
Ilo Valley Rubber and Cocoa Plantations, Limited; April 4.....	45,000
S. E. D. Syndicate, Limited; April 4.....	1,000
Gold Coast Rubber and Mahogany Estates, Limited; April 5	75,000
Ilaro Rubber and Produce Estates, Limited; April 8..	80,000
Boinsu Rubber Co., Limited; April 8.....	125,000
Panni Lands and Rubber Estates, Limited; April 13..	80,000
West African Rubber and Produce Association, Limited; April 14.....	21,000
Sikassoo Rubber Estates, Limited; April 19.....	100,000
Ankobra Rubber Estates, Limited; April 20.....	50,000
West African Rubber, Oil, Gold and Store Syndicate, Limited; April 22.....	20,000
Vine and General Rubber Trust, Limited; April 23...	1,250,000
Rom Tyre and Rubber Co., Limited; April.....	50,000
Aguna Rubber and Trading Co., Limited; April 26..	100,000

GOLD COAST.

Aowin Rubber and Produce Co., Limited; May 3....	£85,000
Aywarra Rubber and Cotton Estates, Limited; May 3.	120,000
Koshea Rubber and Produce Co., Limited; May 6....	50,000

SIERRA LEONE.		British and Continental Rubber and Oil Syndicate, Limited; April 14.....	20,000
Konoh Rubber and Trading Co., Limited; May 5.....	£145,000	Anglo-Dutch Balata, Produce and Rubber Co., Limited; April 15.....	500
SOUTH AFRICA.		Congo Rubber Plantations, Limited; April 15.....	45,000
Rubber, Oil and General Promotions, Limited; April.....	£75,000	Sungei Muda Rubber Syndicate, Limited; April 15....	25,000
RHODESIA.		Rubber and Tea Investors' Trust, Limited; April 15..	75,000
Lochard Estates (Rhodesia), Limited; May 6.....	£35,000	Igalkande Rubber and Tea Estates Co., Limited; April 20	75,000
NATAL.		United Rubber and Oil Investment Trust, Limited; April 21.....	255,000
Tongaland (Natal) Rubber Co., Limited; May 14...	£160,000	Sorata Rubber Estates, Limited; April 21.....	90,000
BRITISH EAST AFRICA.		Atlantic Oil and Rubber Trust, Limited; April 22....	150,000
Malindi Cotton and Rubber Estates, Limited; May 27.	£90,000	Rubber and Petroleum Trust, Limited; April 22.....	10,000
GERMAN EAST AFRICA.		O. and R. Syndicate, Limited; April 23.....	20,000
Alkumbi Rubber Plantations, Limited; April 21.....	£70,000	Mamia River Rubber Estates, Limited; April 25.....	90,000
Bondei Rubber Estates, Limited; May 11.....	200,000	Merchants' Rubber and General Development Corporation, Limited; April 25.....	75,000
GERMAN WEST AFRICA.		Premier Rubber and Oil Development Trust, Limited; April 26	50,000
Bai Rubber and Cocoa Estates, Limited; May 27.....	£80,000	Rubber Planters' Oil and Investment Trust, Limited; April 26	500,000
MEXICO.		Tikam Batu Rubber Co., Limited; April 26.....	30,000
Guayule Rubber Co., Limited; April 6.....	£400,000	Aguna Rubber and Trading Co., Limited; April 26...	100,000
Filisola Rubber and Produce Estates, Limited; April 16	120,000	Matwapa Rubber Estates, Limited; April 27.....	30,000
Soconusco Rubber Plantations, Limited; April 19....	200,000	Rubber and Oil Consolidated Investments, Limited; April 4	100,000
Amistad Rubber Plantations, Limited; April 21.....	120,000	Rubber, Oil and German Promotions, Limited; April 15	75,000
Anglo-Mexican Rubber Estates, Limited; April 22....	895,000	British and Foreign Oil and Rubber Trust, Limited; April 18	1,000,000
Santa Gertrudis (South), Limited; April 28.....	40,000	Rubber and Oil Traders, Limited; May 9.....	25,000
PANAMA.		Rubber Land and Industrial Investment Corporation, Limited; May 19	1,000,000
Castilloa Rubber Plantations, Limited; April 5.....	£115,000	Orient Planters, Limited; May 19.....	22,000
COLOMBIA.		Odumowo Rubber and Mahogany Estates, Limited; May 21	50,000
P. P. B. Rubber Estates, Limited; April 6.....	£7,000	A. D. T. Syndicate, Limited; May 25.....	2,000
H. and U. Rubber and Coffee Estates, Limited; April 16	195,000	Rebber Rubbers, Limited, May 31.....	50,000
BRITISH GUIANA.		British and International Produce Corporation, Limited; May 31	500,000
Essequibo Tea and Rubber Estates, Limited; April 6.	£50,000		
Demerara Rubber Co., Limited; April 12.....	90,000		
British Guiana Balata Co., Limited; May 6.....	60,000		
David Young Rubber Estates (British Guiana), Limited; May 7	85,000		
Coverden Rubber and Produce Co., Limited; May 24.	50,000		
DUTCH GUIANA.			
Surinam Rubber Estates, Limited; May 3.....	£200,000		
Dutch Guiana Balata and Rubber Concessions, Limited; May 6	100,000		
Dutch Guiana Rubber Syndicate, Limited; April 20....	25,000		
BRAZIL.			
St. Antonio (Pará) Rubber Estates, Limited; April 1.	£75,000		
Rubber Corporation of Brazil, Limited; April 9.....	250,000		
Lagoa Rubber Plantations, Limited; April 28.....	50,000		
Pará (Marajo) Islands Rubber Estates, Limited; April 28	125,000		
Javary Rubber Estates, Limited; April 29.....	350,000		
Envira (Brazilian) Rubber Estates, Limited; April 29	85,000		
British Amazon Rubber Estates, Limited; April 29...	400,000		
River Acre (Brazil) Rubber and Finance, Limited; May 6	20,000		
Lafayette Rubber Estates, Limited; May 26.....	150,000		
PERU.			
Iquitos Rubber Syndicate, Limited; April 11.....	£20,000		
ECUADOR.			
Caamano Tenguel Estate, Limited; April 15.....	£300,000		
El Oriente Rubber Estates, Limited; April 16.....	250,000		
BOLIVIA.			
Anglo-Bolivian Rubber Estates, Limited; April 13....	£125,000		
GENERAL.			
[Including companies for which no region is named in the data reaching us.]			
A. R. T. Syndicate, Limited; April 2.....	£1,000		
A. G. Syndicate, Limited; April 5.....	2,505		
Mid-East Rubber Investments, Limited; April 6.....	400,000		
E. and W. Rubber, Limited; April 6.....	10,000		
Rubber Planters' Trust, Limited; April 11.....	31,000		
International Rubber Trust, Limited; April 12.....	25,000		
International Rubber Finance Syndicate, Limited; April 13	50,000		

MR. RYAN'S INTEREST IN THE CONGO.

BEFORE sailing for Europe recently Mr. Thomas Fortune Ryan, of New York, authorized the publication of a statement which is given here in part. Mr. Ryan has been mentioned in these pages already as being interested in the American Congo Co.—organized for exploiting rubber—and also in the important mining concessions granted to Americans by the late Leopold, King of the Belgians. Mr. Ryan said:

"Of all my business concerns that which most interests me now is the Congo development. I expect to give a great deal of attention to it. It is not at all unlikely that I shall make a visit there. The mines in which I am interested are just north of those known as King Solomon's Mines. The outlook for gold there is probably unsurpassed anywhere in the world.

"I am interested not only in the industrial development of the Congo—which country I am convinced affords the greatest opportunities now to be found in the world—but also in the moral and social conditions. The solution of the negro problem there is perhaps the one which deserves the greatest attention. The great exaggerations to which currency has been given have not in any way changed the firm purpose of those responsible for the future of that region to correct any abuses that heretofore have existed.

"It may be of interest to the public to know that I have now in the Congo exploring it in every part more men than Henry M. Stanley had upon his expedition in search of Dr. Livingston. These men are working under the direction of the very best men that America can produce in their various departments of activities."

An extensive sketch of Mr. Ryan appeared in THE INDIA RUBBER WORLD December 1, 1906 (page 72), in connection with the first public mention of his interest in rubber. Later we published a note on his retirement from active connection with most of his multifarious business interests.

News of the American Rubber Trade.

RUBBER WORK TO BE RESUMED AT OLNEYVILLE.

THE plant of the Joseph Banigan Rubber Co. at Olneyville (near Providence), Rhode Island—one of the subsidiary companies of the United States Rubber Co.—is being enlarged and otherwise put into readiness for the manufacture of tires and mechanical rubber goods. It is stated that about \$1,000,000 will be expended on the Olneyville plant, with a view to taking over there an important part of the production of the Revere Rubber Co., which a few months ago was amalgamated with the Rubber Goods Manufacturing Co., which in turn is controlled by the United States Rubber Co.

The Joseph Banigan Rubber Co. was incorporated in November, 1896, with \$1,000,000 capital, under the presidency of the late Joseph Banigan, and the manufacture of rubber footwear was begun January 11, 1897, the nucleus of the factory plant being the old Saxon woolen mill property at Olneyville. Following the death of Mr. Banigan, his executors sold the factory and business to the United States Rubber Co., in 1899. Three years later the capital of the Banigan company was increased to \$1,500,000.

Since March 10, 1908, the Banigan factory has not been operated, the management of the United States Rubber Co. deeming it in the interest of economy to combine the production of the Banigan company and the Woonsocket Rubber Co. in the factories of the latter. The plant at Olneyville, however, has been kept in a state of efficiency, with a view of its being put in operation whenever conditions of trade might render this desirable. President Colt is quoted as saying that when the Olneyville factory is again at work the four plants in Rhode Island controlled by the United States Rubber Co. will have a combined yearly output of \$25,000,000.

PICTURES OF THE RUBBER INDUSTRY.

THE B. F. Goodrich Co. (Akron, Ohio) are utilizing motion pictures to a wide extent in advertising their products. In connection with these pictures, which will be shown all over the country, is a lecture by Mr. F. M. Tillisch, from the company's office, entitled "From Tree to Tire." The picture films show successively forest views in the rubber districts above Pará, Brazil; the tapping of rubber trees, coagulation of the latex by smoking, and other details in the production of the rubber of commerce. These are followed by views in the interior of the Goodrich factory, illustrating all the processes of treating rubber, by washing, grinding, and the like; the building up of a tire, and, finally, mounting the tire on an automobile. This lecture has

been attended largely wherever it has been presented, and, together with the pictures, has been received with great interest.

RUBBER GOODS DIVIDEND.

THE directors of the Rubber Goods Manufacturing Co. on June 1 declared from net earnings the forty-fifth regular quarterly dividend of 1 $\frac{3}{4}$ per cent. on the preferred stock, payable on June 15.

MEMORIAL TO THE LATE R. D. EVANS.

At the annual banquet of the alumni of the school of medicine of Boston University, on June 1, the gift was announced of a fund of over \$200,000, for the establishment of a department of chemical research as a memorial to the late Robert D. Evans, some time president of the United States Rubber Co. The gift is from Mrs. Evans. By the way, the "Stetson cottage," owned by the late Mr. Evans, at Beverly, Massachusetts, is occupied this summer, as last, by the President of the United States.

RUBBER FACTORY EMPLOYEES CELEBRATE.

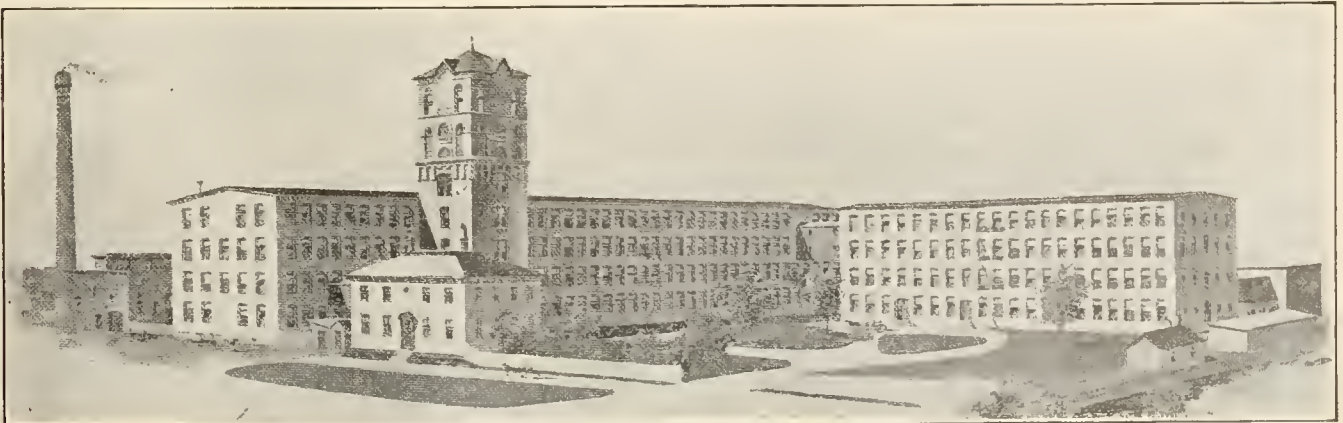
THE Converse Rubber Shoe Club gave a successful entertainment in connection with the opening of the new building of the Converse Rubber Shoe Co. (Malden, Massachusetts). The new building is two stories high, 150 x 70 feet, designed partially for manufacturing and partially for storage purposes. The club mentioned is composed of employes of the rubber company.

NEW YORK MERCHANTS' ASSOCIATION.

THE twelfth annual report of the Merchants' Association of New York shows a total membership of 1,294 corporations, firms and individuals. There are no debts, and the association has a comfortable cash balance. During the year attention was given to various questions of commercial and general interest, and the belief is entertained that much good has resulted from the activity of the association. The membership embraces 17 companies and firms more or less directly connected with the india-rubber interest, and a much larger number whose interests is less direct.

SOLID RUBBER TIRES IN EUROPE.

THE Colonial Tire and Rubber Co.—a corporation under the laws of Ohio to hold the foreign patents on the Swinchart side wire tire report that their licensee in Europe are all doing a good business. These tires are made on royalty in France by Establishments J. B. Torrillon at Clermont-Ferrand; in Germany by the Continental Caoutchouc- und Guttapercha-Compagnie, at Hanover; and in England by the Sirdar Rubber Co., Limited, of London. The management of the company for the

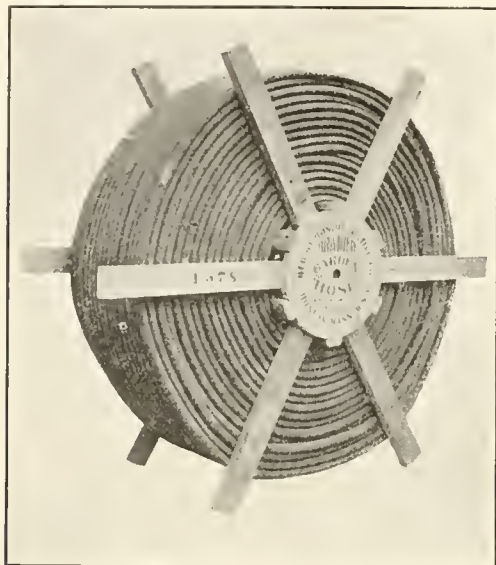


THE BANIGAN RUBBER FACTORY, AT OLNEYVILLE, RHODE ISLAND.

past nine years has been in the hands of Mr. P. D. Hall, its treasurer, at Akron, Ohio. The trade in these tires, known in France as "Bandes Américaines B. & S. Torrillon"—the initials relating to the patentees, Byrider and Swinehart—is reported to amount to about 80 per cent. of the business in solid rubber tires in that country.

A LARGE REEL OF HOSE.

THE illustration herewith was made from a photograph of a reel of hose 1,578 feet long, made by the Boston Belting Co., and which is believed to be one of the longest continuous lengths of hose yet manufactured. The product is ½ inch, two ply,



Forsyth Roxbro braided hose, and this particular reel was sent to the manufacturers' agents in Pittsburgh, Messrs. J. & H. Phillips. The hose was vulcanized by direct steam, not in a mold or form.

RUBBER INDUSTRY AT CATASAUQUA.

THE O'Brien Rubber Thread and Webbing Co. (Catasauqua, Pennsylvania), have gone into voluntary bankruptcy, proceedings having been instituted in the United States District Court at Trenton, New Jersey, too late to be reported in the last issue of THE INDIA RUBBER WORLD. The company named was incorporated April 1, 1908, under the laws of New Jersey, with \$250,000 capital authorized. Among the incorporators named was William J. O'Brien, who became president, and Richard Barlow, who now figures as a principal creditor. The company acquired a plant at East Catasauqua, Pennsylvania, occupied formerly by the Catasauqua Rubber Co., incorporated in the District of Columbia, July 21, 1904, with an authorized capital of \$500,000, and of which the Rev. Father James Regnery, of Easton, Pennsylvania, was elected president. Later—on February 16, 1905—a charter was obtained by the Catasauqua Rubber Co. under the laws of Pennsylvania, with a stated capital of \$100,000. Financial difficulties ensued and in December, 1905, the assets of the Catasauqua company were offered at a sheriff's sale.

William J. O'Brien sailed from New York on June 1 for Russia for the purpose, as is reported, of entering into an engagement with an important rubber company there to take charge of the Catasauqua plant.

GIBNEY & BROTHERS' NEW YORK BRANCH.

THE opening of a New York branch of the Philadelphia tire house of James L. Gibney & Brother was mentioned in the June INDIA RUBBER WORLD (page 329). The location will be Nos. 248-252 West Fifty-fourth street, and the manager Mr. Walter A. Schott. The Gibney business was established in Philadelphia

in 1898, being confined to bicycle tire repairing on a small scale. The sale of bicycle tires was then taken on, and later automobile tires and tire accessories. The firm now are numbered among the largest tire dealing firms in the country.

CONCERNING RUBBER GOGGLE PATENTS.

HARVEY S. COVER, of South Bend, Indiana, issues a warning to dealers in rubber goggles for motorists, against infringing the patents granted to him for goggles. He states that decrees have been entered in favor of the patents in the United States circuit court in Indiana against G. H. Westing Co., and in the northern district of Illinois against Beckley-Ralston Co. and American Thermo-Ware Co. Mr. Cover's goggle has been described in THE INDIA RUBBER WORLD. Later a goggle by another firm was mentioned in this paper, and Mr. Cover writes that this "was the first intimation I (he) ever had of anybody besides myself (himself) that made or offered a rubber goggle of any kind."

RALEY RUBBER CO.'S PRODUCTS.

THE Raley Rubber Co., the incorporation of which was reported in the last issue of this paper, are manufacturing seamless nipples for nursing bottles. Charles Hofacker is president and Hiram S. Raley secretary-treasurer. The other directors are H. B. Raley and C. H. Hofacker. They are located at No. 440 Elm street, New Haven, Connecticut.

TRIBUTE TO THE LATE HENRY C. BURTON.

AT a special meeting of the Executive Committee of the Rubber Sundries Manufacturers' Association, held on May 21, 1910, the following preamble and resolutions were adopted:

WHEREAS, It has pleased the Almighty to remove from our midst by death, May 10, 1910, Mr. HENRY CLAY BURTON, formerly president, and an active member of the Executive Committee since the organization of this Association; and

WHEREAS, The success achieved by the Rubber Sundries Manufacturers' Association was largely due to his deep personal interest, conscientious, energetic and intellectual labor for the welfare of our Association, as presiding officer and as a member of the Executive Committee; and

WHEREAS, His noble character and genial personality and his great belief in the benefits of co-operation has endeared him in the love and admiration of his fellow members of this Association; be it

Resolved, That the members of the Rubber Sundries Manufacturers' Association, through the death of Mr. HENRY CLAY BURTON has suffered a great loss; and, be it further

Resolved, That in commemoration of the love and esteem in which he was held by all members of this Association, and as evidence of their sorrow and their deep sympathy with the bereaved family, this preamble and resolutions be spread upon the minutes of this Association and a copy be forwarded to the family of our deceased associate and beloved friend.

G. R. HODGMAN, President;
 ED. E. HUBER, Secretary-Treasurer;
 H. E. RAYMOND,
 F. H. JONES,
 CHAS. J. DAVOL,
 ALEXANDER M. PAUL,
 Executive Committee.

TRADE NEWS NOTES.

NOTICES were posted at the Millville works of the Woonsocket Rubber Co. on June 2 of a shut down of two weeks for the purpose of installing a new fly wheel in the engine room.

The Mound City Duck and Rubber Co., of St. Louis, have removed from the premises so long occupied by them to larger quarters at No. 832 North Broadway, which they have leased for a long term.

The Diamond Rubber Co. of New York, have taken title to the property in Boston, Nos. 869-871 Boylston street, embracing 5,928 square feet of land, on which there are three story brick buildings. The property will be improved for the new occupants.

The Kokomo Rubber Co. (Kokomo, Indiana) issue an exceptionally attractive hanger illustrating their tires for motorcycles.

The B. F. Goodrich Co. (Akron, Ohio) issue a poster of unusual interest entitled "The Goodrich Rubber Man's Vacation," relating to the various forms of summer enjoyments in which rubber tired vehicles figure.

RUBBER CLUB OF AMERICA—MIDSUMMER OUTING.

THE annual midsummer outing of the Rubber Club of America will take the form this year of a baseball carnival, arrangements for which have been completed by the executive committee. The date is Tuesday, July 19. The place is the beautiful Riverside Recreation grounds, at Weston, on the Charles river, near Boston, which have been secured for the exclusive use of the club and its guests for the day. Besides the "water baseball" and other aqueous sports, there will be regulation baseball, golf (at the Woodland Golf Club), tennis, swimming, and so on. The banquet will be served in the balcony dining room at 6.30 p. m. The famous Lynn Cadet band will be in attendance from first to finish. The entire cost will be \$5 per person. The secretary of the club, Mr. George H. Mayo, No. 197 Congress street, Boston, will be pleased to be informed, as early as possible, of what members will attend and the number of guests which each will invite. An aeroplane glider will be shown.

A NEW RUBBER RECLAIMING PLANT.

THE plant of the Harmer Rubber Reclaiming Works (East Milestone, New Jersey), recently incorporated, as mentioned in THE INDIA RUBBER WORLD (May 1—page 291), has been practically completed. It is equipped with machinery of the latest design and best quality. The president, Mr. Thomas W. Harmer, has had many years of experience, both in the manufacture of mechanical rubber goods and in reclaiming rubber. Situated on the Delaware and Raritan canal and on the Pennsylvania railroad, the new company have shipping facilities such as can hardly be surpassed. A. Marcus is secretary and treasurer.

PENNSYLVANIA RUBBER CO.—INCREASE OF CAPITAL.

THE capital of the Pennsylvania Rubber Co. (Jeannette, Pennsylvania) has been increased to \$2,000,000 by the issue of \$500,000 in additional preferred stock, subscribed for at par in cash by the former shareholders. The officers of the company today are:

President—HERBERT DUPUY.
Vice President—CHARLES M. DUPUY.
Secretary—GEORGE W. SHUVELEY.
Treasurer—H. WILFRED DUPUY.
General Manager—SENECA G. LEWIS.

Mr. Lewis is a recent acquisition to the company's staff, having been connected before with the sales department of the Winchester Repeating Arms Co., from which he resigned to assume his present duties. The factory manager is John J. Moriarty, some time with The B. F. Goodrich Co., and later with the Gutta Percha and Rubber Manufacturing Co. of Toronto, Limited. The additional capital reported is to be utilized in the erection of additional buildings and the installation of new machinery.

INCREASE OF CAPITAL.

L. J. MUTTY Co., manufacturers of rubber carriage cloth in Boston, have increased their capital stock to \$250,000, fully paid. They were incorporated February 4, 1909, with \$120,000 capital authorized, succeeding to the business of a partnership under the same style. The present address of the business is Nos. 91-93 Federal street, Boston.

INCREASED FACTORY SPACE.

WEARWELL Rubber Co. (Marion, Indiana) advise THE INDIA RUBBER WORLD that they have lately trebled their space, and are now occupying three floors instead of one. They make inner sleeves and other accessories for rubber tires, cements, tire paste, and the like. They have also an extensive repair department. S. Hal Smith is the president of the company; G. R. Van Aucken, vice president and manager, and G. D. Lindsay secretary and treasurer.



THE RIVERSIDE RECREATION GROUNDS.

ST. LOUIS CEMENT IN THE EAST.

THE business of the St. Louis Rubber Cement Co. (St. Louis) has grown until it has become necessary to establish a distributing center of their product in the East. They have therefore concluded negotiations with C. A. Spencer & Son., No. 183 Essex street, Boston, for handling their cements and tape in New England and Canada, and also in the states of New York, New Jersey and Pennsylvania. Messrs. Spencer & Son are thoroughly equipped to handle this character of business, and anticipate carrying large stocks of cement in or near Boston; also in Philadelphia, Newark, N. J., and Rochester, N. Y.

TWO NEW INSULATING MATERIALS.

THE Dickinson Manufacturing Co. (Springfield, Massachusetts) are manufacturing several new insulating materials under processes originated by Mr. Kurt R. Sternberg, general manager and treasurer of the company. One of these is known as "Sternoid," and another as "Stern-Bakelite," the binder of which consists of "Bakelite," the invention of Dr. L. H. Baekeland.

TIRE MEN IN THE AUTOMOBILE TRADE.

AT the latest election of officers and directors of the New York Automobile Trade Association, there was a more equal distribution of officers among kindred lines affiliated. Of the twelve members of the board, four are car dealers, four represent big garage interests, and four represent the accessories trade. W. H. Yule, of The B. F. Goodrich Co. of New York, is the new treasurer of the association, and E. H. Broadwell, of The Fisk Rubber Co., is a director. A new committee has been formed devoted to aviation, and including Mr. Yule, of the Goodrich company.

TRADE NEWS NOTES

MR. ALFRED PASSLER, of Binghamton, New York, lately connected with the rubber trade as a traveling man, has gone to London as a special representative of the Kempshall Tyre Co. of Europe, Limited.

The Firestone Tire and Rubber Co. (Akron, Ohio), have taken a ten years' lease on property in San Francisco, at Fulton street and Van Ness avenue, on which they will erect a three-story and basement brick building 30 x 109 feet.

The Easton Rubber Manufacturing Co. is being organized at Easton, Pennsylvania, for the purpose of reclaiming rubber by a new process, and ultimately of manufacturing mechanical rubber goods in which the reclaimed material may be utilized. Wilmer Dunbar, of Greensburg, Pa., is mentioned as president and general manager.

The Southern Packing Manufacturing Co. has been organized in New Orleans, with \$25,000 capital, to make packings of rubber, asbestos, hemp, etc., for various purposes; also roofing and other building materials, and to act as manufacturers' agents for similar lines. The officers are C. T. Sondley, president; P. F. Strieman, vice-president and manager; and D. B. Rogan, secretary and treasurer. The location is No. 801 Baronne street.

CHANGE AT THE GOODRICH BUFFALO BRANCH.

MR. H. B. NIBLETTE, for 12 years past connected with The B. F. Goodrich Co., and latterly with their New York branch, has been appointed manager of the Goodrich branch at Buffalo, New York, and has taken charge of his new position. The Buffalo branch, which has grown steadily since its establishment seven or eight years ago, is now among the most important of their selling establishments. Mr. W. O. Rutherford, whom Mr. Niblette succeeds at Buffalo, has returned to the factory, at Akron. The staff of the New York branch gave Mr. Niblette a dinner on the evening of June 23.

LIEUTENANT FRANCIS H. APPLETON.

ONE of the best known club men in Boston is Mr. Francis H. Appleton, who, with his son, owns a rubber reclaiming factory at Franklin, Massachusetts. In addition to prominent official positions that he holds in such clubs as The Rubber Club of Amer-



LIEUTENANT FRANCIS H. APPLETON.

ica, the Rubber Reclaimers' Club, the Point Shirley Club, and such societies as Boston Commandery, Knights Templar, the Governor of Massachusetts recently presented him with a document which makes him a lieutenant in that famous and abstemious body, The Ancient and Honorary Artillery of Boston.

NEW INCORPORATIONS.

DETROIT Airless Tire and Rubber Co., June 7, 1910, under the laws of Michigan; authorized capital, \$1,500,000. Incorporators: George C. Clark, George E. Stevenson, F. G. Van Dyke (trustee), Detroit, Michigan, and J. A. MacMillan, Dayton, Ohio. This company succeeds the Dayton Rubber Manufacturing Co., of Dayton, Ohio, incorporated May 17, 1905, following a reorganization of a business established at Dayton several years previous. Of late the company have taken an active interest in the "Airless" clincher tire, patented by J. A. MacMillan, who has been general manager. Mr. MacMillan will sustain the same relation to the new company. The Hooven interest will be represented in the Detroit enterprise. The Hoovens are connected with an important manufacture of steam engines, and have been represented on the board of the Dayton company from the beginning.

Hudson Mechanical Rubber Co., June 15, 1910, under the laws of New Jersey; authorized capital, \$25,000. Incorporators: William A. Harding, No. 918 Lincoln place, Brooklyn, New York; J. Harrington Sickel and Welling S. Katzenbach, both of Trenton, New Jersey. The two gentlemen first named are respectively president and secretary-treasurer. The New Jersey address is No. 25 West State street, Trenton. They will have

an office and storeroom at No. 48 Dey street, New York, where they will sell mechanical rubber goods. Mr. Harding for some years has been the New York representative of the United and Globe Rubber Manufacturing Cos. Mr. Sickel is the son of Welling G. Sickel, former president of the United and Globe.

Leicester Rubber Co., June 17, 1910, under the laws of New Jersey; capital authorized, \$50,000. Incorporators: Anthony De Piano, William H. Maher, and George B. La Barre. To take over the manufacture of mechanical rubber and molded goods carried on for some years at No. 53 Paul avenue, Trenton, under the same name. [See THE INDIA RUBBER WORLD, March 1, 1908—page 197.]

Puncture Proof Spring Tire Co., June 1, 1910, under the laws of Delaware; authorized capital, \$100,000. Incorporators: E. J. Forhan, G. F. Martin, and H. P. Jones, No. 154 Nassau street, New York city.

Rubberoline Manufacturing Co., June 7, 1910, under the laws of New Jersey; authorized capital, \$125,000. Incorporators: Ferdinand C. von Heydebrand, No. 35 Washington place; Henry Mielck, No. 122 Palisade avenue; and John Karh, No. 32 Passaic street—all of Garfield, N. J. Mr. Karh has been elected president of the company. Further details appear in another column, and the office of the company is at his address as given.

Ferromatic Tire Manufacturing Co., June 7, 1910, under the laws of Wisconsin; capital, \$11,500. Incorporators: Charles F. Wren, Stella Theresa Wren, and Conrad Werra. Location: Manitowoc, Wisconsin.

Perfect Tire Co., June 8, 1910, under the laws of Ohio; capital, \$50,000. Incorporators: M. J. Kirby, W. A. Moyer, Frank L. Smith, and Jacob Boepple.

Michelin Tire Co., February 10, 1910, under the laws of Missouri, to cover the business in that state of Michelin Tire Co. (Milltown, New Jersey). Capital invested in Missouri: \$10,000. Incorporators: M. A. Wilson, E. M. Gough, J. O. Wilson, H. L. Dyer, and A. J. Goodbar.

City Auto and Rubber Co., April 28, 1910, under the laws of Tennessee. To engage in tire repairs. Location: Memphis, Tennessee.

Amherst Manufacturing Co., May 25, 1910, under the laws of Massachusetts; authorized capital, \$45,000. Incorporators: Edwin D. Marsh, Mason A. Dickinson, and David Barry, all of Amherst, Massachusetts. E. D. Marsh is president and M. A. Dickinson treasurer and clerk. The company are referred to as intending to engage in manufacturing.

Rio Tambo Rubber Co., May 31, 1910, under the laws of Illinois; capital, \$60,000. Incorporators: John Henry, Marie Hahn, and Alexander Smietanka. Location: Room 901, No. 120 Randolph street, Chicago.

Horseshoe Auto Tire Co., April 29, 1910, under the laws of New York; capital, \$25,000. Incorporators: Walter E. Holloway, No. 249 West 123d street, New York City, Henry D. Foster, Tompkinsville, Staten Island, and William Huber, No. 110 Worth street, New York City. This company has been formed to market in the eastern United States the special form of tire controlled by the Racine Auto Tire Co. (Racine, Wisconsin), recently incorporated. The special feature of this tire is a tread protected with renewable metal washers. The officers of the New York company are D. R. Van Vechten, president and general manager; H. D. Foster, vice-president; Walter E. Holloway, secretary and treasurer. The headquarters of the company for the present are in the Produce Exchange Annex, in the offices of Mr. Holloway, who is retiring from the crude rubber trade, to become connected with the new company.

L. Candee & Co. are among the larger manufacturing establishments of New Haven, Connecticut, with extensive sidewalk frontages who will be obliged shortly to pave new sidewalks to conform to the recent specifications adopted by the board of audermen.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS ON the New York Stock Exchange for five weeks, ending June 25:

COMMON STOCK, \$25,000,000.

[The treasury of a subsidiary company holds \$1,344,000.]

Last Dividend, April 30, 1900—1%.				
Week May 28	Sales	1,800 shares	High 42 $\frac{3}{8}$	Low 40 $\frac{1}{4}$
Week June 4	Sales	8,750 shares	High 41	Low 36
Week June 11	Sales	4,100 shares	High 39	Low 37
Week June 18	Sales	200 shares	High 38 $\frac{1}{2}$	Low 38 $\frac{1}{4}$
Week June 25	Sales	5,340 shares	High 41 $\frac{3}{4}$	Low 40

For the year—High, 52 $\frac{1}{2}$, Jan. 3; Low, 35, Feb. 7.

Last year—High, 57 $\frac{3}{8}$; Low, 27.

FIRST PREFERRED STOCK, \$39,824,400.

Last Dividend, April 30, 1910—2%.

Week May 28	Sales	540 shares	High 112 $\frac{1}{4}$	Low 112
Week June 4	Sales	2,750 shares	High 112	Low 107
Week June 11	Sales	2,910 shares	High 110 $\frac{1}{2}$	Low 107 $\frac{5}{8}$
Week June 18	Sales	2,000 shares	High 109 $\frac{1}{2}$	Low 108 $\frac{3}{4}$
Week June 25	Sales	500 shares	High 110 $\frac{1}{2}$	Low 110

For the year—High, 116 $\frac{1}{2}$, Jan. 19; Low, 107, June 3.

Last year—High, 123 $\frac{1}{2}$; Low, 98.

SECOND PREFERRED STOCK, \$9,965,000.

Last Dividend, April 30, 1910—1 $\frac{1}{2}$ %.

Week May 28	Sales	... shares	High —	Low —
Week June 4	Sales	300 shares	High 77	Low 76
Week June 11	Sales	300 shares	High 76	Low 75 $\frac{1}{4}$
Week June 18	Sales	... shares	High —	Low —
Week June 25	Sales	500 shares	High 77	Low 76

For the year—High, 84, Jan. 3; Low, 75 $\frac{1}{4}$, June 6.

Last year—High, 89 $\frac{1}{2}$; Low, 67 $\frac{1}{2}$.

SIX PER CENT. TRUST GOLD BONDS, \$19,500,000.

Week May 28	Sales	71 bonds	High 103	Low 102 $\frac{3}{8}$
Week June 4	Sales	18 bonds	High 102 $\frac{1}{2}$	Low 102 $\frac{3}{8}$
Week June 11	Sales	34 bonds	High 102 $\frac{1}{2}$	Low 102
Week June 18	Sales	34 bonds	High 102 $\frac{1}{2}$	Low 102 $\frac{1}{4}$
Week June 25	Sales	64 bonds	High 102 $\frac{1}{2}$	Low 102 $\frac{3}{8}$

For the year—High, 104 $\frac{1}{2}$, Jan. 15; Low, 102, June 11.

Last year—High, 106; Low, 102 $\frac{1}{4}$.

DETROIT'S \$1,500,000 SHOW.

THE Detroit Industrial Exposition, organized under the auspices of the Detroit Board of Commerce, opened on June 20 and is due to close on July 6. According to all reports the exposition is a most creditable representation of the industries and commerce of Detroit, and has been well supported by the public. The formal opening of the exposition was accompanied by the starting of all the machinery and the lighting of the building by means of an electric signal given by President Taft in Washington. The collection of exhibits in place, it is estimated, exceeds \$1,500,000 in value.

DERBY RUBBER CO.—INCREASED FACTORY CAPACITY.

THE Derby Rubber Co. are enlarging their rubber reclaiming plant at Shelton, Connecticut, having ordered mills sufficient to more than double their capacity, and they are installing an additional boiler plant. Among other improvements is the erection of a commodious office. The factory of late has been run 24 hours daily. Mr. J. W. Cary has been appointed factory manager and is now in charge. He has been several years in the employ of the Safety Insulated Wire and Cable Co. (Bayonne, New Jersey), and latterly as assistant superintendent.

BOSTON WOVEN HOSE CONVENTION.

FIFTEEN of the office managers and traveling representatives of the Boston Woven Hose and Rubber Co. assembled at Cambridge about the middle of June for the annual conference. The results obtained during the past year and conditions in every territory were fully considered, and plans made for the coming season.

STREAT'S NEW WATERPROOFING PATENT.

A PATENT relating to a waterproof fabric, issued to George Streat, of New York, is No. 959,178, dated May 24, 1910. The claims describe the yarns and their relation to each other, and

the filling of the interstices of the fabric with a waterproofing compound. Some 28 years ago Mr. Streat obtained his first patent for a waterproof fabric, which was the basis of considerable litigation with the mackintosh trade. [See THE INDIA RUBBER WORLD, February 1, 1909—page 167.]

TRADE NEWS NOTES.

THE International Rubber Co. (Barrington, Rhode Island), have begun operations in the old Annawamscutt mill, in West Barrington, in the manufacture of rubber sheeting, to which other products will be added.

Angie W. Pierce has resigned as superintendent of the druggists' sundries department of the National India Rubber Co. to become connected with the International Rubber Co. (Barrington, Rhode Island.) With the exception of one interval of a little more than a year Mr. Pierce has been continuously in the employ of the National company since September 6, 1865.

The directors of the Walpole Rubber Co. (Walpole, Massachusetts), have declared quarterly dividends of 1 $\frac{3}{4}$ per cent. on the preferred stock and 1 per cent. on the common stock, payable July 15 to holders of record on July 1.

The Ajax-Grieb Rubber Co. (Trenton, New Jersey), report that out of eight cars in the Atlanta-New York Good Roads Contest equipped with their tires, not one was obliged during the entire trip of 1,100 miles to put on a new casing.

The Bailey "Won't Slip" tread tire is now manufactured under license by nine American tire firms, the latest additions to the list being the Empire Tire Co. (Trenton, New Jersey) and the Consolidated Rubber Tire Co. (New York).

Mr. E. H. Sprague, president of the Omaha Rubber Co. Omaha (Nebraska), was lately elected president of the Omaha Automobile Club.

The factory of the Archer Rubber Co. (Milford, Massachusetts) has been very busy of late, and additional machinery is being installed with a view to increasing the capacity of the factory. They were reported lately to have in hand orders for proofing over 1,000,000 yards of cloth, in addition to the other lines of work that they are turning out.

PERSONAL MENTION.

A RECENT visitor to the United States was Senhor Waldemar Scholz, a leading exporter of rubber from Manãos, Brazil, and president of the Associação Commercial do Amazonas. Readers of THE INDIA RUBBER WORLD will remember that he was the president of the recent Congresso Commercial, Industrial e Agricola held at Manãos, and which was attended by the Editor of this journal.

Colonel Samuel Pomeroy Colt, president of the United States Rubber Co., has issued invitations for a celebration of the one hundredth anniversary of the erection of the De Wolf Homestead, to be held at the Homestead, Linden place, Bristol, Rhode Island, on the afternoon of Monday, July 4. Colonel Colt, by the way, has caused to be published at denial of report that he will be a candidate to fill the next vacancy in the United States senate from Rhode Island.

Mr. James Bishop Ford, first vice president and treasurer of the United States Rubber Co., though an exceptionally busy man in connection with the corporation named and his private affairs, is often called upon to serve on the grand jury of New York county. He was selected to serve on a special grand jury sworn in on January 3 of this year, the deliberations of which were prolonged until early in June, when the foreman of the jury, Mr. John D. Rockefeller, Jr., appeared in court, presented a report, and asked that the jury be discharged. This motion was denied by the court, however, and the jury were ordered to continue their work. No other case of jury duty so long continued is on record in the county.

Mr. G. Edwin Alden, of Boston, is one of the directors of a very swell country club that has just been started in Wellesley, Massachusetts.

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

IT is a question in the minds of many of the manufacturing and rubber supply men whether the real business conditions in San Francisco and on the Pacific coast are not considerably underrated. For the past three years the farmers all through this western territory have raised immense crops and have been getting good prices for their products. They have made money, and have, to a certain extent, improved their holdings materially. More than that, they have been living better than ever before, and just at present the farmers are buying more automobiles than the residents of the cities. But at the same time, although the farmers have for the past few years been making the money and spending some of it, the farmer is not a reckless spender. He puts away a good part of his money, and in that he is different from the wage earners of the cities, who, when they are making money spend it lavishly.

When money is spent in this fashion mechanical rubber goods' houses, as well as other merchants, begin to think that they are having splendid times, and so they most certainly are when there is speculation and booming going on in a big city. But the question is, whether the present conditions are not more healthy, and whether they will not bring results which are of more lasting benefit? The prosperity of the farmers comes to the city more slowly, but it is bound to come there, and if the farmers are well supplied with money, the city will enjoy the wave of prosperity for many years. This is the condition upon which the local merchants are placing their hopes. They are making some complaint, but right now they are forced to admit that they are doing a safe, substantial business, and their prospects for the future certainly were never on a more sound basis.

It is likely true that there are too many business houses here in proportion to the population. The census has shown a great increase in population in the country districts, but not so much in the cities as had generally been expected. Nearly all of the Pacific coast cities are built up to accommodate, by their numerous and large stores, a third again as many people as they have to wait upon. This is anticipation of the larger things that are to come, but in the meantime it looks as though some of the weaker ones must retire from the field. Eight or ten years ago the dealers did not have to pay so much rent, nor did they deem it necessary to keep up such elaborate stores, nor did they have the automobile for one of their competitors.

It is estimated that there will be 30,000 automobiles sold in California this year, and although it makes a big inroad upon some luxuries, it has some certain drawbacks to the rubber business, saving, of course, the tire departments. And when the merchants compare their present business with some that they enjoyed during the years of less expense and less competition, they are apt to say that trade is quiet now, although when they take the present business for what it is, all the live houses find that they are doing well.

* * *

THE many friends, both west and east, of Henry C. Norton, manager of the American Rubber Manufacturing Co., are very grateful to learn that he has passed the danger point of his very serious attack of typhoid fever, and is now fairly on the road to recovery.

* * *

A CHANGE has been effected with the Phoenix Rubber Co., of San Francisco. Mr. Austin Kanzee, one of the founders of this firm, has purchased the interest of J. D. Ralph and C. P. Overton. Mr. Fred W. Burgers, a prominent member of the Olympic Club and a well-known athlete, has become associated with Mr. Kanzee as a member of the Phoenix Rubber Co., and this company, as reorganized, intends to specialize on tires. To that end they will handle the "Republic" tires—pneumatic and solid. Mr. Kanzee will move his seat of operations to the district most suit-

able to the automobile trade, and will secure a new store in a fireproof building. The mechanical end of the business has been disposed of to the Crandley Rubber and Supply Co., who will handle the Republic Rubber Co.'s mechanical lines.

* * *

MR. W. J. GORHAM has been in Los Angeles supervising the fitting up of the new branch store which the Gorham Rubber Co. are preparing to move into in that city. They will be located in the new store by the first of August. In Portland, Oregon, the firm's branch is also moving into a new store, at No. 308 Oak street. The promised raise in the price of tires on July 1 has created such a demand that the shelves of this firm, as well as all the others, have been practically cleaned of tires, and if they had more stock they could do all kinds of business. Mr. Gorham will come to San Francisco for a week or two in a few days, and then will take his family back with him to Los Angeles to stay a few months.

* * *

MR. L. L. TORREY, formerly manager on this coast for the Pennsylvania Rubber Co., has returned from his eastern trip, where he secured the Coast agency for the Quaker City Rubber Co., of Philadelphia.

The Pennsylvania Rubber Co. have placed their tires with the Regal Automobile Co. of San Francisco, leaving the coast branch of the firm under the supervision of Mr. French, with the company's remaining lines to specialize on.

Mr. Joseph V. Selby has returned from his trip to the east, where he visited the headquarters of the Boston Woven Hose and Rubber Co.

Mr. C. C. Eichelberger, manager of the Pacific coast branch of the Firestone Tire and Rubber Co., states that his firm has closed a long lease for the premises on the northeast corner of Van Ness avenue and Fulton street. A three-story structure of the Mission type will be built for the firm.

ADDITIONAL TRADE NOTES.

TRENTON is arranging to have a "sane" celebration of the Fourth this year, to be in charge of a general committee headed by Mr. Welling G. Sichel, a former mayor of the city and an important member of the rubber trade.

The Mexican Crude Rubber Co., engaged in the guayule rubber business in Mexico and having headquarters at Detroit, Michigan, have announced an initial quarterly dividend of 3 per cent., for the quarter ending June 30, and payable July 15.

Mr. Hoskison Gates, of Riverbank court, Cambridge, Massachusetts, has accepted a position as salesman with the Picher Lead Co. Mr. Gates will cover the Eastern seaboard territory, with headquarters at the office of the company, No. 100 William street, New York.

The Le Fort Rubber Cement Co. have begun the manufacture of rubber cement for the shoe trade at Brockton, Massachusetts. The location is at Mason and Standish streets.

The Canadian Consolidated Rubber Co., Limited, announce that the regular quarterly dividend of 1¾ per cent. on preferred shares will be payable on July 2.

EASTHAMPTON RUBBER THREAD CO.

At the annual meeting of this company (Easthampton, Massachusetts, June 21) these officers were re-elected: William G. Bassett, president; L. S. Stowe, treasurer; F. W. Pitcher, clerk and general manager; W. L. Pitcher, superintendent.

AVIATION FOR RUBBER MEN.

A FEATURE of interest novel on the program of the outings of the Rubber Club of America has been arranged for the annual event of this Club, which, as announced on another page, is to take place this month. It is an exhibition of an aeroplane glider by an expert.

Review of the Crude Rubber Market.

THE Amazon output of rubber during the crop year, which ends with this date, was larger than in any preceding year, but the amount of the increase was not sufficient to have a marked influence on price conditions. It may be of interest to analyze the year's arrivals (including caucho) as compared with three preceding years, as follows:

	1906-07.	1907-08.	1908-09.	1909-10.
July-December tons	14,720	14,240	15,735	16,715
January	3,780	4,860	5,480	5,490
February	5,060	5,340	5,040	4,760
March	5,830	4,240	4,140	5,210
April	4,490	3,100	3,760	3,600
May	2,625	3,210	2,340	2,175
June	1,500	1,660	1,570	a 1,070

Total, crop, year 38,005 36,650 38,065 39,020
[a To and including June 29, 1910.]

It will be seen from the table that the only gain over last year was recorded in the first six months of the season, when the arrivals were practically 1,000 tons in excess of the corresponding arrivals one year before. Since January 1, in spite of the exceptional prices prevailing in the consuming market, the receipts have been smaller than in the second half of any recent season. The January-June arrivals for four years have been as follows (in tons):

	1907.	1908.	1909.	1910.
January-June	23,285	22,410	22,330	22,305

The record of the month has been full of fluctuations, but within a narrow range. At the London auction of June 14, the offerings of plantation sorts were larger than on any previous occasion—amounting to 255 tons—and the sale continued through three days. The bidding was slow at first, but became more active, and prices advanced somewhat as the sale progressed. The results of the sale had a firming effect on the market, as had also the Antwerp auction on June 23.

At the latter about 279 tons were offered whereof about 75 per cent. is understood to have been sold at an average advance of about 95 centimes per kilogram [=about 8½ cents per pound]. The offerings embraced an unusual quantity of plantation sorts.

NEW YORK QUOTATIONS.

Following are quotations at New York for Pará grades, one year ago, one month ago, and June 30—the current date:

PARÁ.	July 1, '09.	June 1, '10.	June 30, '10.
Islands, fine, new	140@141	225@226	225@226
Islands, fine, old	143@144	none here	227@228
Upriver, fine, new	147@148	240@241	238@239
Upriver, fine, old	149@150	242@243	240@241
Islands, coarse, new	68@ 69	95@ 96	104@105
Islands, coarse, old	71@ 72	none here	none here
Upriver, coarse, new	104@105	160@161	159@160
Upriver, coarse, old	none here	none here	160@161
Cameté	80@ 81	109@110	120@121
Caucho (Peruvian), ball	94@ 95	155@156	153@154
Caucho (Peruvian), slab	80@ 81	none here	none here
Ceylon, fine, sheet	155@156	229@230	218@219

AFRICAN.

Lopori, ball, prime	110@111	none here	none here
Lopori, strip, prime	none here	none here	197@198
Aruwimi	—@100	none here	none here
Upper Congo, ball, red	104@105	190@191	none here
Ikelemba	none here	none here	none here
Sierra Leone, 1st quality	106@107	165@168	167@168
Massai, red	106@107	165@168	167@168
Soudan niggers	101@102	none here	none here
Cameroon, ball	74@ 75	110@111	none here
Benguela	67@ 68	none here	none here
Madagascar, pinky	98@ 99	none here	none here
Accra flake	22@ 23	none here	none here

CENTRALS.

Esmeralda, sausage	90@ 91	133@134	131@132
Guayaquil, strip	77@ 78	106@107	none here

Nicaragua, scrap	87@ 88	128@129	126@127
Panama	67@ 68	none here	90@ 91
Mexican, scrap	89@ 90	128@129	126@127
Mexican, slab	65@ 66	none here	none here
Mangabeira, sheet	61@ 62	none here	none here
Guayule	34@ 35	95@100	94@ 95

EAST INDIAN.

Assam	95@ 96	none here	133@135
Pontianak	43¼@ —	8½@ 9	7½@ 8
Borneo	35@ 45	none here	none here

Late Pará cables quote:

	Per Kilo.	Upriver, fine	Per Kilo.
Islands, fine	9\$600	11\$000	
Islands, coarse	4\$000	6\$800	
Exchange		16¾d.	

Latest Manáos advices:

Upriver, fine	12\$500	Exchange	16 13/16d.
Upriver, coarse	7\$000		

Statistics of Para Rubber (Excluding Caucho).

	NEW YORK.		Total 1910.	Total 1909.	Total 1908.
	Fine and Medinm.	Coarse.			
Stocks, April 30 tons	127	16 =	143	543	357
Arrivals, May	212	120 =	332	1062	1506
Aggregating	339	136 =	475	1605	1863
Deliveries, May	248	121 =	369	1421	1493

Stocks, May 31	91	15 =	106	184	370
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	PARÁ.			ENGLAND.		
	1910.	1909.	1908.	1910.	1909.	1908.
Stocks, April 30 tons	260	935	1040	1100	720	2005
Arrivals, May	1340	1370	1955	1308	830	700
Aggregating	1600	2305	2995	2408	1550	2705
Deliveries, May	925	1750	2360	858	950	1110

Stocks, May 31	675	555	635	1550	600	1595
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World's visible supply, May 31 tons	2,871	2,367	3,469
Pará receipts, July 1 to May 31	30,570	29,040	28,420
Pará receipts of caucho, same dates	7,380	7,540	6,370
Afloat from Pará to United States, May 31	60	481	750
Afloat from Pará to Europe, May 31	480	542	424

African Rubbers.

NEW YORK STOCKS (IN TONS).

May 1, 1909	268	December 1, 1909	134
June 1	156	January 1, 1910	228
July 1	268	February 1	134
August 1	130	March 1	161
September 1	123	April 1	121
October 1	67	May 1	125
November 1	134	June 1	90

Liverpool.

WILLIAM WRIGHT & Co. report [June 1]:
Fine Pará.—With an absence of trade demand, both here and in the States, prices have declined fully 1s. 6d. [= 35.6 cents] per pound since our last; stocks in America are small, and although large here are well held. Until there is a resumption of trade demand, prices will be subject to speculative manipulation. The Manáos receivers have taken 000 to 1,000 tons off the market, and so far this has had no appreciable effect.

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for carload lots, per pound—show practically no change from last month:

Old rubber boots and shoes—domestic	10¾@10⅞
Old rubber boots and shoes—foreign	10⅞@10¾
Pneumatic bicycle tires	7¼@ 7⅜
Automobile tires	10½@10⅞
Solid rubber wagon and carriage tires	10¼@10¾
White trimmed rubber	10 @11
Heavy black rubber	6½@ 6¾
Air brake hose	6 @ 6¼
Garden hose	2⅞@ 3
Fire and large hose	3¾@ 3½
Matting	1¾@ 1⅞

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weight in Pounds.]

JUNE 3.—By the steamer *Cuthbert*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
New York Commercial Co.	40,200	16,400	23,500	6,000	86,100
Henderson & Korn	.....	.....	.....	41,400	41,400
Poel & Arnold	1,100	.....	32,300	.....	33,400
L. Johnson & Co.	300	.....	25,100	.....	25,400
G. Amsinck & Co.	4,400	900	3,400	6,900	15,500
A. T. Morse & Co.	.....	.....	16,500	.....	16,500
Edmund Reeks & Co.	.....	.....	300	10,900	11,200
William E. Peck & Co.	2,200	300	3,300	.....	5,800
Total	48,200	17,600	104,400	65,200	235,400

JUNE 14.—By the steamer *Dominic*, from Pará:

Poel & Arnold	32,100	.....	48,200	10,600	90,900
New York Commercial Co.	27,500	7,500	15,200	1,300	51,500
Henderson & Korn	24,700	700	2,600	.....	28,000
A. T. Morse & Co.	.....	.....	21,800	.....	21,800
L. Johnson & Co.	700	.....	13,900	.....	14,600
Hagemeyer & Brunn	4,500	900	1,800	1,800	9,000

Edmund Reeks & Co.	3,200	300	1,300	.....	4,800
William E. Peck & Co.	700	.....	600	.....	1,300
Total	93,400	9,400	105,400	13,700	221,900

JUNE 21.—By the steamer *Sao Paulo*, from Pará:

A. T. Morse & Co.	13,200	.....	4,600	.....	17,800
L. Johnson & Co.	.....	.....	25,100	.....	25,100
Poel & Arnold	.....	.....	25,100	.....	25,100
New York Commercial Co.	.....	.....	3,300	.....	3,300
William E. Peck & Co.	1,100	.....	700	.....	1,800
Total	14,300	.....	58,800	.....	73,100

JUNE 23.—By the steamer *Clement*, from Pará:

Poel & Arnold	16,400	5,700	62,700	.....	84,800
Hagemeyer & Brunn	21,100	2,500	9,900	.....	33,500
L. J. Johnson & Co.	.....	.....	17,300	.....	17,300
A. T. Morse & Co.	12,900	.....	2,600	1,300	16,800
New York Commercial Co.	.....	.....	5,900	4,300	10,200
Henderson & Korn	8,200	.....	.....	.....	8,200
William E. Peck & Co.	3,300	300	3,300	.....	6,900
Total	61,900	8,500	101,700	5,600	177,700

PARA RUBBER VIA EUROPE.

	POUNDS.
MAY 31.—By the <i>Arabic</i> =Liverpool:	
New York Commercial Co. (Fine)	35,000
JUNE 1.—By the <i>Coppaname</i> =Bolivar:	
General Export Co. (Fine)	3,500
JUNE 8.—By the <i>Coronia</i> =Liverpool:	
Raw Products Co. (Coarse)	10,000
Livesey & Co. (Coarse)	7,000
JUNE 10.—By the <i>Pennsylvania</i> =Hamburg:	
George A. Alden & Co. (Coarse)	10,000
JUNE 14.—By the <i>Surinam</i> =Bolivar:	
General Export Co. (Fine)	45,000
General Export Co. (Coarse)	11,000
American Trading Co. (Fine)	13,000
American Trading Co. (Coarse)	36,000
Iglesias Lobo & Co. (Fine)	15,000
Iglesias Lobo & Co. (Coarse)	9,000
G. Amsinck & Co. (Fine)	5,500
G. Amsinck & Co. (Coarse)	2,000
JUNE 17.—By the <i>Mauretania</i> =Liverpool:	
N. Y. Commercial Co. (Fine)	22,500
N. Y. Commercial Co. (Caucho)	22,500

Manhattan Rubber Co.	2,500
Neuss Hieslein & Co.	1,500
Eggers & Heinlein	1,500
JUNE 1.—By the <i>El Alba</i> =Galveston:	
Continental-Mexican Rubber Co.	*300,000
JUNE 2.—By the <i>Jose</i> =Honduras:	
Eggers & Heinlein	7,000
A. Rosenthal & Son	5,000
Manhattan Rubber Co.	2,000
JUNE 2.—By the <i>El Paso</i> =Galveston:	
C. T. Wilson & Co.	*22,500
JUNE 4.—By the <i>Morro Castle</i> =Frontera:	
Harburger & Slack	7,500
E. N. Tibbals & Co.	5,500
New York Commercial Co.	3,500
H. Marquardt & Co.	1,500
General Export Co.	1,500
J. W. Wilson & Co.	1,500
Maldonado & Co.	1,000
E. Steiger & Co.	1,000
JUNE 6.—By the <i>Voltaire</i> =Bahia:	
Poel & Arnold	65,000
A. Hirsch & Co.	27,000
J. H. Rosbach & Bros.	13,500
A. D. Hatch & Co.	5,500
JUNE 6.—By the <i>Matanzas</i> =Tampico:	
Continental-Mexican Rubber Co.	*160,000
Ed. Maurer	*45,000
Poel & Arnold	*35,000
New York Commercial Co.	*33,000
JUNE 6.—By the <i>Colon</i> =Colon:	
G. Amsinck & Co.	9,500
Isaac Brandon & Bros.	8,000
Piza, Nephews & Co.	3,500
National Sewing Machine Co.	1,700
Pablo Calvet & Co.	1,700
R. Fabien & Co.	1,500
New York Commercial Co.	1,500
L. Johnson & Co.	1,000
Demarest Bros. & Co.	1,000
Mecke & Co.	1,000
JUNE 6.—By the <i>Crown Prince</i> =Bahia:	
J. H. Rosbach & Bros.	80,000
Poel & Arnold	34,000
New York Commercial Co.	22,000
JUNE 7.—By the <i>Vaderland</i> =Antwerp:	
Poel & Arnold	*11,000
JUNE 7.—By the <i>Prins Eitel Friedrich</i> =Colombia:	
J. H. Rosbach & Bros.	7,500
Maitland, Coppell & Co.	3,500
Caballero & Blanco	3,000
JUNE 7.—By the <i>El Dio</i> =Galveston:	
Continental-Mexican Rubber Co.	*75,000
JUNE 8.—By the <i>Trent</i> =Colombia:	
A. M. Capen's Sons	9,000
Suzarte & Whitney	1,500
G. Amsinck & Co.	1,500
JUNE 9.—By the <i>Momus</i> =New Orleans:	
A. T. Morse & Co.	2,500
Manhattan Rubber Co.	2,000
Robinson & Co.	1,000
New York Commercial Co.	1,000
JUNE 10.—By the <i>Pennsylvania</i> =Hamburg:	
Rubber Trading Co.	9,000
JUNE 10.—By the <i>El Cid</i> =Galveston:	
C. T. Wilson & Co.	*27,000

JUNE 13.—By the <i>Celtic</i> =Liverpool:	
A. Hirsch & Co.	13,500
JUNE 13.—By the <i>Merida</i> =Mexico:	
Harburger & Stack	15,000
E. N. Tibbals	7,000
General Export Co.	3,500
H. Marquardt & Co.	3,500
JUNE 13.—By the <i>Laplaid</i> =Antwerp:	
Poel & Arnold	*10,000
JUNE 13.—By the <i>Alleghany</i> =Colombia:	
Stanley Jordan & Co.	2,500
J. H. Rosbach & Bros.	1,000
Kunhardt & Co.	1,000
Delima, Cortissoz & Co.	1,000
JUNE 13.—By the <i>Seguranca</i> =Tampico:	
New York Commercial Co.	*135,000
Ed. Maurer	*125,000
Poel & Arnold	*15,500
General Export Co.	*2,500
For Europe	*50,000
JUNE 4.—By the <i>Prinz Joachim</i> =Colon:	
G. Amsinck & Co.	3,500
Graham, Hinkley & Co.	1,500
J. A. Pauli & Co.	1,500
JUNE 13.—By the <i>Advance</i> =Colon:	
G. Amsinck & Co.	6,500
Isaac Brandon & Bros.	3,500
L. Johnson & Co.	2,000
American Trading Co.	1,000
Eggers & Heinlein	1,000
Demarest Bros. & Co.	1,000
New York Commercial Co.	1,000
Bartling & De Leon	1,000
JUNE 16.—By the <i>Comus</i> =New Orleans:	
A. T. Morse & Co.	6,000
Manhattan Rubber Co.	5,000
Robinson & Co.	1,500
New York Commercial Co.	1,500
Eggers & Heinlein	2,000
JUNE 17.—By the <i>El Norte</i> =Galveston:	
Continental-Mexican Rubber Co.	*155,000
JUNE 17.—By the <i>American</i> =Mexico:	
Geo. A. Alden & Co.	3,500
JUNE 18.—By the <i>Byron</i> =Bahia:	
A. Hirsch & Co.	65,000
J. H. Rosbach & Bros.	5,600
Poel & Arnold	59,000
A. D. Hatch & Co.	15,000
JUNE 18.—By the <i>Esperanza</i> =Vera Cruz:	
H. Marquardt & Co.	3,000
J. A. Kendall Co.	1,500
American Trading Co.	1,500
A. Klipstein & Co.	1,000
JUNE 18.—By the <i>Panama</i> =Colon:	
Piza, Nephews & Co.	5,000
A. Rosenthal & Sons	2,500
Henry Mann & Co.	1,000
JUNE 20.—By the <i>Prinz Sigismund</i> =Colombia:	
Cortez Commercial Co.	3,500
Caballero & Blanco	1,500
Maitland, Coppell & Co.	1,500
Isaac Brandon & Bros.	1,000
JUNE 21.—By the <i>Bayamo</i> =Tampico:	
Continental-Mexican Rubber Co.	*300,000
Ed. Maurer	*70,000
New York Commercial Co.	67,000
Poel & Arnold	*40,000
For Europe	*25,000

OTHER NEW YORK ARRIVALS.

CENTRALS.

[*This sign, in connection with imports of Centrals, denotes Guayule rubber.]

	POUNDS.
MAY 27.—By the <i>Pres. Lincoln</i> =Hamburg:	
George A. Alden & Co.	7,000
Poel & Arnold	3,000
MAY 28.—By the <i>Mexico</i> =Frontera:	
Harburger & Stack	17,500
General Export Co.	4,500
E. Steiger & Co.	4,000
H. Marquardt & Co.	3,500
W. L. Wadleigh	3,500
Streebe & Ultze	3,500
Graham, Hinkley & Co.	2,500
J. W. Wilson & Co.	2,000
American Trading Co.	1,500
Isaac Kubic Co.	1,000
MAY 31.—By the <i>Monterey</i> =Tampico:	
Continental-Mexican Rubber Co.	*150,000
Ed. Maurer	*90,000
N. Y. Commercial Rubber Co.	*67,000
MAY 31.—By the <i>Atai</i> =Colombia:	
Maitland, Coppell & Co.	2,500
Suzarte & Whitney	2,500
Kunhardt & Co.	2,500
MAY 31.—By the <i>Finland</i> =Antwerp:	
Poel & Arnold	*11,000
MAY 31.—By the <i>Allianca</i> =Colon:	
G. Amsinck & Co.	16,000
Pablo Calvet & Co.	5,500
Mecke & Co.	3,500
A. Santos & Co.	3,000
A. T. Morse & Co.	2,500
Isaac Brandon & Bros.	2,000
MAY 31.—By the <i>El Norte</i> =Galveston:	
C. T. Wilson & Co.	*15,000
MAY 31.—By the <i>Comus</i> =New Orleans:	
A. T. Morse & Co.	5,000
Robinson & Co.	4,000
A. N. Rotholz	3,500

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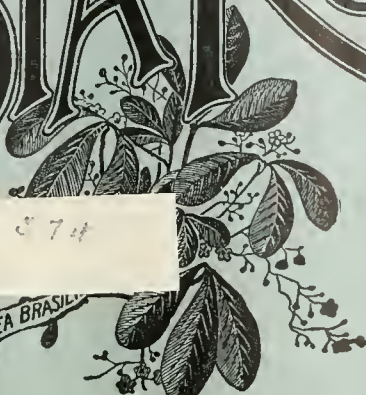
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ASTONISHING RUBBER PROFITS.

THE results attained by the older and better established rubber plantations continue to exceed all expectations. The 250 per cent. declared by the Vallambrosa company for their last business year again calls attention to this most successful company. It may be of interest here to recall briefly the history of the Vallambrosa, which has just completed its sixth year.

Originally the owners of three neighboring estates in the Malay peninsula got together and formed a company. Some rubber had been planted in 1898 and the succeeding years, and they have been planting ever since. The incorporators issued shares amounting to £45,000 [= \$218,992.50] which they divided among themselves, while they allowed others to subscribe for £5,600 [= \$27,252.40] in shares, making a total issue of £50,600 [= \$246,244.90], which is the amount of capital stock now outstanding.

The tapping of rubber was begun in the second year, with the result that a profit was realized, though no dividend was declared. During the succeeding four years there has been a constant increase in the rate of yield, both from a larger number of tappable trees each year, and a more liberal average yield per tree. There has been also a rapidly increasing rate of dividends declared.

During the last four completed calendar years the rub-

ber collected on the Vallambrosa estates aggregated 1,025,867 pounds, and the dividends declared £222,640 [= \$1,083,477.56]. In other words, the shareholders thus far have received in dividends 4 4/10 times the amount of their investment. But what is more striking than any given rate of dividend, dividends amounting to slightly more than \$1, gold, have been paid out for every pound of rubber gathered. For the last year alone, when the rubber crop was 370,902 pounds, the dividend amounted to £126,500 [= \$615,612.25]. This works out at \$1.66 profit for the shareholders for each pound of rubber produced during the year.

It is respectfully submitted that no other cultural interest in the history of the world, under normal conditions and in open competition, has ever shown such profits as have been derived from rubber planting. Nor is it conceivable, so long as these trees continue to yield rubber, that any condition will ever arise in the trade that can prevent such companies as the Vallambrosa from being immensely profitable.

As for some newer planting companies—but that is another story.

WHO INVENTED THE "PNEUMATIC?"

A PROPOSAL to erect in Edinburgh a memorial to the inventor of the pneumatic tire has given rise to some dispute as to who was the real inventor. This is not the first time that a dispute has arisen as to the real author of an important invention or discovery. The fact is that a really distinct invention is not, in its earlier stages at least, a simple matter, however simple and commonplace it may appear to the general mind after its development and widespread use.

Such being the condition of inventions in general, it may be asserted further that a really new article of utility is seldom developed by a single mind, but is the result of coördinated effort on the part of the inventor himself, of engineers and factory superintendents who assist in developing it, of his patent attorneys, the patent office examiners, of the manufacturers who ultimately undertake its production, and of an indefinite number of users of the article. Every man of a practical turn of mind who takes up the use of a newly invented article is liable to make some suggestion bearing upon its possible improvement, or its better adaptation to its intended uses, to the end that as long as the article remains in demand, each year's output of it may possibly be better than the preceding types. Many of the improvements so suggested are likely to be covered by patents—often in the name of the original inventor—but others, relating merely to details and not to new principles of invention, are utilized as part and parcel of the original patent.

To take the pneumatic tire, Robert William Thomson, while the first patentee of such an article, cannot be claimed to have produced a practical article of commerce. His aerial wheel was regarded simply as an interesting

novelty, for the world was not ready yet for pneumatic tires, and Thomson and his patent were soon forgotten. Dunlop's pneumatic tire, brought out at a time when the public mind was more receptive, led to more practical results, but his invention disclosed no principle not anticipated by Thomson, and hence patent protection could not be claimed for it. The patents under which the really successful pneumatic tires have been made did not relate primarily to the principle of an air cushioned wheel, but to details of attaching these cushions to the wheel rim, and holding them in place.

Credit is due both to Thomson and to Dunlop for their study and application to the subject of rendering vehicular traffic more comfortable, but there is not being made on earth to-day any tire, the shape or means of attachment of which can be traced to any suggestion made by either of the gentlemen named. The Dunlop company early in its career dropped the Dunlop invention in favor of tires distinctly different, and to-day the tires made by that important concern are not even the same as were covered by various patents which the company acquired as development was made in the tire art.

The standard automobile tire to-day was protected in England by the patent granted to Bartlett. The tires made under this patent were developed year by year until they became the modern "clincher" tire, and it is informing to consider that the tire section of the present time has been a gradual outgrowth from the forms illustrated on this page as copied from Bartlett's specification.



BARTLETT'S CLINCHER TIRE—EARLY FORMS.

[From these the modern automobile tire has been developed.]

The purpose of this article is not to claim preëminence for any particular inventor in respect of the pneumatic tire, but to point out that the standard type of tire to-day is not the work of any one man, but of countless workers and students in the tire field.

THE AMERICAN AND HIS DOLLAR.

IF what we are about to quote were not in an esteemed contemporary (English), we should pay no attention to it. But as original matter, in a rubber paper, it constrains us:

Those who know America as I do cannot deny that he [the American] has but one thought, how to make money. The average man in America talks about money, thinks about money, to the exclusion of every topic.

It is with bowed head and shame mantled cheeks that we acknowledge that this is the exact truth. The only papers published in the United States are financial journals; none else would be read, and we have the pitiful sight of a country that could afford to spend millions on

sketches of travel, of adventure, of modern fiction, with absolutely no literature. A country with no great magazines, no notable réviews, no scholarly publications. Commercial colleges are the only schools; no universities, no seminaries, no schools of the liberal arts.

If the Americans did not center all of their thought on making money, they might learn how to spend it, and become possessed of palatial homes, beautiful grounds, art museums, natural history rooms, botanical gardens, and free public parks for their poor.

If they did not so love the Almighty Dollar they might be possessed of yachts, of half a million automobiles, of aeroplanes, of golf and other sports.

If they didn't love the filthy lucre as they do—and those who really love it do not part with it easily—they might travel every summer in Europe and see how liberal the foreigner is in his spending. They might live at the best hotels there and perhaps bring back a foreign heiress or two to increase their own carefully hoarded millions.

Were it not for this worship the American woman, to-day dressed in calico, unfashionable and dowdy, might be chic, graceful and lovely, might have the silks and satins, the pearls and diamonds, in fact, might sometimes be as well dressed as woman in her station elsewhere.

How sad it is! America, free America, rich America, dollar-loving America, with no hospitals, no missions, no philanthropic institutions.

The stingy prince of American financiers ought long ago to have put some of his millions into the acquisition of rare pictures, costly first editions, and other objects of art. He could well afford to build a marble palace somewhere about Thirty-fourth street, New York, and form a collection of treasures such as exist nowhere else in the world, unless it be the Vatican. But does he do it? How can he when he thinks, talks and lives only in money.

It's time that America awoke and took lessons from her kinsfolk across the water who care little for money. As an object lesson they ought to have been present in Mincing lane during the rubber craze, where a mob of average English people, men and women, fought for chances to invest in rubber plantation stocks. They didn't love money. Their excitement was not due to greed. It was pure philanthropy, combined with something like football exercise, with never a thought of dividends.

NONSENSE ABOUT RUBBER.

Does not the big rubber combine wish to discuss the charges of Senator Bristow of the big profits accruing since the rubber tariff was advanced? Does it figure that the plums are all due to the boom in rubber abroad and the immense consumption in tires?—Boston Record, July 13.

DO not the combined barbers of Allahabad desire to discuss the length of Methuselah's whiskers?

Do not the heirs and assigns of the Queen of Sheba desire to discuss the signet ring of Solomon?

Do not the policemen on the Brooklyn bridge desire to discuss the views of a canary bird regarding political economy?

We trow not.

But all the theses above outlined are of more importance, and more practical, than the editorials from several hundred daily newspapers that have reached the office of this journal, based upon a recent public address by a United States senator on the subject of rubber and the tariff. This subject is treated more fully on another page of this issue.

We have not read in any newspaper thus far that the recent prize fight at Reno was won by Joan of Arc, or that Pope Gregory IV has been elected queen of New York city, or that the Malays have monopolized all the honey bees at the North pole.

Yet such statements would be as rational as stacks of newspaper clippings—and clippings from daily journals of the highest standing—which THE INDIA RUBBER WORLD files, from motives of curiosity, under the heading "Nonsense About the Rubber Trust."

Why do newspapers otherwise apparently sane persistently misrepresent industrial conditions all the while? What could be more imbecile than to assert that the high prices of crude rubber are fixed by the largest purchaser of this material, as is done so frequently? Or that the guayule rubber business depends upon the American tariff, as Senator Bristow thinks, and so many great newspapers assume to be true, without taking the trouble to learn the truth?

Would the editor of one of these papers accept any excuse from a subordinate who misstated by a fraction the standing of an individual baseball player in one of the "leagues?"

"SIC UTERE TUO," ETC.

So far the United States has made no attempt to regulate the Rubber Trust.—The World (New York), July 26, page 9.

SUCH failure on the part of Uncle Sam may have been due to his inability to discover the said "trust." Did not the United States Industrial Commission, acting by direction of the Congress, in 1901, in its fine-tooth-comb investigation of "Trusts and Industrial Combinations—General and Miscellaneous Problems," try its utmost to find the "rubber trust?" So far as is apparent from the voluminous reports of the Commission, it succeeded only in finding Mr. Flint; and of course no mere government would attempt to regulate any man so versatile in business, especially in view of the difficulty of discovering whether he was the *rubber* trust or the *bobbin* trust or the *chicle* trust or the *starch*, etc.

But what is more to the point. Didn't *The World* itself awake in a printers' devil of a fight one night in April, 1893, after seeing "The Rubber Trust"—we believe it was "a monster of at least two heads, clearly defined and most forbidding of aspect"—and declare that "now is the time to smash it?" Whatever its editor may have done thereafter, outsiders considered that *The World* was attempting to regulate the rubber trust. But from that time until now this ablest American newspaper has not so defined the "rubber trust" as to make it visible to a man without smoked glasses. So why call upon the United States to regulate it?

Who doubts that the investigation of trusts in New York state, in 1886, fathered by the able Senator Lexow, was mothered by the virtuous *World*? Much of that long, drawn-out investigation was devoted to trying to find the "rubber trust," and the Senator perhaps might have discovered the monster, but for the fact that the chief witness on the stand refused for so many days to answer any question in a way to corroborate *The World's* assertions.

And now *The World* is at it again.

But what Senator Lexow said in his report to the legislature was *Sic utere tuo ut alienum non laedas*. Could "the United States" do better now?

SYNTHETIC RUBBER RESEARCH.

DESPITE the failure thus far to produce synthetic rubber—at least commercially—a new undertaking in this field is reported from England. The Research Syndicate, Limited, registered May 11, 1910, with a capital stated of £12,500, has for its purpose the provision of funds for carrying out research work connected with the manufacture of wholly or partially synthetic or artificial caoutchouc, and similar substances, and also for the production of such substances from natural raw materials. It is of interest to quote as the basis for the work of the new syndicate the following paragraph from the prospectus:

"Applications have been made for letters patent with reference to certain processes, which it is hoped will lead up to the synthetic manufacture of the above substances (caoutchouc, gutta-percha, etc.), but it is in no way guaranteed that such results will follow or that the research work which is to be carried on at the company's expense will result in the discovery of processes for manufacturing by artificial means the above substances or that if such processes are discovered they will be of any commercial value."

These applications for letters patent are fifteen in number, ranging in date from December 9, 1909, to the present, and being in the names of Francis Edward Matthews, PH.D., F. I. C., Edward Halford Strange, M.S.C., and William Henry Perkin, PH.D., F. R. S. Arrangement is made for the use of works at Rainham, Essex, owned by the Industrial Chemical Co., Limited.

THE GERMAN "SYNTHETIC RUBBER."

EDWARD M'BEAN, of Glasgow, an important manufacturer of waterproof fabrics who recently was in the United States on business, in a recent interview in *Oil, Drug and Point Reporter* (New York), said that he did not think the production of artificial rubber at all likely. He said:

"You know that that big German company which produces such quantities of valuable drugs and dyes from coal tar [Farbenfabriken of Elberfeld Co.; see THE INDIA RUBBER WORLD, July 1, 1910—page 356], has produced a substance in its laboratories known as synthetic rubber. It is a sort of built-up material, and they say it has the qualities of the genuine, but I do not think it is more than a curiosity.

"Manufactured with such difficulty, it cannot be of commercial use. These rubbers have a certain amount of elasticity, but they have no cohesion. You can tell them at once; they have a dead feeling, and will stretch, but will not spring back like a piece of the pure material. A lot of this shoddy stuff is made from second hand rubber, ground up. Linseed oil is a very popular adulterant. It is a great absorber of moisture. For instance, if you spread some of it on a piece of glass where it cannot be soaked up you will find upon its drying that the residue has increased 6 per cent. in weight simply from the water it has absorbed from the oil. Rubber with oil in it is poor, spongy stuff."

THE NEW CONGO REGIME.

A CONFLICT between Belgium and the Rubber Concessionaire companies threatens to break out on the Congo. A sort of free trade will be introduced into Kasai district, beginning July 1. This is an outgrowth of the reform propositions which have been recently adopted. The Kasai company, which represents the rubber business in this district, made the following propositions to the Belgian government: The state to turn over to the company all the shares of the company which it retains in its possession (50 per cent.), whereupon the company is to pay over to the state the half of its capital, which amounts to 8,000,000 [=about 9,500,000 francs].

Pará, Manáos and the Amazon.

By The Editor of "The India Rubber World."

FIFTH LETTER.

Arrival at Manáos, the Upriver Rubber Capital.—Touring the City in a Motor Car.—Its Fine Modern Appearance.—The People and Their Characteristics.—The Rich Products of Amazonia, Especially Rubber.—Notes on the Commercial Association and the Rubber Congress.—The Transportation System.

LEAVING the muddy Amazon, we were soon forging through the black waters of the Rio Negro. On the north were high, red, clay banks, rather scantily clothed with vegetation—that is, as compared with the jungle lands below. Native houses began to multiply and soon we saw the city of Manáos in the distance. A little later we anchored out in the stream, as several ocean steamers which were discharging at the floating docks took up all of the room. Hardly was the anchor down before friends were aboard, who attended to all of the customs formalities, and we walked by the Federal and State customs' men just as if they were non-existent, and, embarking upon a launch, were soon ashore.

The great Rubber Congress was in session, or soon to be, and the Commercial Association paid me the compliment of making me its guest, with the privilege of living at a hotel, or at the house of the local representative of "Casa Alden." I chose the latter, for had I not met him in Boston the year before, and was he not an American with an American wife and a Yankee baby born in Brazil?

There was much excitement in the rubber market the day of my arrival. The first of the series of spectacular jumps that carried the precious commodity up to \$3 per pound had occurred, and then the river had interrupted the cable. Fortunately there was little rubber in to quarrel over, but everybody was on the *qui vive* just the same.

We walked from the substantial quays that form the boat landing, past the imposing custom house, to one of the rubber warehouses, and sat there and chatted and smoked while we cooled off, for the day happened to be hot. Then we visited several others in the same line and learned the latest news, which was but a repetition of the story already told. The rubber houses in Manáos were almost exact duplicates of those in Pará—a huge warehouse on the ground floor for receiving, examining, and boxing; offices on the floor above, always with a large staff of assistants and clerks. As in Pará, rubber was everywhere in evidence. Open wagons loaded with it passed

continually. One enterprising house had a motor truck that crashed along the pavement with just the same awkward energy it would display in New York or London.

Later we took a carriage and drove to the residence where I was to be quartered; a fine modern house in the residential part of the city, where I received royal entertainment and the home cooking for which my soul had been yearning.

We might have taken the "bond" instead of a carriage, but the electricity was weak, and the cars were only crawling as they made their rounds. In answer to the reader's unspoken question, I do not know why the electric street car in Manáos is called a bond, nor does any one with whom I am acquainted. The road was built by Americans—in fact, financed by them—and later sold to the government and for awhile the service was good. Then one noon the engineer and his helpers had their *siesta* interrupted by the blowing out of a cylinder head on the great engine. Unfortunately no one was hurt, the aforementioned public servants escaping. At the time of my arrival new equipment was going in, competent engineers had been engaged, and better service was in sight.

A FIRST VIEW OF MANAOS.

After dinner that evening a Renault with a bright yellow body and the muffler wide open drew up in front of the door. It was garrisoned by an expert driver and a friendly young French Brazilian-American interpreter, which car and appendages I learned had been placed at my disposal during my visit. One of the first uses to which I put it was to tour the town.

The city itself is a counterpart of what a young, rich, North American city would be that had grown up overnight. Not architecturally, of course, for the tropical world evolves a style of its own, and gorgeous colorings come without bidding and are most fitting. The public buildings were beautiful; particularly the \$2,000,000 theater situated on an eminence in the middle of the city, dominating all the rest. Palaces, parks, libraries, hospitals, were very fine. Sandwiched in between them were waste spaces, old-fashioned tiled residences, and much that showed the sudden growth of the city, but all this was being rapidly changed. When one considers that this city is a thousand miles from the seacoast, in the heart of a vast tropical jungle, with wild



PANORAMA



VIEW ON RIO NEGRO AT MANAOS.

Indians within a hundred miles of it, its presence seems incredible. In a way, it is as modern as New York or Chicago. The latest Parisian fashions are there, and almost anything that civilized man desires is obtainable. Prices are high, to be sure, because both luxuries and necessities are imported and subject to a duty of 100 per cent. But when something besides rubber is produced by the magnificently fertile lands that surround it, Manáos will be one of the great and beautiful cities of the world and living as reasonable as anywhere.

Both the State and the Federal revenues naturally come very largely from rubber. These taxes are assessed on the average price at which rubber is sold for a certain period. On the rubber that comes down the Amazon the State taxes are: Manáos (Amazonas), 19 per cent.; Pará, 22 per cent.; Matto Grosso, 20 per cent.; Acre territory, 20 per cent.; Bolivian Federal tax, 14 per cent.; Iquitos (Peruvian) Federal tax, 14 per cent. The State tax in Ceará is 22 per cent. There are minor taxes on rubber also—for instance, local improvement taxes of 1 to 2 per cent.

The city has naturally elements of the picturesque. It is built on a group of hills, and while this has involved much cutting and filling, and many retaining walls, it adds both to its sightliness and healthfulness. Some in Manáos have the ambition, which may not be as wild as it seems at first, to negotiate a short cut to the United States by way of British Guiana. All they would have to do would be to go up the Rio Branco, cross to the Essequibo, and come out at Georgetown.

Dominating vast fertile plains, drained by the Rio Negro, the



FLOATING DOCK AT MANAOS.

Solimões, and the Madeira, with their mighty tributaries, the wealth that is sure to flow into this center is incalculable. Today the main exporting business, rubber and Brazil nuts, is handled by Portuguese, Brazilian, German, English, and American firms, less than 20 in number.

The people of the city had an exceedingly alert carriage—surprisingly so for those who dwelt on the equator. Laborers, whether busy at the docks or in the warehouses, were really working. Perhaps they ought to, for they received somewhere from 15 to 20 milreis* a day.

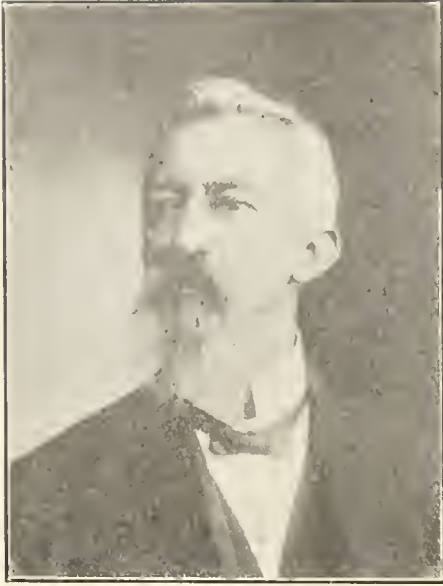
THE RIVER FRONT AND THE DOCKS.

I do not think I spoke of the magnificent spread of the river in front of the city. It forms a great pool, four or five miles wide and deep enough at low water to accommodate ocean steamers. During the rainy season the river rises from 30 to 40 feet, and this was why the company that had the concession to build docks passed so many sleepless nights. They have finally anchored huge floating docks a little way off shore, and when the river rises pay out the anchored cables so that the dock rises with it. Goods are sent ashore from these docks on long aerial cables. I was told that it cost 38 cents to transfer each case of rubber from the pier to the dock. Not a long journey, but expensive when one considers that that is just about what

*The gold milreis, the standard of the Brazilian monetary system, is equal to 54.6 cents in United States money. Business, however, is conducted mainly on a paper money basis, with the price of the milreis varying with the rate of London exchange, which averages a little over 15 pence, or 30 to 31 cents.



OF MANAOS.



COLONEL ANTONIO CLEMENTE BITENCOURT.
[Governor of Amazonas.]



SENHOR WALDEMAR SCHOLZ.
[President Manáos Commercial Association.]

it would cost to ship the same case from New York to Australia.

Nostalgia is a peculiar disease, and calls for strange remedies. I got rid of my mild attack by visiting the rubber offices and gazing upon the likenesses of rubber men in the States. As a finish I paid 80 cents for one pound of American apples and was cured.

I was pretty busy, for the Rubber Congress was on, and the meetings were exceedingly interesting. As the detailed story of that great convention has already been told, I am going to confine myself to the more personal narrative. For example, the visit of four of us to the Bosque—the very extensive experiment station on the outskirts of the city. We went in carriages as far as we could, then up to the broad plateau where the planting was done. There were some thousands of *Hevea* trees planted in partial shade in paths cut through the jungle. They were doing nicely, and although it will take them a trifle longer to mature,

I believe the planting will be most successful. We also examined a large planting of bananas. As this fruit brings 8 milreis a bunch in the field, this experiment also should be most successful.

Then we explored. Walking through wonderfully beautiful forest paths; down by the old waterworks with its big cement tanks now abandoned, into the great forest park that one of the former Governors had projected. Other and more needed improvements had absorbed the city's money, and the jungle was rapidly and effectually recovering its own. Outside of the park we hunted for wild *Heveas*, but found only the *Guyanaensis*. There was also a vine which we could not identify, full of a very sticky rubbery latex.

In Manáos the laborers are practically of the same type as in Pará, except that the Indian mixture seems a little more evident. One is nearer the great wild tribes of the upper rivers, so that the blowgun with its poisoned arrows, necklaces of human



W. STUART GORDON.
[With Gordon & Co., Manáos.]



W. H. HILDRETH.
[With A. H. Alden & Co., Limited]



BERTINO MIRANDA.
[Secretary Manáos Commercial Association.]

teeth, and feather headdresses are often brought in. Occasionally, too, specimens of the real wild Indian may be seen. A young Englishman whom I met had spent some months up in the Putamayo district and brought down with him a nine-year-old boy as body servant who was a veritable little savage. Friendly and smiling he was when all went right, a murderous little tiger if things went wrong. He would accept reproof from his master, but from no one else. One day a man servant struck him and his master returned two hours later to find the boy sitting in the courtyard, a loaded Winchester across his knees, and all the servants hidden in a hastily barricaded room from which they dared not emerge. Had the offender shown himself the boy would certainly have shot him.

A COMMERCIAL LEADER.

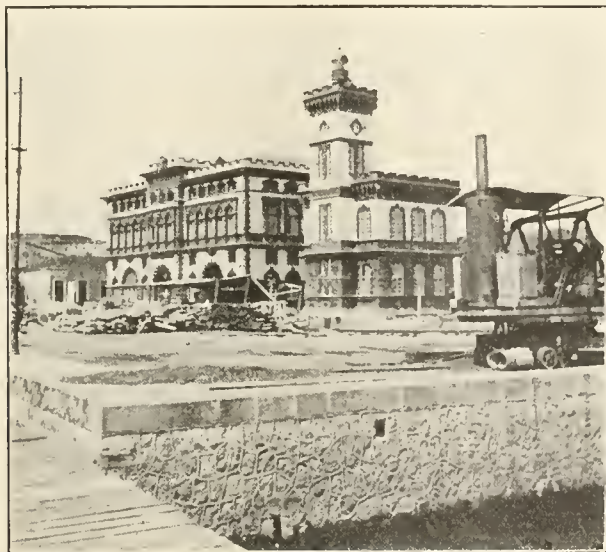
The president of the Commercial Association, although he bore a German name, was not phlegmatic. Indeed, he had abjured Teutonia and was a Brazilian of the Brazilians. Athlete, sportsman, *bon vivant*, business man, he defied climate and care, was always on the move and kept others moving also. It was he who chartered the *Suprema*, a typical little river steamer, and took a few of us up to the Rio Negro for a day's jaunt.

that the *Hevea Brasiliensis* would not grow up the Negro. Yet here it was. This planting, although 20 feet above the water as it then stood, was subject to inundations and apparently suffered no harm, while further up the slope were trees equally large and healthy that were above high water mark. The Botanist of our party soon discovered a borer beetle that was industriously puncturing many of the trees, and we all fell to and helped him to coax larvæ out of their holes for later entomological examination. If I know anything about that Botanist, and I think I do, he will make that particular breed of beetle sorry that it ever tackled rubber trees.

Later we visited the comfortable ranch houses, saw them make *cassava*, admired the beautiful flower gardens, filled our pockets with *Hevea* nuts and turned toward our boat and Manáos. It was on this excursion that we tried "cupussu," a drink made from a creamy, pulpy fruit that is deliciously refreshing. The proper way to imbibe it is to slowly sip a goblet of it, then swallow half a pint of gin to head off the cramps, then a cup of black coffee to head off the gin. One of our party who despised gin and did not care for coffee was the busiest man in all Brazil for 24 hours after finishing his goblet.

THE PRODUCTS OF AMAZONIA.

Perhaps the most interesting of the sights in Manáos was the double exhibition of Amazonian products. I call it double because there was first a rubber exhibition arranged by the Commercial Association for those attending the Congress, and in



CUSTOM HOUSE AT MANAOS.

The "black river" for miles and miles up into the interior is nothing less than a chain of great lakes, and my host unfolded a weird scheme for navigating it by means of boat aeroplanes, which, like gigantic flying fish, should skip from one lake to another. He made it appear quite feasible, and if such a thing is ever done he will be just the one to furnish the courage and dash to put it through.

Our first pleasurable experience on this voyage was breakfast served on an ingenious table, which, when not in use, folded its legs, rose to the ceiling and hung high above our heads. The meal was excellent—a freshly caught river fish, a wonderful salad, fruit, and coffee.

Out of sight and sound of the city the solitude was oppressive. It may have been that the jungle covered shores had lost their charm, or—and this is more likely—it may have been the total absence of bird and animal life for which the Rio Negro is noted.

Soon we entered an estuary and after an hour or more of steady steaming sighted a clearing that indicated our near approach to "Paradizo" ranch. Hardly had we got ashore before we saw rubber trees, and many of them. Much to my surprise they were planted in regular rows and were big, young, and lusty. I had heard only the day before, from one well versed in rubber,



MANAOS COMMERCIAL ASSOCIATION.

the same building a varied collection of native products that were to go to the World's Fair at Brussels. In the former were specimens of fine and coarse Pará rubber, of caucho, and a great *pelle* of rather sticky rubber from the *Hevea Guyanensis*. One enterprising and wealthy *seringueiro* had prepared block, crepe, and pancake rubber after the fashion of the preparation in the Far East, and it certainly was as good as any plantation rubber in the world. There were also gathered and shown all of the tapping and coagulating tools and utensils used in Brazilian rubber gathering.

What the country had done agriculturally and industrially was shown in the wonderful exhibits of cereals, textiles, coffee, cocoa, and woods of all degrees of hardness, beauty of polish and variety of grain. There was also ornate feather work, gorgeous native embroideries, and wonderful hammocks.

These exhibitions were opened by the Governor in person, and all came in frock coats and tall hats. As each visitor entered the door, the Police Band, which was lying in wait in an alcove, burst forth with a brazen crash of welcome, while the newcomer, trying to look dignified and free from self-consciousness, wobbled through the vestibule and lost himself in the crowd where he could watch the next fellow do the same thing.



FLOATING DOCKS AND AERIAL CABLES.



MOVING CASES OF RUBBER BY AERIAL CABLES.

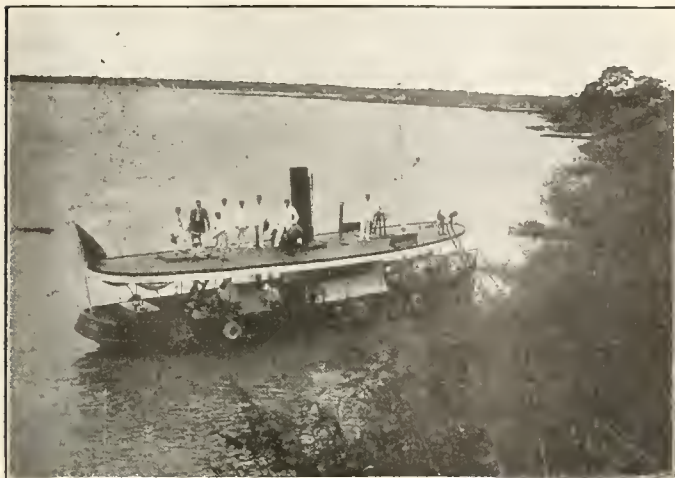
CONDITIONS OF LIVING IN MANAOS.

I did not find the heat too oppressive. It got up into the 90's sometimes, and there was the usual fight against mildew, which proved it to be somewhat damp. Mine host, his wife, and the baby all came down with severe colds while I was there, which I believe was wholly due to the dampness. I do not expect to make Manáos my permanent residence, although one might do worse, but if I do, my sleeping quarters will be on the second floor and not on the ground floor, for that is where one takes cold, and a cold once taken in the tropics is as hard to cure as a sprained disposition.

Another thing, every window and door in my home should have screens, even if none other in the city followed suit. The yellow fever mosquito is a city dweller, and if he was driven out of Panama by screening and a little sanitation, he can be out of Manáos. The government is alive to it, but the people, foreigners and all, seem indifferent. While I was there the *Inspector Sanitario* sent out a circular illustrated with pictures of mosquitos, which was passed from house to house. It was, however, in Portuguese, and I was unable to decide whether the *Culex*, kneeling in prayerful attitude, or the *Anopheles*, standing on its head as if about to turn a joyful somersault, was the one to avoid.



GRADING FINE RUBBER IN A MANAOS WAREHOUSE.



RIVER EXCURSION NEAR MANAOS.

At first I kept close tabs on the death rate in the daily papers, through my Companion. I showed him the Portuguese word for fever, and his statistics grew larger day by day. Finally I discovered that he believed that *Fevereiro* (February) meant fever. Therefore, if it happened to be the 20th of the month, dispatches of the day before would appear throughout the paper "Fevereiro 19." Adding them up he got a daily death rate of something like 350 and sure to increase to the end of the month. It speaks much for his self poise that he was not at all startled, even if I was.

One of my early visits was to the Governor, who impressed me as most anxious to give his State a capable, businesslike administration. I attended all of the functions that made up that notable week from the laying of the corner stone of the new brewery to my own lectures in the *Theatro Amazonas*. I enjoyed official breakfasts, private dinners, and "sing songs." But of all the meals, some of which were magnificently served, none tickles the palate of my memory like the turtle roasted in the shell with *farinha* that my hostess prepared for me. It was indescribably delicious. At last I could comprehend how an Indian could stand day after day in a cranky canoe, in the broiling sun, on the off chance of shooting an arrow up into the sky, that



THE EDITOR, INTERPRETER, AND "RENAULT."

it might drop, impale, and secure this most delicious of crustaceans.

PLANTING RUBBER IN A CITY PARK.

It was my suggestion, and I am proud of it, that got the Governor, his staff, and a dignified committee out of their beds very early one morning to plant *Hevea* rubber trees in one of the public parks. It seemed as if in that great city some one ought to know how the tree that produced its wealth looked. Yet few of the business men could tell me whether the leaves of the *Hevea Brasiliensis* grew in clusters of three or thirty-three. So I suggested city planting and they assented with enthusiasm.

The Governor planted his tree, the President of the Association his, I planted mine, then came Dr. Huber with many others, and we sprinkled that beautiful park with thrifty seedlings that, according to latest advices, "are doing well."

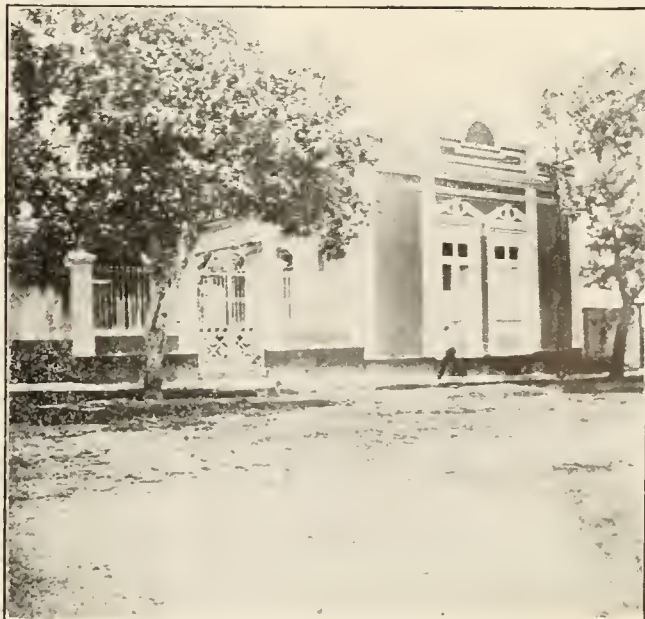
The other proceedings of the convention, the eloquent speeches, the discussions, the list of prize winners, the committees appointed—are they not all recorded in the published official report, brought out by the Commercial Association? So why should I inscribe them here?

THE TRANSPORTATION SYSTEM.

Manáos has direct sailings for the United States and Europe,



MR. PEARSON, MRS. SANFORD AND CHILD, MR. SANFORD.



HOUSE FOR CLERKS OF "CASA ALDEN."



PALACE OF JUSTICE, MANAOS.



FALLS NEAR MANAOS.

and a great fleet of steamers, big and little, that go to all the upper rivers, even to the slopes of the Andes.

The carrying trade of the Amazon is done, first, by ocean going boats of such lines as the Booth, Hamburg-American, and Lloyd Brasileiro, many of which visit Pará and Manaus only, while others go a thousand miles further up to Iquitos; second, by a fleet of river steamers, several hundred in number, that belong some to individuals and some to companies. The Amazon Steam Navigation Co., Limited, for example, the oldest, has about forty steamers and many tugs and lighters. Their boats are from 150 to 800 tons burden, and the company is subsidized by both State and Federal governments to run regularly up some of the great tributaries of the Amazon.

Time was when the flat bottomed stern wheel Mississippi type of steamer was very generally used, but it has practically disappeared. The twin screw steamer is to-day the usual thing,

that is for the better class of river boats. Some of these are fitted with electric fans, ice machines and excellent accommodations for first class passengers. The boats are usually two deckers, both being open. The lower deck is for the engine, cargo, animals, crew and third class passengers. This deck is usually loaded in layers—merchandise, mules and dogs at the bottom, passengers in hammocks just above, with an animated top layer of parrots, monkeys, and insects. The upper deck, reserved for officers and first class passengers, has a few four bunk cabins and a long table aft where meals are served, and is very comfortable.

Of the hundreds of individual steamers no two are exactly alike. All types of engines are represented, and of propellers one would not believe that so many patterns had ever been made—a great handicap in repairing. The individual boats do not pretend to run on schedule time. They leave when they get ready, go where they choose, and arrive when they may. The result is a great deal of wasted effort. It often happens, on the main river or some of the great tributaries, that a party expecting the boat will wait for days and finally go back in disgust to their *seringal*. Then a week or more later the boat arrives and sends out an expedition to find the *seringal* and secure its freight.

According to Brazilian law any and every boat navigating their waters must carry mail if requested to do so, and that without recompense. A wise old Portuguese sea captain de-



CHURCH OF ST. SEBASTIAN, MANAOS.



"VICTORIA REGIA" (VICTORIA WATER LILY.)



RUBBER TREE PLANTED BY THE EDITOR.

scribed to me the mail carrying of some of these smaller boats that went far into the interior. Not being paid for the service the owners were resentful, and sometimes when away from the restraints of civilization the mail bags were viciously dumped overboard. At other times they were completely forgotten, and after months of journeying were brought back and delivered to the postoffice from which they started.

Of great importance to city and state is the Associação Commercial do Amazonas, commonly called the Commercial Association. Every business house in Manáos, of any prominence—Brazilian, Portuguese, English, German, and American—is represented in this Association. Nor is this all; business interests throughout the state of Amazonas, particularly in the upper Amazon, are also members. It is really a State Board of Trade, active, progressive, comprehensive, and vital.

Organized 35 years ago, its history has been marked by varying degrees of activity, but it has ever stimulated coöperation in the direction of the general welfare of the city and state. Its work has been much broadened since its reorganization under the new statutes of May 28, 1908. Since July of that year it has published a monthly *Revista* (review). This is no mere compendium of statistics—though its commercial figures are of much value—but every trade topic bearing upon Amazonian progress is treated in forceful and well-written articles, which have been influential in government circles as well as with the business public.

The Association has launched a plan for a biennial Congress to be devoted to commercial and industrial interests, and particularly to the promotion of the rubber trade. I was fortunate enough to attend the first congress, the success of which has



SERINGUEIROS BRINGING HOME LATEX.

been so generally recognized. A very interesting feature in the Association building was their varied collection of samples of crude rubber and of rubber articles made by native gatherers in the forest.

I saw much of the Secretary of the Commercial Association. A quiet, modest, scholarly gentleman, whose whole thought is for progress in his state and country. He reads and writes most of the modern languages, but shyly avoids conversing except in his own. As a historical writer and author he has already taken high rank.

The visitor to the Amazon country, whatever tongue he may speak, soon learns some Portuguese. One word in particular impresses itself upon him from the beginning, that is *borracha*. He hears it in the streets of the cities, on the river steamers, in the jungle, and soon learns that it means rubber. Like all people of Latin extraction, the Brazilians are very apt in coining expressive phrases. They often call india-rubber "*ouro preto*," black gold, a fascinating term, perfect in its complete suggestiveness.

[TO BE CONTINUED.]

NEW RUBBER RECLAIMING PROCESS.

A PATENT on a new mechanical process for reclaiming rubber from waste has been granted to E. W. Snyder, of Akron, Ohio. The process has been worked out along oil and heat resisting lines, after nearly four years of experimenting by the inventor. Many grades of reclaimed rubber, if over cured, are liable to burn, but this product is referred to as not being affected injuriously by over curing. By the Snyder process, the fabric contained in rubber waste is removed in a shape designed to fit it for use by paper manufacturers.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

THE fall in price of 2s. 6d. per pound for rubber, instead of the expected rise to 15 shillings, has proved an effective damper to the class of investor so much in evidence in March and April. Those who are still outside the pale of rubber investors can generally point to one or more acquaintances

RUBBER AND THE PUBLIC.

whose shares have declined in value after having been purchased at high prices. Companies are still being brought out and go to allotment, but they are by no means so numerous as they were, nor does one read that they have been largely over subscribed after the lists have been open for an hour or two. The prognostication that we shall shortly see another good rise in the price of rubber may or may not prove true, but even if there is another considerable rise I don't anticipate anything like the rush for shares in the companies both new and old which was witnessed three months ago.

The demand for shares came largely from genuine investors who wished to seize the opportunity of materially increasing small incomes, and this class has naturally only a limited capital to play with, even if disclosures about some of the new companies had had no deterrent effect. Then the discovery that there is by no means a free market in many of the shares has also come as an unflattering surprise in many quarters. Further, the holiday season is now commencing, and this means not only an alternative way of disposing of cash reserves, but also means the absence from business of possible investors. If there is to be a revival of the market activity of last spring, I imagine that it will not occur before October. Among the recent flotations there are none which call for notice as being of special interest. West Africa and the Far East are still to the fore. One of the latest West African companies is the Mamia River Rubber Estates, Limited, located in the Gold Coast Colony. The inclusive cost of the rubber delivered in London is estimated at 1s. 9d. per pound, and the profits are calculated on a selling basis of 4 shillings. This may be conservative enough at the present time, but how about a few years hence, when the predicted fall of fine Pará to 2s. 6d. takes place? Of course these wild rubber companies will always have an asset in palm oil and mahogany, though they will also need a good price for their rubber if they are to pay substantial dividends on their capitals.

In his Budget statement the chancellor of the exchequer referred to the rubber boom as having been a source of revenue that will soon die out. Some exception has been taken to this in Mincing lane, where it is predicted that the boom will continue for two years. No doubt high prices will continue for some time, but what the chancellor referred to was the rush of new companies which were formed in the course of a month or two. We are hardly likely to have another experience of this sort, though good plantation companies will continue to come out at intervals and be supported by investors as distinct from mere speculators.

Some months ago I referred to the fact that one of the professors of chemistry at Berlin University had patented dichlorethylene as a solvent of rubber, and expressed my doubts as to the patent having any technical importance owing

THE OPTIMISM OF PATENTEES.

to the price of the solvent. Recently Mr. Bloch, a German scientist, has patented the use of the persulphides of hydrogen in the cold cure of rubber. These very unstable bodies are to be dissolved in carbon bisulphide or acetone and presumably take the place of chloride of sulphur. Professor Perkin, of Manchester, is another organic chemist of high standing who has lately associated himself with a rubber substitute patent. With regard to

patents generally the main idea, I take it, is to make money; it is not customary to go to the expense or trouble of patenting what is merely of scientific interest. Before the trade interests itself in a novelty it requires some assurance that economy will result from its adoption, and this is a desideratum that the professors and other scientific men unconnected with the trade seem to persistently ignore. Of course a very large number of rubber patents never come to anything, but in not many cases is this due to the fact of expense in carrying them out; it is more generally due to their innate worthlessness. This is because so many of the inventors have had no previous connection with the trade and their reluctance to consult a practical man before taking out a patent is due to a fear that the latter may rush off to the patent office on his own account.

Of late there has been a considerable accession to the patents for reclaiming or regenerating vulcanized rubber, which was only to be expected under existing market conditions. So far, however, the main feature about these new processes compared with those in existence is the use of more costly chemicals or the more complicated nature of the reactions—both of which are against economy of production. With regard to synthetic rubber it is quite extraordinary how both scientific chemists and important firms like the great Bayer company, of Germany, stick to the idea that there must be a large fortune for those who solve the problem. They were working at it two years ago when I was in the laboratory of the Continental company, at Hanover, though possibly by this time the astute directors of that great concern may have come to the conclusion that the problem is of little technical importance, however great its scientific interest.

I NOTE that the reference to this interesting topic in the June issue of THE INDIA RUBBER WORLD (page 325) is headed, "The Latest Artificial Rubber." To be strictly

BLUM'S ARTIFICIAL RUBBER.

accurate, I believe that two or three synthetic rubber patents are of more recent date. Certainly Blum's British patent of 1908 has only quite recently been published in full, having probably been amended. The fact that a process for making rubber from peat was being exploited or boomed two or three years ago was well known to me, but it was only quite recently that I read the full patent. This makes it clear that the project is not so wild as one might at first imagine. The peat to be used is not that of the ordinary peat bog, but a special sort of peat found in Scandinavia and containing a good deal of leaf wax. The process of converting this into rubber by enzyme action sounds very fascinating, if a trifle complicated, and it need hardly be said that the process is of great theoretical interest if not of practical importance. What makes me rather skeptical about it, however, is the slow process that is being made.

To read the patent all is plain sailing; you take your ton of peat and after the various biological and chemical reactions are finished you remove your pure rubber and presumably sell it. Being anxious to get hold of some of this rubber I have bestirred myself, and all I can find out from inquiries is that the process is not yet in thorough working order, and that those who are interested in its ultimate success are putting up some more money to bring the process to a successful conclusion. This rather looks as if the patent was somewhat previous and that the rationale of the enzyme action is not sufficiently understood. It is not so many years since scientific men flocked to a certain town in Germany to see the production of fat by enzyme action, a development which was to revolutionize the soap trade. The other day I asked a prominent soap manufacturer what had become of the process, and his answer was that nothing of technical

importance had resulted. Altogether, looking at the somewhat complicated reactions involved, it is difficult to see how any such biological process can beat the ordinary biological method of production by trees.

At the recovered rubber works of Messrs. Laughton & Co. (Clayton, Manchester), an explosion of a steam chest occurred

EXPLOSION IN A RUBBER WORKS.

on October 30 last, causing serious injuries to one of the hands, and a Board of Trade inquiry into the circumstances was held on June 28 and 29 at the Manchester Town Hall. The chest which exploded was a spreading machine chest $74\frac{1}{2} \times 22\frac{1}{2}$ inches and $3\frac{1}{4}$ inches deep, made about two years ago by Messrs. Francis Shaw & Co. It was tested to stand 20 pounds steam pressure, steam coming from a Lancashire boiler working at 130 pounds pressure, through a regulating valve. The finding of the court was that the explosion was caused by excessive steam pressure in the chest, and a workman was found to blame for the chest not having the requisite fittings to prevent such an occurrence. Another workman was to blame for failing to regulate and control the valves on the day of the explosion. Further, the firm was blamed for not ascertaining whether the chest had been properly tested and for using it without a reducing valve in order to prevent a safe working pressure being exceeded. They had not appreciated as they should have done the risks it was necessary to guard against. The firm were ordered to pay £30 towards the cost of the inquiry and the workman who was in charge at the time of the explosion, and whose evidence was considered unsatisfactory, was ordered to contribute £3. It was stated by the counsel for the firm that they had now got all their pans and chests insured and were acting under the insurance company's instructions. It has not been customary to have such vessels insured, though I imagine that such action will now be more common as the result of this inquiry. I have known several previous inquiries with regard to explosions—so-called—of vulcan pans, but I do not recall any case similar to that just referred to.

In the last Birthday honors' list appeared the name of Mr. John Michael Fleetwood Fuller, M. P., as the recipient of a baronetcy.

PERSONAL MENTION.

Mr. Fuller, who has been for some years vice-chamberlain of his Majesty's household, under the Liberal government, belongs to a Wiltshire family largely interested in the Avon India-Rubber Co., Limited, of Melksham, in that county.

Viscount Grimston, who is managing director of a rubber tire works at St. Albans, is the only son of the Earl of Vernland, who is a director of a number of companies. The titles in this family must not be confused with those under which the celebrated Francis Bacon was raised to the Peerage, viz.: Lord Vernland and Viscount St. Albans.

Mr. Walter F. Reid, who this year succeeds Professor Ira Remsen, Johns Hopkins University, of America, as president of the Society of Chemical Industry, has for many years taken a close interest in the rubber industry. The substitute for rubber termed "Veluvil" was brought out by him, though for some time he has not been directly connected with its somewhat checkered career. Professor Reimsen, who has arrived in England to attend the annual meeting of the Society, at Glasgow, was entertained at dinner by the London Chemical Industry Club.

Mr. Samuel Schryber, who recently read a paper on the chemistry of india-rubber before the London Chemical Society, is on Professor Wvndham Dunstan's staff at the laboratories of the Imperial Institute.

Dr. Carl Walter Thiel, F. I. C., who after leaving the laboratory of the Harburg-Vienna company, at Harburg, two years ago, commenced a consulting practice in Hamburg, has now gone to Berlin as managing director of a rubber factory there. Dr. Thiel spent some years previously with Messrs. F. Reddaway & Co., Limited, of Manchester.

GOODYEAR IN BRONZE.

A MEMORIAL to Charles Goodyear, the discoverer of vulcanization, has been erected at Naugatuck, Connecticut, the scene of some of Goodyear's most important work, and now an important center of the rubber industry, through the gen-



BUST OF CHARLES GOODYEAR.

[Discoverer of the vulcanization of india-rubber.]

erosity of Colonel Samuel P. Colt, president of the United States Rubber Co. It is in the form of a bust, in bronze, made by Tiffany & Co., of New York, and is mounted on a pedestal in the new railway passenger station at Naugatuck. It was a gift to the railway corporation.

ARE GUTTA GOLF BALLS COMING BACK?

OWING to the increased price of rubber, a further rise in the price of golf balls is anticipated by the Scottish golf players, concerning which United States Consul H. D. Van Sant, of Dunfermline, says:

"At present the price of the best standard is 60 cents, which is an advance over a short time ago. It is said the price will soon be 3 shillings [= 73 cents]. This expected advance raises the question of a return to the old-fashioned 'guttie.' At the time the new American rubber ball first made its appearance into Scotland its introduction was strongly opposed by some of the leading golfers' associations, both professional and amateur. But the Haskell ball from the States was out and to-day its use is practically universal, yet the talk now is that if prices for the rubber article keep on advancing a return to the 'guttie' is among the possibilities. It is said the objection that links are now laid out for the longer flying rubber-core golf ball can be met with the statement that contrivances for adding to the flight of a ball may be introduced at any time, and the courses can be altered to meet the requirements of any change. The 'guttie' was the original ball used in Scotland, the first home of golf."

A VERY fine exhibit of rubber goods used in connection with railways is being made by George Spencer, Moulton & Co., Limited, of Bradford, Wiltshire, at the Centenary Exhibition at Buenos Aires, which opened on May 25.

AFFAIRS OF THE G & J TIRE CO.

THE interests of The G & J Tire Co. and the Indianapolis Rubber Co. have been merged, and articles of incorporation have been granted under the laws of Indiana for the formation of a new company, to be known as the G & J Tire Co. of Indiana. The history of the companies here named forms an interesting chapter in the development of the tire industry in America.

The Indianapolis Rubber Co., incorporated December 5, 1892,



PRESIDENT DOWSE.



SECRETARY WARD.

with \$25,000 capital, was one of the first companies formed for making tires as its principal output, and at once attained success, growing with the rapid increase in the demand for cycle tires. The first president of the company, the late H. E. Galloway, was also manager of the Indiana Bicycle Co. (Indianapolis), and close relations existed between the two concerns until after the death of Mr. Galloway, when the Indiana Bicycle Co. became independent and began the manufacture of "G & J" tires under royalty. When the American Bicycle Co. was organized in 1899, among the properties taken over were those of the Indianapolis Rubber Co. and the Indiana Bicycle Co. Shortly afterward the American Bicycle Co. disposed of all its tire manufacturing interests, and the tire making at the two plants in question was merged in the factory of the Indianapolis Rubber Co., which passed under the control of the Rubber Goods Manufacturing Co.

The G & J Tire Co. was incorporated, in New Jersey, Novem-

ber 17, 1899, with \$1,000,000 capital, as a subsidiary company of the Rubber Goods Manufacturing Co. Its object, first, was to act as a holding company for the G & J patents, covering the American type of "clincher" tire for cycles and motor cars and, secondly, to make and sell tires under its own name. The leading makers of tires were licensed by the G & J company, and the tires sold by this company were made at the factory of the Indianapolis Rubber Co. For some years past the official list of the G & J company has been identical with that of the Indianapolis Rubber Co.

There will be no liquidation of the original G & J Tire Co. and the Indianapolis Rubber Co. The G & J Tire Co. of Indiana assume all liabilities of the Indianapolis Rubber Co. The G & J Tire Co.—of New Jersey—as a patent holding corporation, will continue to exist.

During the past two years additions have been made to the Indianapolis plant, in the way of building extensions and machinery equipment, of practically \$500,000, and the output of the plant has increased over 700 per cent. during three years. The G & J company are unique in the respect that their factory is devoted exclusively to the manufacture of pneumatic tires.

The management of the G & J Tire Co. is in the hands of Mr. Byron C. Dowse, as president, and Mr. Richard Ward, as secretary and treasurer. Mr. Dowse became connected with the company in December, 1899. In time he became manager of their Chicago branch, and on the resignation of Mr. J. D.

Anderson, now president of the Hartford Rubber Works Co., in October, 1907, Mr. Dowse was elected president of the G & J Company. Mr. Ward has been an employé of the Rubber Goods Manufacturing Co. for about fourteen years, having served in different capacities with several of the subsidiary companies before identifying himself with the G. & J. Tire Co. at Indianapolis.

DOLLAR RUBBER AGAIN.

WHEN rubber is low in price mankind believes always that it will go lower. When it is high people are sure that it is going higher. And this in spite of all statistical history. Of course the exception proves the rule, and a very breezy exception in the form of a wealthy manufacturer thus expressed himself recently:

"So they look for \$3 rubber, and may be \$4 rubber, do they, almost all of them? The great majority sadly predict continued high prices? I'm glad they do, for majorities are usually wrong. Personally I am just as sure of seeing dollar rubber again as I am sure that I have ever seen it. All of this fine Pará that has gone into automobile tires forms a huge sinking fund for us. When we begin to spend it, crude rubber will accumulate; for awhile big operators and wealthy manufacturers will stock up at high prices, but they will soon tire of that, and then prices will tumble. Few appreciate what plantation rubber will do for us in the next five years. Where we get 4,000 tons now, we will be receiving 40,000 or 50,000 tons. Then, too, I see the beginning of a greatly stimulated production of wild rubber. The drop won't come in a minute, but it will come, and dollar rubber sometime in the future is a certainty."



FACTORIES OF THE G & J TIRE CO.

New Rubber Goods in the Market.

MORGAN & WRIGHT "FRICTION PLUG" RUBBER HEEL.

IN addition to the other advantages of a rubber heel for leather shoes, the heel illustrated herewith has a non-slipping feature, provided by placing a tightly rolled plug, composed of cotton fabric and rubber, at the back of the heel, where it grips the ground, holding the wearer's foot firm in place at the instant the foot is put down. The fabric in this plug is thoroughly impregnated with rubber, the two materials being molded



"FRICTION PLUG" HEEL.

and cured together under more than two tons hydraulic pressure, thus forming the whole into one inseparable mass. The plug is referred to as wearing down slowly and evenly at the same rate as the surrounding rubber, and never wearing smooth; besides it adds to the life of the heel. The basket like corrugations on the wearing surface are another advantage, as also is the air cushion space on the upper side of the heel.

These heels are made "whole" and "half," and in white and gray colors. [Morgan & Wright, Detroit, Michigan.]

AN ORTHOPEDIC RUBBER HEEL.

In view of the growing demand for a shoe with the heel extended on the inside down under the shank to support the arch, some of the largest manufacturers are making a line of shoes, both men's and women's, with a heel of this kind.



The leather heel, however, coming under the arch of the foot, seems to be too rigid, and to obviate this difficulty the heel herewith is being placed upon the market. It is a rubber heel—either whole or half—with insertions of non-slipping fabric, as shown in the cut. Persons who have tried it claim that it is beneficial in the way of supporting the arch of the foot, while not having the rigidity of a leather heel. The whole heel can be applied

easily by any shoemaker to an old shoe. The retail price is 75 cents. [Foster Rubber Co., No. 170 Summer street, Boston.]

THE "FLAT BRAMBLE" GOLF BALL.

An entirely new marking for golf balls is the "Flat Bramble," which is illustrated to a degree in the accompanying cut. This is a gold crescent marking, on a white cover ball. This marking is referred to as increasing very greatly the wearing qualities of the ball, besides being very durable. The ball thus marked holds its shape, insuring trueness in play even after long, hard usage. This marking is patented, and the balls are sold under guarantee. [The Kempshall Manufacturing Co., Arlington, New Jersey.]



"FLAT BRAMBLE."

"THE PALPITATOR"—A NEW TOY.

A NOVEL house toy of rubber, which has been well received in the trade, is described as a "heart palpitor" and also as a



"plate lifter." Worn under the clothing, as indicated in one of the cuts, it gives a striking imitation of palpitation of the heart. Placed under a table cloth, it may be made to lift any small article on the table. A patent is pending on this novelty. [Huron Rubber Co., Cleveland, Ohio.]



THE ROCHESTER TELEPHONE MUFFLER.

THE use of the device illustrated here places within arm's length all the privacy of a telephone booth, without rendering it necessary for the user to leave his desk. It saves



ROCHESTER TELEPHONE MUFFLER.

the cost of a telephone booth, besides the space required for one. It excludes foreign sounds, thereby improving the talking qualities of the telephone. It also shuts out side tones, so that a person with whom one is speaking is not annoyed by hearing other voices or noises that may be within range of the transmitter. This muffler is made of glass, with a detachable rubber mask, which latter can be washed and thus kept in sanitary condition.

[Rochester Telephone Muffler Co., Rochester, New York.]

THE "RUBBER-VULC" LATHER BRUSH.

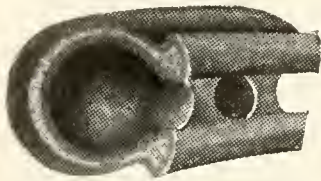
A RUBBER setting for the bristles of a lather brush, and brushes for many other purposes, cannot be excelled by any other method of construction of such articles. Rubber is absolutely unaffected by use in water and soap, will not absorb moisture or germs, or swell or burst. The line of brushes here referred to is made in a variety of styles, but in each case the ferrule in which the bristles are set can be unscrewed from the handle proper. The handle may be had in one piece of hard rubber, or made of rubber and celluloid, rubber and white bone, and so on. To prevent the twisting and rotting of bristles, as sometimes happens when the brush is left standing upright, there is supplied with this line a neat nickel plated metal hanger with screw for attachment to the wall, as shown in the cut. These brushes, in seventy styles, are protected by American and foreign patents. [Rubber-Bound Brush Co., Belleville, New Jersey.]



"RUBBER VULC" BRUSH.

NATIONAL AIRLESS CLINCHER TIRE.

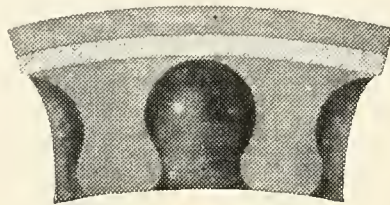
The tire illustrated here is made of rubber and fabric, so far as the casing is concerned, the same as the ordinary clincher pneumatic. Instead of being hollow, however, like a pneumatic



AIRLESS CLINCHER TIRE.
[View of the Casing.]

mounted on the car the tire has the appearance of a pneumatic. It is referred to as being resilient and easy on both machine and passengers, though slightly slower than a pneumatic. The inner construction is not separate from the outer casing, but the tire is built up from this core and the whole tire is cured in one mass. [Airless Tire Co., Indianapolis, Indiana.]

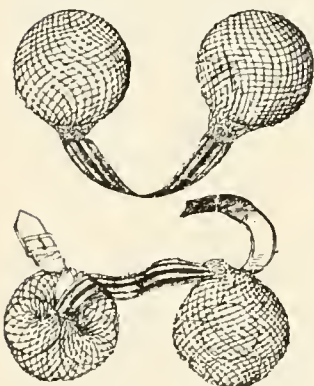
as shown in the cuts. This inner construction shows a series of spherical cavities at short intervals, separated by pieces of solid rubber. These pieces spread at top and bottom, thus giving the truss the element of strength. The cavities go clear to the rim. When



AIRLESS CLINCHER TIRE.
[Showing inner construction.]

LIFE SAVING AND SWIMMING APPARATUS.

The appliance illustrated here is of the class in which buoyant



bodies are enclosed in net bags connected together by straps. The buoyant bodies are permanently inflated, and have an airtight and watertight covering. In this case hollow rubber balls are secured in bags, as described, and connected to the two ends of a strap; or the strap may have free ends, to one of which a buckle is attached. More than ball may be placed in each bag. Patented by W. Harz, Grossenham, Saxony.

"CAN'T SLIP" RUBBER HEEL.

A distinctive feature of the rubber heel illustrated here is a piece of extra quality rubber at the tip of the heel where the greatest wear comes. This is referred to as adding at least one-third to the service of the heels. Another feature is the air chamber between the leather and the rubber heel which



Tread Surface.



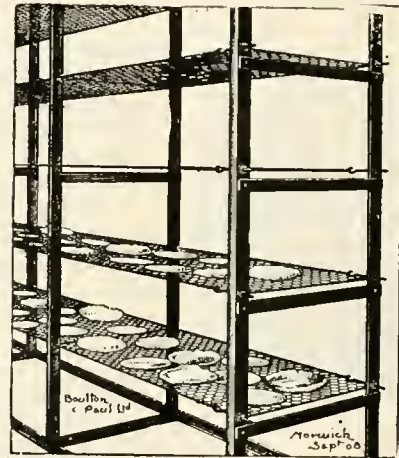
Air Cushion.

"CAN'T SLIP" RUBBER HEEL.

keeps the opening clear, and produces a continual suction, thereby preventing the wearer from slipping. These heels are made under the patents of W. G. Anderson, by Converse Rubber Shoe Co. (Malden, Massachusetts), who have been adding to their factory capacity to enable them to produce this new line of goods.

RUBBER DRYING RACK.

In the fitting out of plantation rubber factories outfits for drying are essential, and under this heading may be mentioned the strong, serviceable drying rack illustrated on this page. These



RUBBER DRYING RACK.

racks are supplied complete, including iron framing and galvanized wire netting. The netting can be obtained also for fitting to existing racks. [Boulton & Paul, Limited, Norwich, England.]

HEALTH IN RUBBER FACTORIES.

In a certain important rubber manufacturing center in New England complaints have been made of the number of employes, particularly girls, who leave, as is alleged, on advice of physicians. The superintendent of one factory, interviewed by a local newspaper, is quoted as saying:

"It is true we have found many physicians have advised their patients to quit working in the rubber shops if they wished to recover. We employ many girls and if one of them goes to a doctor complaining of a headache, he will ask her where she works and when she replies, 'In the rubber shop,' he will shake his head and say, 'Well, you'll have to stop working there before I can do anything for you.'

"Such an idea is absurd. I invite any physician and the board of health to come down to our shop at any time to see whether it is not fit to work in.

"It is a great injustice to us. It makes it hard to get people to work for us, as such reports spread and many become frightened. The fact of the matter is that some of our employes have been with us for many years and are in first class health. I know of one girl who has worked in the shop for the past fifteen years and is even more healthy than when she began."

AN UNSATISFACTORY WATER BOTTLE.—"I trust you slept comfortably and had everything you needed?" said Sandy Macpherson's hostess one cold morning last winter.

"Ay, weel enough," replied her guests, a venerable Scot; "but I dinna see the guid of yon bottle in the bed."

"Why, wasn't the water hot?" the hostess asked in surprise.

"Verra hot," responded Macpherson, "but ye forgot to put anything in it."—*Scraps.*

A BOOK for everybody interested in tires—"Rubber Tires and All About Them"—this office.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED JUNE 7, 1910.

- N**O. 960,243. Hair comb. J. H. Aker, East Orange, N. J.
 960,246. Automatic alarm tire valve. F. F. Ashmore, Kansas City Mo.
 960,274. Machine for working crude rubber. M. C. Clark, assignor to Maurice C. Clark Co., all of Providence, R. I.
 960,308. Armor for pneumatic tires. I. Goldstein, Chicago.
 960,714. Process of making resilient molds. A. A. Schmidt, Chicago.
 960,748. Footwear [Leather shoe waterproofed with rubber.] M. M. West, Cleveland, Ohio.
 960,749. Spring wheel. [With rubber tire.] F. Westerbeck, St. Louis.
 960,814. Rubber. [Rubber overshoe with special heel.] J. S. Capen, Stoughton, Mass.
 960,846. Apparatus for removing foreign matter from india-rubber, gutta-percha, balata, and the like. [See THE INDIA RUBBER WORLD July 1, 1910—page 361.] M. M. Dessau, London, England.
 960,894. Bottle dam. W. S. Gray, assignor of one-half to G. W. Snyder, both of Indianapolis, Ind.
 960,983. Separable rim for vehicle wheels. T. J. Mell, assignor to the Republic Rubber Co., all of Youngstown, Ohio.
 961,033. Cup or head for massage device. C. M. Siebert, Jr., assignor to the Seibert-Welch Co., all of Columbus, Ohio.
 961,034. Massage apparatus. *Same*.
 961,054. Guide rack for fire hose. S. B. Willis, New York city.
 961,065. Spring tire. V. Bauer, Horton, Kans.

Trade Marks.

- 48,475. E. Z. Jefferson, Sewickley, Pa. The word *Jasce*. For rubber belting and hose.
 49,578. The E. A. Edgerton Mfg. Co., Shirley, Mass. The word *Reflex*. For suspenders and garters.

ISSUED JUNE 14, 1910.

- 961,104. Means for automatically inflating pneumatic tires. R. Connell, Westport, New Zealand.
 961,126. Rubber heel. A. B. Heimbach, Duluth, Minn.
 961,141. Holder for erasing material. G. P. Kingsbury, Scranton, Pa.
 961,144. Composition of matter for repair of pneumatic tires. J. H. Lewis, Joplin, Mo.
 961,153. Tire pump. C. S. Myers, Columbia, Pa.
 961,172. Mechanism for manufacturing pneumatic tires. T. Sloper, Devides, England.
 961,234. Hose nozzle support. C. V. Hoover, North Birmingham, Ala.
 961,251. Lawn sprinkler. F. E. Opitz, Longbeach, assignor to B. Brown and E. H. Sparling, Los Angeles, Cal.
 961,278. Spring wheel. G. H. Williams, Los Angeles, Cal.
 961,297. Holder for garden hose. J. Jarger, Denver, Colo.
 961,345. Elastic collar bearing for centrifugal machines. C. H. Hackett and T. W. Morgan, assignors to W. W. Marsh, all of Waterloo, Iowa.
 961,346. Rubber heel. G. Hadjich, assignor of one-fourth to C. B. Shaffner, both of Chicago.
 961,374. Tire for vehicles. [With special tread.] J. S. Schleicher, Mount Vernon, N. Y.
 961,395. Process for regenerating and devulcanizing india-rubber or caoutchouc and extraction of caoutchouc from raw materials containing caoutchouc. [Consists of treating the natural material with limonene.] G. Austerweil, Neuilly, near Paris, France.
 961,427. Pressure regulating device for pneumatic tires. C. J. Brosnan, assignor of one-half to A. Webster, both of Springfield, Mass.
 961,443. Tire. [Pneumatic.] R. Herman, Crafton, Pa.
 961,553. Tire holder and trunk. F. S. Sutherland, Manchester, Mass.
 961,625. Boot or shoe heel. C. E. Macduffee, assignor to himself, W. H. Coper, J. P. Read, all of New York city, and J. L. Gordon, West Hoboken, N. J.

ISSUED JUNE 21, 1910.

- 961,791. Chain shield for pneumatic tires. L. W. Noyes, Chicago.
 961,882. Wheel and tire therefor. [Pneumatic.] G. D. Moore, Worcester, Mass.
 961,929. Mat. E. Bouchard, Providence, R. I.
 961,955. Elastic tire for vehicle wheels. B. A. Godek, Paris, France.
 962,054. Method of making shoes for automobile and other vehicle tires. R. Rowley, New York city, and J. J. Coomber, Jersey City, N. J., assignors to Rubber Co. of America.
 962,102. Compression apparatus for tire shoe wrappings. *Same*.
 962,230. Pneumatic tire. W. A. Lurie, Chicago.
 962,297. Resilient tire. J. Baar, Philadelphia.
 962,401. Tire carrier. L. A. Dow, Melrose, Mass.

Trade Mark.

- 49,615. The Worthington Ball Co., Elyria, Ohio. A diamond shaped design. For golf balls.

ISSUED JUNE 28, 1910.

- 962,428. Overshoe retainer. L. Harrold, Ellwood City, and W. J. Thamsen, Hazeldell, Pa.
 962,444. Solid tire for vehicle wheels. A. Mans, Dieghem, Belgium.
 962,515. Machine for printing on rubber footwear. J. W. Moore, Newton Highlands, Mass., assignor to the J. W. Moore Machine Co., Boston, Mass.

- 962,615. Tire plug. L. A. Bourquenez, Botsford, Conn.
 962,729. Automobile tire. G. F. Annis and C. C. Annis, Freedom, Okla.
 962,730. Tire carrier. C. F. Batt, New York city.
 962,778. Wheel tire. T. Midgley, Columbus, Ohio, assignor to the Hartford Rubber Works Co.
 962,814. Means for securing tires to vehicle wheels. C. G. Cabanne, St. Louis.
 962,897. Pneumatic tire. W. B. Hartridge, Seaford, England.
 962,954. Collapsible tub. J. D. Green, Chillicothe, Ohio.
 962,975. Resilient wheel. A. H. Peloubet, Newark, N. J.

Trade Marks.

- 143,969. R. & J. Dick, Ltd., Greenhead, Scotland. The representation of a roll of belting, bearing the words *Balata and Canvas Belting*. For machinery belting of balata and canvas, the former substance predominating.
 49,697. The Republic Rubber Co., Youngstown, Ohio. The word *Lanca*. For power transmitting and conveyor belts [of balata and canvas].

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the application, which in the case of these listed below was in 1909.

*Denotes Patents for American Inventions.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JUNE 1, 1910.]

- 2,914 (1909). Composition for printers' blankets, tire cores, etc. [Solution of magnesium chloride added to cereal flour.] F. W. J. Henning, London.
 2,935 (1909). Self-sealing tire or tire tube. C. H. Gray, of India-Rubber, Gutta-Percha and Telegraph Works Co., Ltd., London.
 2,988 (1909). Spare tire or tired wheel for motor cars. C. C. and G. T. Hilton, Rugby, and T. Main, Loughborough.
 2,992 (1909). Tire-carrying rim with spare rim side by side. M. G. Townsend, Totton, and W. Stewart-Greene, London.
 3,069 (1909). Spring wheel with solid rubber tire. R. C. Parsons, London.
 3,072 (1909). Use of rubber in ships between the internal armor and outing plating. Vickers, Sons & Maxim, London. (G. E. Elia, Paris, France.)
 *3,147 (1909). Tire in which springs held between seats are enclosed in an ordinary clincher tire cover. M. A. Dees, Pascagoula, Mississippi.
 3,152 (1909). Tire treads formed of rows of alternating raised and recessed portions, the recesses being metal studded. H. P. Northam, London.
 3,201 (1909). Hose coupling. P. Krischer, Hagen, Germany.
 3,297 (1909). Tire tread. E. Kempshall, London.
 *3,393 (1909). Insole for boots treated with gutta-percha. J. W. Barber, Newton, Massachusetts.
 3,450 (1909). Lining of tire tubes, to prevent leakage of air. J. N. Bailey, Stretford, Lancs.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JUNE 8, 1910.]

- 3,630 (1909). Rotary mold table press for forming india-rubber and the like into biscuits. British Murac Syndicate, and M. M. Dessau, London.
 *3,711 (1909). Detachable rim for pneumatic tire. G. Barker, Birmingham. (W. R. Hartley and A. F. Callahan, Chicago, Illinois.)
 3,713 (1909). Tire composed of bands of perforated rubber with interposed metal bands. L. P. Landtved, Copenhagen, Denmark.
 *3,714 (1909). Spring wheel. W. H. Ward, Cleveland, Ohio.
 *3,715 (1909). Spring wheel. *Same*.
 *3,716 (1909). Spring wheel. *Same*.
 3,726 (1909). Tool for applying pneumatic tires. W. Allen, Seaford, Sussex.
 3,921 (1909). Pneumatic tire. [Tread of fabric, rubber and leather, metal studded.] G. Haafkens, Amsterdam, Holland.
 3,940 (1909). Press for molding waste rubber and ebonite into masses. O. C. Immisch, London.
 4,071 (1909). Detachable rim for pneumatic tires. J. Knight, Liverpool.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JUNE 15, 1910.]

- *4,127 (1909). Inflating pump for motor tires. [May be operated by the motor when the vehicle is at rest.] F. Woodhead, Cheltenham, Pennsylvania.
 4,150 (1909). Signal to indicate deflation of a pneumatic tire. W. Gibson, London.
 4,154 (1909). Elastic composition. [Made by treating glue in an anhydrous formaldehyde; celluloid or a substitute may be added.] Commercial Products Co., London. (L. Berand, Crefeld, Germany.)
 4,213 (1909). Spring wheel with solid rubber tire. J. Giraud, Paris, France.
 4,230 (1909). Tire in which cushions of horsehair wound with fabric to form a tube are placed inside the air tube or between the tube and cover. B. Knittel, Dresden, Germany.
 4,275 (1909). Elastic tire. [Tread blocks of india-rubber alternate with blocks of wood.] M. and N. D. Moses and A. F. Lewis, Llangadock, South Wales.

- 4,410 (1909). Rubber packing for hermetically sealing coffins. T. Dean, Ilkley.
- 4,461 (1909). Pneumatic spring surrounding the axle of a motor car. L. Basso, Genoa, Italy.
- 4,654 (1909). Prevention of skidding in motor cars by means of rubber-covered distance blocks. S. T. Richardson and R. Price, Birmingham.
- 4,686 (1909). Solid tire. G. S. Ogilvie, Woodbridge, Suffolk.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JUNE 22, 1910.]

- 4,710 (1909). Plug with rubber washer for non-refillable bottles. H. Cleland, Ardglass, County Down.
- 4,715 (1909). Wheel with two rims side by side. P. S. Taylor, Swansea.
- 4,769 (1909). Swimming apparatus. R. Deetjen, Charlottenburg, Germany.
- 4,822 (1909). Pneumatic tire with special security bolt. S. Murison, Ebb Vale, Monmouthshire.
- 4,838 (1909). Rim for pneumatic tire with detachable flange. Anthony Wolverhampton.
- 4,893 (1909). Pneumatic tire valve. F. O. Warwick, Nuremberg, Germany.
- 4,915 (1909). Non-skid tread for pneumatic tires. R. Kenyon, Accrington, Lancs.
- 4,926 (1909). Single or twin solid tire. C. Challiner, Manchester.
- 4,981 (1909). Pneumatic tire with non-skid tread. F. S. Brown, London.
- 5,041 (1909). Spring wheel with rubber tire. A. F. Hawksley, Fairhaven, Lancs.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JUNE 29, 1910.]

- 5,342 (1909). Mud guard for pneumatic tire. J. J. H. Sturmev, Coventry.
- 5,376 (1909). Tire cover with special tread. A. E. Drown, London.
- 5,461 (1909). Cow milking machine. T. Edmonds, Royton, Lancs.
- 5,463 (1909). Wheel with two rims side by side. P. Savoye, Paris, France.
- 5,465 (1909). Pneumatic tire with leather cover. B. Päsche, Treptow-Berlin, Germany.
- 5,515 (1909). Spring wheel with rubber band tread. B. Loutzky, Berlin, Germany.
- 5,547 (1909). Spring wheel with rubber tire. L. Lege, Hanover, Germany.
- 5,582 (1909). Detachable rubber-tired wheel; double and multiple wheel. C. Jenatzy, Brussels, Belgium.
- 5,702 (1909). Leather pneumatic tire cover. O. Walter, Berlin, Germany.
- 5,747 (1909). Double or multiple rims for pneumatic tires. W. T. Skelding and A. Blackwell, Stourbridge.
- 5,749 (1909). Device for putting on or detaching tubes of pneumatic tires for cycles. H. Starr, Blackburn, Lancs.
- 5,782 (1909). Tread bands for pneumatic tires, for use in snow. W. Fenske, Schlussee, Germany.
- 5,810 (1909). Spring wheel with rubber tire. W. Stewart, Wigan, Lancs.
- 5,930 (1909). Disk wheel with tread band of plastic composition. F. Walton, London.
- 5,938 (1909). Spring wheel with rubber tires. S. V. Galley, Isleworth, and J. J. Kerr, London.
- 5,942 (1909). Tread band of chains for pneumatic tires. H. B. Davis, Cradley Heath, Staffordshire.
- *5,943 (1909). Reel and reel carriage for hose, telegraph cables, etc. P. R. J. Willis, Kingston. (B. F. Wasson, Clinton, Illinois.)

THE FRENCH REPUBLIC.

PATENTS ISSUED (with Dates of Application).

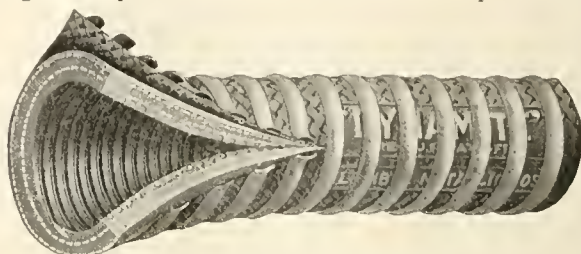
- 410,332 (Dec. 13, 1909). V. Rivaud. Product for the conservation of all articles of vulcanization of rubber.
- 10,371 (Dec. 15). Bell & Dahl. Improvement in elastic tires for wheels.
- 410,447 (Dec. 15). F. Buhl. Elastic tire.
- 410,940 (Dec. 21). V. W. Grapin. Detail of rubber blocks for wheel rims.
- 410,628 (Dec. 20). J. Dorel. Demountable elastic tire for wheels.
- 410,664 (Dec. 23). F. Steigenberger. Tire protector.
- 410,815 (Dec. 30). Du Hommet. Pneumatic tire of leather.
- 410,928 (Dec. 30). L. Raab. Elastic wheel for vehicles.
- 410,947 (Nov. 22). M. Mollard. Rim and envelope for pneumatic tire.
- 410,953 (Dec. 1). Sanz & Gomez. Rubber for horseshoe.
- 411,005 (Dec. 15). F. E. Serraire. Wheel and elastic tire.
- 411,025 (Dec. 28). V. A. Roux. Pneumatic tire.
- 411,061 (Dec. 30). E. Nathan. Leather pneumatic tire.
- 411,171 (Dec. 31). L. de Lagrange. Vehicle wheel and soft elastic tire.
- 411,407 (Jan. 8, 1910). M. Liebe Harkort. Elastic tire.

[NOTE.—Printed copies of specifications of French patents can be obtained from R. Robet, Ingenieur-Conseil, 16 avenue de Villier, Paris, at 50 cents each, postpaid.]

SIR GEORGE NEWNES, Bart, M. P., one of the leading newspaper and periodical publishers in Great Britain, died on June 9 at the age of 59. Sir George was at the head of Newnes Co., Limited, his publishing concern. He has been referred to in THE INDIA RUBBER WORLD as interested in the Inambari Pará-Rubber Estates, Limited, with properties in Peru, in which his sole surviving child, Frank Hillyard Newnes, Bart, is a director. The latter is also a director in Galvez Rubber Estates, Limited, with properties in Bolivia, and in Newnes Co., Limited.

DYNAMITE ROCK DRILL HOSE.

THE fact that widespread public notice is not taken of the rubber tube. The better this is protected from wear, from heat, and from other destructive elements, the longer is the life of the hose. The illustration shows a type of hose that is not very strong, but in which the tube is protected with scientific thoroughness. It is covered on the outside by a ply of heavy fringed duck which, in turn, is covered with a dense tough coating of compounded rubber. This in turn is protected by a

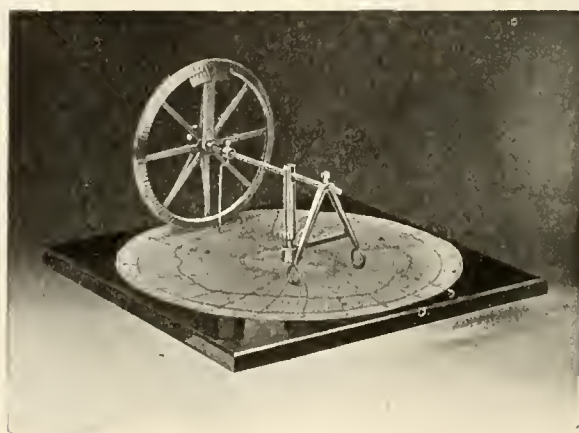


FLEXIBLE METALLIC "DYNAMITE" ROCK DRILL HOSE.

braided covering of non rustable annealed steel wire. Outside of this is wound spirally a protecting jacket of concave non rustable steel wire. The tube is protected on the inside somewhat as it is on the outside. First with a ply of heavy duck, then by a coil of special spun steel wire which is bedded in and covered by a layer of rubber. This hose is not only very strong, standing a pressure of over 1,000 pounds to the square inch, but very flexible. [Mulconroy Co., Inc., No. 722 Arch street, Philadelphia.]

A NEW AVERAGING INSTRUMENT.

A NOVEL piece of engineering apparatus is the new Bristol-Durand Radii Averaging Instrument, for circular chart records, of which an illustration appears here. As automatic recording instruments for pressure, temperature, and electricity, using circular charts, have come into such general use, there has developed a demand for a simple device to quickly determine the average of the record made on such charts, and the integral



BRISTOL-DURAND RADII AVERAGING INSTRUMENT.

value for the whole 24 hours, or for the time covered by the record. The instrument illustrated embodies a wooden base with a metal socket, which is provided for supporting and centering the chart. The socket holds a rotatable pin with a vertical slot at the top to receive the bar which carries the integrating tracer point and triangular support. The vertical groove in the rotatable pin allows the integrating wheel to roll on the chart with uniform pressure due to its own weight. The manufacturers are The Bristol Co., at Waterbury, Connecticut.



Rubber Club of America at Riverside.

THE twelfth annual midsummer outing of The Rubber Club of America—counting from the time when it was the New England Rubber Club—occurred on the afternoon of July 19, when the members, gathering in Boston, journeyed to the beautiful Riverside Recreation Grounds, at Weston, on the Charles River, of which they had for the day exclusive use. Of course, the many guests of the members of the club were not excluded, either from the grounds or from the day's programme or from participation in the fun which permeated the whole park and protruded from all its bounds.

The members and guests began to arrive on the grounds about 1.30 o'clock, and for two hours or more there was a steady influx of jolly rubber men, apparently filled to the limit with expectations of pleasure and—if anticipation of the story may be indulged at this point—every one at the close of the day felt that it had been good for them to be there.

The first thing that happened was the attack upon the "Rubber Dodger," a feature illustrated in the programme, which, as a representative of "\$3 rubber," proved about as hard to hit as the recent crude rubber market has been. And if the efforts of the rubber manufacturers to knock out the rubber dodger may be accepted as the criterion of their skill at throwing, something may be expected to happen before long to the prices of raw material.

The rival baseball teams organized among the rubber men then started for the ballfield, headed by the Lynn Cadet Band, with Lieutenant Francis H. Appleton as drum major, and followed by a large and admiring contingent of the club party. The two teams were the "Fats" and the "Thins." The members of the first were arrayed daintily in "Mother Hubbard" gowns, topped with millinery, which would have brought exceeding joy to feminine hearts about 1853. The "Thins" wore overalls and horse hats of the type prescribed by the Society of Prevention to Cruelty to Animals in Paris, New York, and some other places. Every player, irrespective of "form, weight or past performance," smoked a cob pipe and prayed for a substitute. [There will be no reference in this article to rubber substitutes.]

When the ballfield was reached Umpire Francis H. Appleton—he had exchanged the baton for the bat—promptly called the game. The sphere used was of the "house" baseball type. Nine

innings, prolific of "classy" batting average and almost-home runs, were applauded generously by a discriminating gallery, victory finally crowning the "Thins."

The Thin team: W. Page, p.; W. J. Kelly, c.; R. E. Paine, 1 b.; F. D. Balderston, 2 b.; W. L. Pitcher, s.s.; R. L. Chipman, 3 b.; J. T. Callaghan, l. f.; C. R. Richmond, c. f.; M. G. Hopkins, r. f.

The Fat Team: H. D. Scott, p.; R. L. Rice, c.; F. D. Hood, 1 b.; G. H. Mayo, 2 b.; F. T. Ryder, 3 b.; A. W. Stedman, s.s.; F. H. Jones, l. f.; E. F. Pfaff, r. f.; J. E. Dunbar, c. f.

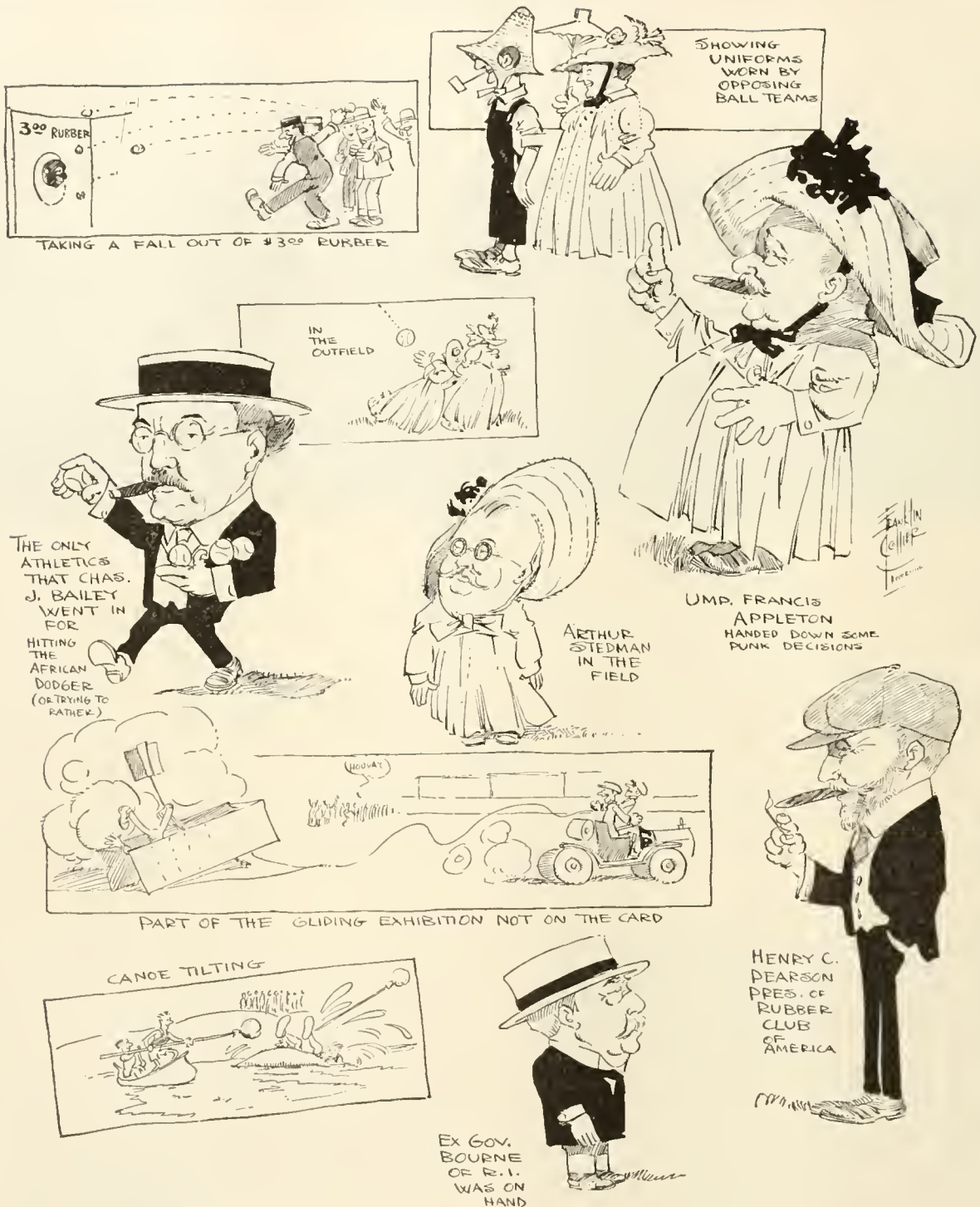
THE SCORE.

Innings	1	2	3	4	5	6	7	8	9
Thin Men	2	0	1	1	0	0	2	4	1—11
Fat Men	0	1	0	4	1	0	1	0	3—10

Robert W. Warren, an aeronaut of Waltham, was a guest of the Club during the afternoon. He came provided with an aeroplane glider, with which he made a flight. The machine is il-



MR. WARREN AND HIS GLIDER.



THE RUBBER MEN LOOKED GOOD TO THE BOSTON "GLOBE'S" CARTOONIST.

lustrated in this report. Toward the end of the flight, the grounds not being provided with the particular brand of wind suited for the glider, its guide made an unexpected sudden descent, but fortunately escaped injury. The ascent was made with the assistance of Mr. G. E. Habich's "Cole 30" automobile, in towing.

Water sports succeeded. Mathew Mann, who has had much experience in England and America, gave a much applauded exhibition of diving and submarine swimming. A 50-yard handicap swimming competition was won by Eldon Arthur, with Alexander Sutherland second, in 32 seconds.

Sutherland won the costume race, with Louis Kirth second.

The other entrants in this event lost valuable time in getting into their duds.

Mann and Sutherland won in the canoe tilting, which was an amusing event. Then there was relay racing, a little water polo, and—at 6:30—the call for dinner.

Perhaps a happier body of men never sat down to a dinner, or to one more acceptable. The viands, the music and what not were all that could be desired, and 9 o'clock, the time for leaving, came all too soon.

Arrangements had been made for golf at the Woodland Golf Club, where a game took place in the morning, the players having lunch there before starting for Riverside. The prizes offered:

- First. Thermos bottle in a leather case.
- Second. Silver plated edged with a spirited golf scene and framed in ebony.
- Third. A silver cup.

THE GOLF SCORE.

	Gross.	Hand'p.	Net.
George L. Clark.....	84	24	65
F. D. Balderston.....	83	12	71
R. E. Paine.....	81	12	72
L. B. Page.....	78	4	74
M. G. Hopkins.....	101	24	77
F. P. Lee.....	95	16	79
W. G. Page.....	85	4	81
J. H. Learned.....	105	24	81
A. W. Stedman.....	99	18	81
W. J. Kelly.....	106	24	82
G. E. Hall.....	102	18	84
R. L. Chipman.....	95	10	85
H. C. Mason.....	97	12	85
T. F. Kimball.....	111	18	93

PRIZES.

- Best net: George L. Clark.
- Second best: F. D. Balderston.
- Best gross: L. B. Page.

TWELFTH ANNUAL OUTING

Rubber Club of America

Program and Menu



JULY NINETEEN NINETEEN TEN

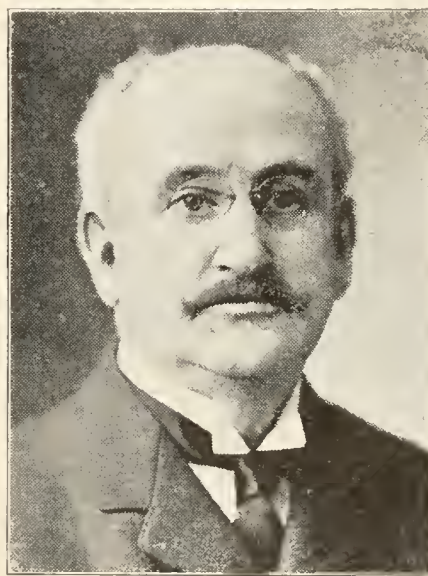
MENU.

- Cocktails
- Iced Olives Anchovies
- Little Necks
- Clear Consomme
- Clam Bisque
- Broiled Soft Shell Crabs—
- Tartare Sauce
- Sliced Cucumbers
- Sauterne
- Mignonette of Tenderloin
- Sauce Soubise
- Tomatoes Moderne
- Frozen Tom and Jerry
- Roast Spring Duckling
- New String Beans
- Potatoes au Gratin
- Champagne
- Salad Espagnolle
- Assorted Cakes
- Peach Ice Cream
- Frozen Pudding—
- Sherry Sauce
- Coffee
- Toasted Crackers
- Port de Salut

THE LATE THOMAS J. SKINNER.

THE fact that widespread public notice is not taken of the passing of a man more or less prominent in business does not argue that the loss to an industry or to a community is small. For there are quiet characters who rarely appear before the general public, yet who are as truly representative, helpful, public spirited citizens as many more expertly advertised contemporaries. Of this quiet, modest, admirable type was Thomas Judson Skinner, who up to two years ago was actively connected with the Stoughton Rubber Co., and indeed held the office of treasurer to the day of his death.

Mr. Skinner was born in Wakefield, Massachusetts, August 27, 1844, the town then being a part of Reading. After a high-school education he was apprenticed to learn the shoemaker's trade, but later went into a general store in Wenham, Massachusetts, and after a short time secured a position with the old firm of Daniel Allen & Co., and in 1870 was admitted to the firm. Later the name was changed to Maynard, Skinner & Co.,



THE LATE THOMAS J. SKINNER.

which partnership was dissolved in 1882. Then for ten years Mr. Skinner handled the finances of a wholesale house in State street, Boston. In 1893 he accepted the treasurership of the Stoughton Rubber Co. This position he filled with much ability.

In his home town, Wakefield, he was a model and valuable citizen. He served for ten years as auditor of its accounts, then twenty years as town treasurer. He was one of the organizers of the Wakefield Savings Bank, and was successively trustee, vice-president, and president, resigning in 1907. He was the first president of the Wakefield Coöperative Bank, and director in the Wakefield National Bank. He was for twenty-five years treasurer of the First Parish Congregational church and a practical working member of many influential town committees. He was a member of Golden Rule Lodge, F. A. M., and having served in the civil war, was a member of H. M. Warren Post, No. 12, G. A. R. He belonged to many other organizations, including The Rubber Club of America. He is survived by a son and two daughters.

In anticipation of the flight of Mr. Grahame-White from London to Paris large numbers of people availed themselves of the opportunity of seeing his aeroplane on exhibition for several days in High Holborn. This machine is British built and covered with "North British" aeroplane fabric.

AN unexplained fire on a railway siding near Torreón, Mexico, destroyed two box cars and guayule shrub valued at \$25,000 (Mexican).

Some Rubber Interests in Europe.

REPORT OF THE "PROWODNIK" COMPANY.

THE report of the directors of the Russian-French India Rubber Co.—the "Prowodnik" firm—at Riga, presented at the twenty-second annual meeting, held in May, related to the accounts for the business year 1909. The results compared with 1908 as follows (in rubles):

	1908.	1909.
Receipts	21,673,587.21	22,864,641.44
Expenses	19,690,947.16	20,654,461.04
Net profits	1,983,540.05	2,210,180.40

[1 ruble = 51.5 cents.]

Other details from the report for 1909 follow:

ABSTRACT OF ACCOUNTS FOR 1909.

Receipts	22,864,641.44
Expenditures	20,654,461.04
Profits for 1909	2,210,180.40

DISTRIBUTION OF PROFITS.

Amortization by installments	696,677.79
Government taxes	141,707.32
Amount paid to the board of inspection	31,900.11
Remuneration to the committee of revision	2,500.00
Amount paid the management and gratifications to employés, technicians, foremen and workmen	221,148.58
Dividend, 12 per cent.	1,080,000.00
Transferred to special reserve account	36,246.60
Total	2,210,180.40

BALANCE SHEET, JANUARY 1, 1910.

ASSETS.

Land, buildings, machines, apparatus, tools, etc.	9,444,724.84
Patents	57,265.00
Cash, sight drafts, bills of exchange and bank deposits	2,026,157.92
Raw material, goods partly manufactured and merchandise at the factory	4,091,192.40
Manufactured goods in outside warehouses	4,941,317.47
Divers debtors	6,661,756.65
Transient amounts	196,120.02
Shares, in vaults and in the hands of debtors	143,700.00
Total	27,562,234.30

LIABILITIES.

Capital of the company	9,000,000.00
Amortization installment funds	4,553,303.78
Reserve capital	4,568,516.11
Special reserve	1,278,744.60
"Del Credere" capital	218,229.92
Divers creditors and acceptances	6,340,794.80
Employés' saving fund	214,477.60
Less amounts administered direct by the "caisse d'épargne" ..	93,102.96
Shares deposited in the hands of debtors	143,700.00
Transient amounts	61,509.57
Taxes for 1909	141,707.32
Guaranty fund for "Del Credere" debtors	53,609.56
Dividend for 1909—12 per cent.	1,080,000.00
Dividends from previous years not claimed	744.00
Total	27,562,234.30

The company was chartered August 8, 1888, with a capital of 700,000 rubles [= \$360,500], and began operations in the following year.

Within the past two years the share capital of the company has been increased from 7,000,000 rubles [= \$3,605,000] to 9,000,000 rubles [= \$4,635,000], in compliance with a vote at a special general meeting on August 23, 1908. The new share issue was completed on December 23 of that year—20,000 shares of 100 rubles issued at 200 rubles, and netting 3,954,656.99 rubles after paying the stamp tax and other expenses of issue. The result was to add to the share capital 2,000,000 rubles and to the reserve funds 1,954,656.99 rubles. The new shares ranked for dividends from January 1, 1909. Hence at the same rate of dividend—12 per cent.—the distribution was 1,080,000 rubles [= \$556,200] for the last business year, as against 840,000 rubles [= \$432,600] for the business year 1908.

The Russian word Prowodnik—which is printed here in the Russian alphabet—does not indicate a locality, but is to be translated "Conductor," in the sense of a leader of the business, or the one in front. We have known this word to be translated

"a live wire," but we believe this rendering is not used in the office at Riga.

ПРОВОДНИКЪ

[The first nine letters are equivalent to the English PROWODNIK; the final letter is a guide to the pronunciation in Russian.]

The name of this company is expressed in their trade publications in English as The Russian-French India Rubber, Gutta-percha and Telegraph Works "Prowodnik," Riga, the style being due to the fact that an important amount of French capital was employed in its foundation. In French the style of the company is Société des Fabriques Russes-Françaises pour la production des articles des Caoutchouc, de Gutta-Percha et de Télégraphie "Prowodnik," Riga. In their German correspondence the style used is Gesellschaft der Russisch-Französischen Gummi-, Gutta-percha- und Telegraphenwerke in Firma "Prowodnik," Riga. A general view of the works appears in THE INDIA RUBBER WORLD, June 1, 1910 (page 323).

Products of the Prowodnik comprise perhaps as wide a range of india-rubber and gutta-percha goods, including hard rubber, as is the case of any other factory in this industry in the world. Besides, asbestos and linoleum goods are included. Not only is every important class of rubber products included, but a great variety is made in each class. For instance, their catalogue of stationers' goods is illustrated with representations of fifty styles and shapes of erasers, many of them of ornamental design such as are not shown in the American market. There are erasers ornamented with such various subjects as a beehive, a horse racing, representations of postage stamps, the Eiffel tower, a cannon mounted, animals and birds of many kinds, and so on—lettered in languages to suit the prospective trade. These details are mentioned here to indicate the very great attention which is given to meeting every possible demand, and the same care is reflected in the manufacture of rubber tires for all purposes, footwear, clothing, railway and steamship appliances, and so on. The company are large exporters, maintaining agencies not only throughout Europe, but in Asiatic Russia, Persia, China, and Australia.

The administration of the Prowodnik company is in the hands of a board of directors consisting of B. W. Wittenberg, R. Lehmwald, H. Kunkel, A. V. Hertwig, and E. Koch. Mr. Wittenberg is director general and president of the board. There is also a *Conseil de Surveillance*, consisting of Paul A. Schwartz, Th. H. Schwartz, W. Vajen, J. Erhardt, B. Herberz, F. Uthemann, R. Finaly, and L. Vernes.

GERMAN TIRES AND THE FRENCH TARIFF.

[FROM THE "GUMMI-ZEITUNG."]

MANY references have been made in the *Gummi-Zeitung* to the disadvantages against German industries, and especially the rubber industry, as a result of the high French tariff. The German trade in all of the rubber articles exported to France suffers severely under the new tariff. Toys, surgical articles, and special rubber goods are now taxed more than ever before "to protect French industry to a sufficient extent against German competition."

To the extent of protective duties not being prohibitive of trade, every country must be allowed to use them in its interests. But the new French tariff is extremely rigorous, and it suppresses importation to a very great extent.

It can be especially stated, in its application to automobile tires, that the tax has been increased 30 per cent. This tariff now amounts to 100 francs for 100 kilograms [= \$19.30 for 220.46

pounds]. The *Hannoverscher Courier* states, regarding the report of specialists:

"The effect is that the exportation of rubber tires will diminish, and that factories will to a still greater extent establish branches in France, and there produce rubber tires to fill the demand of the French public which cannot be satisfied by the French production itself."

It is doubtful that French industry will profit by such methods, as these new establishments will be quite a competition to French production, as was the previous importation. On the other hand, no one will object to it, as French automobile tire factories have their branches in Germany. [There are, for instance, the Michelin and Hutchinson firms. EDITOR I. R. W.]

We can only hope that the French government will revise the new tariff, on account of its rigorosity, and change it as soon as possible, so that the hostilities between French and German rubber tire manufacturers will be stopped. Such a manifestation of sharp competition does not contribute to an increase of the respect of the public for either the German or the French automobile tire manufacturers.

SUSPENSION OF A GOLF BALL COMPANY.

At a special meeting of shareholders of Hutchinson, Main & Co., Limited, manufacturers of golf balls, Springvale Works, Cowlairst, Glasgow, Scotland, on July 1, it was resolved to wind up the business, and Messrs. John M. McLeod and Robert D. Fraser, chartered accountants, of Glasgow, were named as liquidators. The concern mentioned, formerly a copartnership, was registered as a limited company in Edinburgh, early in 1906, with £100,000 [= \$486,550] capital. The Hutchinson company were the defendants in the notable litigation instigated by the Haskell Golf Ball Co. (Akron, Ohio), for the defense of their British patent, which case was brought up to the British house of lords, the decision of which was unfavorable to the American company. [See THE INDIA RUBBER WORLD, January 1, 1908—pages 110-112.]

A NEW PRODUCT FOR USE IN THE ARTS.

BY DR. F. G. WEICHMANN.*

THE base of this new material is vegetable-albumin, under which generic term vegetable ivory, the vegetable caseins, glutens, hemi-celluloses, reserve-celluloses, horny-albumins, etc., are included.

The vegetable-albumin, from whatever source derived, is treated with one or more substances, which convert it into a new substance, a plastic eminently well adapted for use in the arts and industries. To this new plastic the name "Protal" has been given.

Any and all materials commonly used in the rubber industry may be incorporated with protal. About a hundred different protal compounds have been produced and, of course, the properties of these compounds vary with the ingredients employed.

Protal can be molded, pressed, or otherwise formed into any desired shape. It is odorless, resilient, and can be cut, sawed, filed, polished, tapped, and counter sunk, like hard rubber. It can be colored by dyes, and all pigments can be incorporated with it. It is non-explosive and is very resistant to the influence of heat and electricity.

Among the great number of protal compounds which have been made, there are some which contain rubber, rubber substitutes, shellac, rosins, asbestos, etc. Some of these products remain plastic and moldable for a long time and possess the remarkable quality of hardening on immersion in water.

Compounds of protal with rubber, rubber fluxes, and some of the so called rubber substitutes, exhibit a wide range in their properties. They can be made hard, semi hard or soft, which

of these qualities they are to exhibit being determined by the choice of loading materials and by the conditions of heat and pressure governing their production.

Among the most important compounds of protal, is protal-bakelite. "Bakelite" is that most interesting and valuable product, the discovery of which was announced last year by Dr. L. H. Baekeland, of Yonkers, New York, and which is, as is well known, a condensation product of phenol and formaldehyde.

Protal-bakelite possesses many valuable qualities. It exhibits great resistance to nearly all chemical solvents. It is an excellent electric insulator, is capable of taking a high degree of polish, can be produced in almost every color, and is well adapted to the many purposes and uses for which hard rubber and hard rubber compounds are, at present, almost exclusively employed.

It possesses the great advantage over hard rubber of not being subject to oxidation, of not softening on the application of heat, and of not being attacked by oils and bodies of a similar nature.

Any and all materials, organic as well as inorganic, may be incorporated with protal-bakelite, thus giving rise to a great number of compounds which possess very different qualities, and properties and which are adapted to a great variety of uses.

Protal-bakelite compounds have, as before said, great dielectric strength, ranging from about ten thousand volts to about twenty-six thousand volts per millimeter.

It would be practically impossible to specify all of the uses to which this new plastic may be put. It need only be borne in mind that this is a plastic which can be fashioned into any shape, which can be molded and pressed, which is capable of taking a high polish, which is not affected by water—cold or boiling—which is resistant to practically all chemical solvents, which can be tooled and machined with ease and which is produced in both flexible and rigid form.

In cost, this material compares very favorably with rubber, and every day witnesses its introduction into new fields of industry. The manufacture of protal and of protal-bakelite is in the hands of a New York concern, the Protal Co., with works at Bridgeport, Connecticut, and Yonkers, New York.

* * *

EDITORIAL NOTE.—Vegetable ivory, mentioned in the preceding article, is the same as the ivory nut, the seed of the ivory palm, native of South America; known also as corozo. The albumen is close grained and very hard, resembling the finest ivory in texture and color, and capable of being wrought into ornamental work. The quantity of ivory nuts entering into commerce is very great. The average importations into the United States for some time past have been over 9,200 tons a year, and the consumption in other countries still larger. Hitherto when vegetable ivory has been worked into buttons and the like the scrap cuttings have been regarded as valueless. It is now used, however, as the base of such products as "Protal."

* * *

THE firm Bakelite Gesellschaft, m. G. H., has been incorporated in Germany, at Berlin. The object of the enterprise is to produce, sell and use the Bakelite, invented by Dr. Baekeland, of New York. The company is also to use the patent which was granted to Dr. Baekeland, and to produce and to sell all the materials which compete with Bakelite, especially the condensed products and plastic masses, and also to acquire and use the patents to be granted for the production and uses of such products. The capital stock is 300,000 marks [= \$71,400]. The business managers are Consul Sali Segall, of Charlottenburg, and Max Wieger, PH.D., of Erkner.

THE botanic gardens of Ceylon are mentioned as having dispatched, early in May, thirty-six Wardian cases of *Hevea Brasiliensis*, consigned to the Liberian Rubber Corporation, Limited.

*Abstract of a paper read before the American Institute of Chemical Engineers, at the second semi annual meeting, Niagara Falls, Ontario, June 22-24, 1910.

Colonel Colt's Fourth of July.

THE quaint old town of Bristol, Rhode Island, near Providence, celebrated the Fourth of July this year more enthusiastically and picturesquely than often happens, in Bristol or any other town. The whole day was given up to it—from 6 in the morning, when the Bristol train of artillery fired a salute and the bells of all the churches were rung, ushering in the day, until 9:30 at night, when the grand display of fireworks came to an end.

There was a grand parade—military, naval and firemen's—a review of the procession by the governor and his staff, the reading of the Declaration of Independence in the opera house, followed by an oration by the governor. Then there were band concerts, exhibition drills, a baseball game and a cutter race between the crews of the Bristol Naval Reserves and the United States cruiser *Tacoma*. The *Tacoma*, by the way, was not the least feature in the day's celebration; it was one of the biggest things Bristol had seen in many a day in the celebration way. The navy boat was a principal attraction, being visited by thousands of citizens. And the salute that she fired in honor of "the day" certainly did awake the town.

A midday function of more than usual interest was the throwing open of the old De Wolf Homestead—"Linden Place"—where from 12 o'clock until 3 Colonel Samuel Pomeroy Colt, president of the United States Rubber Co., entertained the governor and his staff and the citizens of his town. The homestead, a spacious mansion of colonial architecture, was erected by Senator James De Wolf, Colonel Colt's grandfather, just a hundred years before.

In the rear of the house, on the beautifully shaded lawn, luncheon was served for the crowds who attended the reception. It is something of a strain for any one to put in a whole day of reception work, beginning with the morning meeting, and greeting the governor, escorting him to the opera house, riding

in the state carriage in the procession, reviewing it, and then attending and participating in all the other festivities, but Colonel Colt did all this without apparent fatigue. At the reception at Linden place he put in several strenuous hours shaking hands and chatting, and was in every way his old-time, robust, genial, tactful self.

THE INDIA RUBBER WORLD's correspondent stops here to suggest that any deficit in the space allotted to him be filled out with a list of the guests at Linden Place, but this item alone would crowd out the trade news and market reports and half the advertisements booked for this issue. The list of guests must be omitted, therefore, beyond the names of Governor Augustus O. Bourn, Walter S. Ballou (president of the Woonsocket Rubber Co.), the chiefs of staff of the Industrial Trust Co., but the names can't all come in here.

There must not be omitted, however, a mention of the state coach in which Senator De Wolf used to drive to and from Washington in the years beginning with 1821, when he used to serve Rhode Island in the councils of the nation, before the days of railroads. In this antique vehicle, in the formal parade, rode Governor Pothier and his lady and the Governor's aide and Colonel Colt, amid the cheers of everybody in Bristol, for the entire population, apparently, was on the streets.

CENTENNIAL LUNCH AT LINDEN PLACE.

	Sweetbread	Cutlets with Peas	
	Cold Whole Salmon	Mayonnaise	
		Olives	
Lobster Salad			Chicken Salad
	Filet of Beef, Moderne		
Assorted Cake			Salted Nuts
	Ice Creams		Ices
		Strawberries	
Lemonade			Appolinaris
		Coffee	



"LINDEN PLACE"—THE DE WOLF HOMESTEAD—NOW THE RESIDENCE OF COLONEL COLT.

RUBBER IN POLITICS AGAIN.

CERTAIN public utterances in relation to the india-rubber industry, made recently by some gentlemen of prominence and widely diffused through the newspapers, evidently have not been inspired from well informed sources. They have appeared in connection with the never ending discussion of the tariff question, and, by the way, it is singular how much misinformation creeps into discussions in this field, whether the speakers favor or oppose a protective tariff. There is no intention in this place to consider any tariff argument, but to put on file some facts bearing upon the subject of recent public addresses, and it may be added that this is done not at the instance of any rubber company and without consultation with any such company.

The Hon. Joseph L. Bristow, one of the United States senators for Kansas, on July 8, addressed the Chautauqua Circle at Winfield, in that state, on the Tariff act of 1909 which, he claimed, had been manipulated by United States Senator Aldrich in respect of the rubber schedule, for the enrichment of the latter's family and a few friends.

Points made by Mr. Bristow are that the new tariff act, which became effective on August 5, 1909, raised the duty on imports of rubber manufactures; in September "it was discovered that the organization of a rubber trust was being consummated"; that this was completed on December 6, 1909, by the merger of the last of several companies with the Intercontinental Rubber Co. The speaker continued:

"Since the organization of this trust there have been rapid advances in price of every rubber product from automobile tires to babies' rattles. The profits that this gigantic monopoly is making for its incorporations and promoters, the Aldriches, the Guggenheims, and the Ryans, are illustrated by the dividends that have been paid since these mergers became effective."

Continuing, the speaker recites: "On January 10, 1910, one month and four days after, a dividend of 7 per cent. was paid on the preferred stock; on February 10, 1910, another 7 per cent. dividend was paid; on March 10, 1910, another dividend of 4.2 per cent. was paid, making 18.2 per cent. dividends in three months and four days."

A few facts bearing upon the above may be briefly stated here:

1. The Intercontinental Rubber Co. is not engaged in the manufacture of rubber goods, but in the production of crude rubber in Mexico and on the Congo. Crude rubber being on the free list, its importation is not affected by the tariff.

2. The Intercontinental Rubber Co. was incorporated December 6, 1906, by the same interests that already owned and were operating crude rubber businesses under different corporate titles. Their relation one to another was outlined in THE INDIA RUBBER WORLD as early as June 1, 1907 (page 283). No real change in the character of the businesses referred to is known to have resulted from their consolidation.

3. The dividends on the shares of this company are cumulative, at the rate of 7 per cent. per annum. No dividend was paid until October, 1908, the company's earnings having been retained for the further development of the business and to place the company on a firm financial basis. The first dividend was paid in that month, followed by the other dividends mentioned by Mr. Bristow; in other words, accumulated profits were disbursed in dividends at short intervals until the company had "caught up."

* * *

THE Hon. Jonathan P. Dolliver, a senator from Iowa, in a speech in the United States senate just before the recent adjournment, confessed that that body had voted on the Tariff bill without having sufficient information. If the honorable senators had known, for instance, that, under the old rate of duties, automobile tires were being made with such profit that a single company in Akron, Ohio, had declared stock dividends which increased its capital from \$50,000 to \$10,000,000—"if we had

known that, do you suppose the senate would have listened with patience to the senator from Rhode Island [Mr. Aldrich] when, after admitting that rubber weaving material like boots and shoes needed no protection, he said 'but there are rubber tires of automobiles?'"

Doubtless most readers, particularly those in the rubber trade, would have been more interested if the speaker had appended to his remarks details verifying his statement regarding stock dividends.

A MISDIRECTED "RUBBER" DISPUTE.

[FROM THE NEW YORK "JOURNAL OF COMMERCE," JULY 23.]

SENATOR BRISTOW, the "insurgent" of Kansas, and Speaker Cannon have been indulging in a heated controversy over the effect of increasing the duty on manufactures of india-rubber from 30 to 35 per cent. *ad valorem*, a controversy that seems to have been quite misdirected and futile. The Kansas senator discovered that Senator Aldrich and his son and son-in-law had a large interest in certain rubber companies which have been merged in a combination since the Payne-Aldrich tariff raised the duty.

He also discovered, or thought he did, that the importation of rubber goods had considerably diminished since the duty was raised, presumably to the profit of the "rubber combine." Speaker Cannon disputed Bristow's statistics and declared that rubber imports had increased since the change in the duty, which would not signify much if true.

There is a good deal of mixing up of facts in this warm weather controversy in Kansas, and a good deal of misapplication of assumptions. There has in fact been a considerable decrease in the importation of manufactures of rubber in the last year, but there was a still larger decrease in the previous year, before the change was made in the tariff. What effect the increase in the duty had, no man can calculate, but it was probably not large. A more pertinent question would be how much the domestic manufacture increased as the result of the tariff.

But where Mr. Bristow failed to aim straight was in directing his shafts against certain companies and a combination which are not engaged in manufacturing rubber goods in this country at all, but in the production and importation of crude rubber upon which there is no duty. Whether or not the Aldriches are interested in what is known as the "rubber trust" does not appear, but the concern with which their names were associated by Senator Bristow is not "it," but an entirely different organization, not directly concerned in the manufacture or in the manufactured goods.

Still, the increased tariff on the manufactures, if it increases the domestic industry, may add to the profit of the American importers of the crude material. Their relation with the manufacturers may produce a community of interest sufficient to account for Senator Aldrich's part in having the duty increased and give color to the insurgent senator's charge of a personal interest in the result.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of the value of exports of manufactures of india-rubber and gutta-percha for the month of May, 1909, and the first eleven months of five fiscal years, beginning July 1:

MONTHS.	Belting, Packing and Hose.	Boots and Shoes.	All Other Rubbers.	TOTAL.
May, 1910	\$173,994	\$198,995	\$540,133	\$913,122
July-April	1,580,088	1,593,696	4,082,427	7,256,211
Total, 1909-10	\$1,754,082	\$1,792,691	\$4,622,560	\$8,169,333
Total, 1908-09	1,371,586	1,208,473	3,468,945	6,049,004
Total, 1907-08	1,225,618	1,486,959	3,443,465	6,156,042
Total, 1906-07	1,135,116	1,082,003	3,358,459	5,575,578
Total, 1905-06	1,119,010	1,425,324	2,685,511	5,229,845

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

THERE is some indication that an improved condition of business is already felt in the commercial life of the houses engaged in the rubber industry on the coast. Improvement has been slow. However, it is safe to say that most of the houses are doing a regular routine business, though nothing that could be called rushing. The old story about cost of material, competition and low prices is still heard on all sides. As this is the season when people are thinking more about their vacations than about new undertakings, or at least, if they think they are not able to go for vacations, when they can talk about other people being away so that it is hard to find anybody to sell goods to, the consequences are that it is a rather quiet season.

Some houses believe in making a big stir on the theory that it is good policy to appear prosperous during even quiet times, and so they are not holding back at all in the matter of stock and sales force. The outlook is good, and although that too has come to be an old story with the trade, nevertheless it is being verified little by little.

* * *

AN Eastern rubber man who has been studying conditions on the coast makes some remarks not altogether complimentary to San Francisco, but which he believes to be true, and which he thinks ought to be remedied. "I was surprised when I got to looking into conditions here," he said, "to find what a cheap quality of goods is being used on the coast. Everybody in the trade seems to talk cheapness, and cheap goods are scattered everywhere. The rubber merchants cut and undersell until they get things down to apparently low rates. But what is the result? The result is that they reduce the quality of their goods. They can't and they don't sell high quality goods at their present prices.

"All of your fine new buildings in San Francisco have been supplied with a very cheap grade of stuff. This is not because they would not have bought the best, but because the dealers are breaking their necks to sell them the cheapest. A merchant came to me and I showed him something for 22 cents. He made an awful fuss. Then I started to tell him that I could make a price of 15 cents.

"Now you are talking," he interrupted.

"Yes," I said, "but look at the cheap stuff I have to make for 15 cents. We can supply it, but it is no good."

"Well," he said, "that is what the people want."

"Now there must be something wrong. This is a big, rich territory, and I do not believe that all the people here want cheap stuff. I think the trouble is with the dealers, and I think that they ought to commence to show their best goods and ask the right price for them."

* * *

MR. F. S. MIXOR, secretary of the Goodyear Rubber Co. (New York), passed through San Francisco last week accompanied by his wife, on the way to Japan for a two months' trip.

MR. R. H. PEASE, of the Goodyear Rubber Co., has returned from a week's automobile trip over the Sierras to Truckee and Lake Tahoe. Today he will start for Portland for a two weeks' trip. He states that the general business is running ahead, both in the San Francisco and Portland stores, and now with seasonable weather in the fall they will have an excellent year as they have taken plenty of advance orders. Mr. Runyan, with this firm, has returned from a business and pleasure trip to San Diego and southern California.

The firms are still talking about the good business on tires, but the rise in price has had the effect of making things a little quiet in that line lately. Just before the rise, however, all of the dealers made a big clean up.

The Gorham Rubber Co. have opened a branch store at Spokane Washington. Here they have placed W. J. Roope in charge. This makes three branches that this firm have started up within

the past two months, one in Oakland, where Harry Carlton has been placed as manager, and the other in Portland, where J. H. Smith is the manager. The Portland store is under the Seattle store.

MR. PHILLIPS, of the fire department of the Seattle branch of the Gorham Rubber Co., was in San Francisco last week on his vacation. Mr. Gorham is at present in Seattle, and from there he will make a trip East.

* * *

MR. H. C. NORTON, manager of the American Rubber Manufacturing Co., has recovered sufficiently from a long attack of fever to be able to make short visits to his office. Soon he expects to be able to take up his regular line of duties. At the factory in Emeryville this company is doing a good business.

MR. A. T. DUNBAR, the new selling agent on the coast for the Boston Belting Co., is getting his salesrooms, at No. 55 First street, well filled with a stock of belting, hose, packings, and mechanical goods, and is now in line to commence active operations in his new offices.

Messrs. Squire & Byrne have opened a branch store at Los Angeles. This firm has been doing good work in their San Francisco headquarters and have concluded that they can best handle their growing business in the Southern portion of the State by establishing a branch there. The Los Angeles manager is "Dad" Tracy, of San Francisco.

MR. J. E. FRENCH, the present Pacific coast manager for the Pennsylvania Rubber Co. is preparing to take a trip through the northwestern territory, with the view to opening agencies at Seattle and Spokane, Washington, and Portland, Oregon. He states that he has received his first shipment of their new vacuum cup tire, which is taking well with tourists.

THE NEXT LONDON RUBBER EXHIBITION.

THE dates for the International Rubber and Allied Trades Exhibition, to be held in the Royal Agricultural Hall, in London, have been fixed finally for June 24-July 11, 1911, which dates will avoid conflicts with any other engagements for the use of the same building. The rubber fair will follow the Royal Military Tournament, which hereafter will be held at Agricultural Hall, instead of at Olympia, as formerly.

The British Colonial office has sent an invitation to the governors of all British colonies in which rubber is grown, suggesting that each colony be represented at the Congress.

German interest in the coming rubber fair has been indicated already in THE INDIA RUBBER WORLD. The official German committee will include Herr L. Hoff, general director of the Hamburg-Wien company; Kommerzienrat S. Seligmann, of the Continental-Caoutchouc und Guttapercha Cie.; Herr E. Spannagel, general director of the Berlin-Frankfurter company, and Dr. Soetbeer, general secretary of the Centralvereins Deutscher Kautschukwaren-Fabriken—together with several gentlemen connected, in an important sense, with the German interest in rubber planting.

MR. A. STAINES MANDERS, organizing manager for the rubber exhibition, in a letter to THE INDIA RUBBER WORLD, in pointing out what he regards as an important representation from other countries in prospect, expresses the hope that "the United States will follow suit."

* * *

THE Rubbers Growers' Association, the headquarters of which are in London, have decided to present to the committee of the International Rubber and Allied Trades Exhibition, to be held in June, 1911, the three medals (gold, silver and bronze), to be awarded for the best exhibits of certain kinds of crude rubber, under conditions to be announced later.

The *India-Rubber Journal* (London) is offering a silver shield of the value of 100 guineas [\$511], for the best sample of plantation Pará rubber shown at the exhibition.

News of the American Rubber Trade.

A LARGE SCRAP RUBBER BUSINESS.

THREE important firms trading in scrap rubber have lately been incorporated into one, with \$1,000,000 capital, under a charter from the State of New York. The firms are B. Loewenthal & Co., J. Loewenthal & Sons, and R. Loewenthal & Co. These houses individually heretofore have conducted a very extensive business in rubber scrap. By combining their resources and perfecting an extensive organization, they are placed in a very formidable position to compete for business all over the world in their line. The originators of the three firms were practically the pioneers of the business in scrap rubber—which has become so important as the basis of the rubber reclaiming industry—and their combined experience, together with the enterprise and enthusiasm of the large number of young men interested, points to a continued progress and prosperity of the company. The officers are:

President—B. LOEWENTHAL.

Chairman Board of Directors and General Manager—HERMAN MUEHLSTEIN.

Vice president—VICTOR LOEWENTHAL.

Second vice president—R. LOEWENTHAL.

Third vice president—J. LOEWENTHAL.

Secretary—PAUL LOEWENTHAL.

Treasurer—E. B. FRIEDLANDER.

Assistant secretary—R. M. LOEWENTHAL.

Assistant treasurer—MILTON LOEWENTHAL.

The New York offices and warehouses will be located at Nos. 481-483 Washington street. In Chicago, besides two warehouses, there will be a downtown office at No. 162 Fifth avenue. The Boston branch is at No. 161 Summer street, and the Akron branch at 504 Hamilton building.

THE B. F. GOODRICH CO.—\$20,000,000 CAPITAL.

A SPECIAL meeting of shareholders of the B. F. Goodrich Co. (Akron, Ohio), has been called for August 24, for the purpose of increasing the capital stock from \$10,000,000 to \$20,000,000. The increase is to be 7 per cent. cumulative preferred stock, the existing capital to continue to be common stock. It is the purpose of the directors at once to declare a stock dividend of \$5,000,000 in preferred shares, at par, and the balance of the increase in capital (\$5,000,000), before being sold elsewhere, will be offered to the stockholders of the company at par, *pro rata*. Arrangements will be made for the listing of both preferred and common shares on the New York Stock Exchange. Recent newspaper reports have mentioned quotations for Goodrich stock as high as \$325 for \$100 shares.

FIRE HOSE FOR NEW YORK CITY.

THE fire commissioner of New York City advertised for sealed bids for furnishing and delivering fire hose for his department, to be opened on June 16, as follows:

For the boroughs of Brooklyn and Queens: 30,000 feet of 2½-inch rubber hose.

For the boroughs of Manhattan, The Bronx, and Richmond: 20,000 feet of 2½ inch rubber hose.

For the boroughs last named: 10,000 feet of 3 inch rubber hose.

The only bid under the specifications was from H. W. Johns-Manville Co. (No. 100 William street, New York), who quoted \$1.44 per foot on the 2½-inch hose, and \$1.74 per foot on the 3-inch hose. THE INDIA RUBBER WORLD was informed at the headquarters of the fire department on July 22: "The award of contract was deferred." H. W. Johns-Manville Co. have not figured in the manufacture of fire hose or other rubber goods, but have the largest establishment in the country for asbestos goods, for electrical and other purposes. They have deferred giving any information in response to an inquiry regarding their interest at this time in fire hose.

FAULTLESS RUBBER CO.—FACTORY EXTENSION.

FOR the past year The Faultless Rubber Co. (Ashland, Ohio), have been engaged in changing and rebuilding their entire plant. At present they have under way two new buildings—a three story office and factory building, 50 x 175 feet, with brick walls and reinforced concrete floors, and a 50 x 50 feet addition to their present power plant. They also expect to begin work shortly upon another building, 75 x 150 feet, two stories, which likewise will be a fireproof structure. In the principal building now under way the latest appliances for the comfort of the employes will be installed, including an emergency hospital, a room where those who care to do so may assemble for their lunches, and a rest room for the girls.

NEW PROOFING WORKS AT SOUTH FRAMINGHAM.

A NEW company has been incorporated in Massachusetts, under the style A & A Rubber Co., to engage in the proofing of rubber fabrics for the trade and the manufacture of rubber novelties at South Framingham. The company start with an up-to-date factory and purpose specializing in high grade goods. They are reported to be beginning with a good lot of orders. Calvert B. Archer is president and Leon Aronson treasurer. Mr. Archer was superintendent for a number of years of the Milford Rubber Co., at Milford, which after a successful career went into voluntary liquidation in 1908. Mr. Aronson, one of the incorporators of the Milford company, was president of it throughout its career.

INTERESTING DECISION IN A SUIT OVER LEAD PROCESSES.

IN the United States circuit court for the eastern district of Missouri, eastern division, in the matter of the Picher Lead Co. v. St. Louis Smelting and Refining Co., in a decision by Judge Pollock on July 15, the defendants were enjoined from using certain apparatus necessary for the production of sublimed white lead, and covered by patents owned by the Picher Lead Co.

RECOVERY FROM A FIRE.

THE McFarland Foundry and Machine Co., Inc. (Trenton, New Jersey), advise THE INDIA RUBBER WORLD that, while the fire in their plant early in July caused them considerable inconvenience, it was not necessary to shut down, and they have been able continuously to take care of orders, both in their machine shop and in their foundry. The firm mentioned are specialists in molds for mechanical rubber goods.

TRADE NEWS NOTES.

THE office building of the Hartford Rubber Works Co. (Hartford, Connecticut), 44 x 65 feet in area, will have another story added.

The Apsley Rubber Co. (Hudson, Massachusetts), have a new artesian well on their property, 700 feet deep and capable of supplying 55 gallons of water a minute.

The General Asbestos and Rubber Co. (Charleston, South Carolina), have opened an office and warehouse at No. 96 John street, New York. They have obtained permission under the laws of South Carolina to increase their capital from \$25,000 to \$50,000. This company formerly was The Charleston Metallic Packing Co. [See THE INDIA RUBBER WORLD, March 1, 1910—page 222].

Jenkins Brothers (New York), are distributing a picture of Hero's first steam engine, made over 2,000 years ago, pointing out how much better it might have been if "Jenkins' '96 packing" had been used, instead of the grass and water and sand which Hero had to be content with.

The Revere Rubber Co. have removed their Boston store to No. Devonshire street.

RUBBER FOOTWEAR IN AN OHIO CITY.

THE growing importance of Columbus, Ohio, as a distributing center in the footwear trade is indicated by the recent incorporation there of the Andrews Shoe Co., with \$100,000 capital, for the purpose of carrying on a jobbing trade in boots and shoes and rubbers. The firm is headed by Messrs. W. H. Andrews, Sr., and W. H. Andrews, Jr., who have long been identified with this trade in that territory.

The Columbus Rubber Co., organized at Columbus at the beginning of the year, to handle several brands of footwear manufactured by the United States Rubber Co., are understood to have met with a large measure of success. By the end of the year they expect to be handling also a line of mechanical products of the United States company.

A TEXAS BALATA REPORT.

THE Big Bend Manufacturing Co., who have contracted with the State of Texas for the purchase of the guayule shrub on the State school lands in that State, it is understood, will build a factory at Valentine, in the extreme southwestern part of Texas, and opposite the Mexican State of Chihuahua. The company mentioned is under the same control as the Texas Rubber Co., who have been making guayule rubber for some time at Marathon, Texas. [See THE INDIA RUBBER WORLD, November 1, 1909—page 49.] The Marathon factory was mentioned recently as running day and night.

BICYCLE TIRE PRODUCTION.

THE Hartford Rubber Works Co. are reported to have made more bicycle tires during the month of June than during any preceding month for the last twelve years. Though the production was 45,853 tires, it was not large enough to fill the orders in hand. It is stated that plans are under way for expanding the company's capacity to 75,000 per month, or 900,000 per year. The capital of the company has been increased recently from \$200,000 to \$1,000,000.

The interest in cycling cannot be said to be dying out so long as new "records" are being made. At New Haven, on July 14, Frank L. Kramer covered 25 miles in 54:13—2 minutes and 15 seconds faster than the previous record.

NEW FIRE HOSE SELLING BRANCHES.

OWING to the demands of many of their new customers, the Eureka Fire Hose Manufacturing Co. (New York), have decided to open branch offices on or about September 10, on fire department matters, in Minneapolis, North and South Dakota, Iowa, Nebraska, New Mexico, Arizona, Nevada, Montana, Wyoming, Washington and Wisconsin. These branch stores will carry sufficient stock to meet all orders. Patrons in the territory referred to will thus have the advantage of doing business direct with the Eureka company, instead of through agents, as heretofore.

LITIGATION OVER TIRE COVERS.

SUITS have been entered in the United States circuit court in Boston by Hopewell Brothers, of Newton, Massachusetts, against two parties for selling tire covers, or tire cases, alleged to infringe the patents held by the former. The suit in one case is for selling a tire cover with the endless coil spring like the "Hopewell," and in the other for selling a tire cover buttoning along the tread, similar to the "Russell" case. Dealers and jobbers generally have been served with a notice by Hopewell Brothers advising them of the situation. The circulars contain details of the patents held by that firm.

FROM BASEBALL TO POLITICS.

MR. ALBERT G. SPALDING, who on July 17 filed a formal application as a candidate for the United States Senate from California, to serve from March 4 next, was one of the founders and is the present head of the enormous sporting goods business conducted in the United States as A. G. Spalding & Brothers and

A. G. Spalding & Brothers' Manufacturing Co., and in Great Britain as A. G. Spalding & Brothers. This business was begun in Chicago, March 1, 1876, with, it is reported, \$800 capital. The capital is now over \$4,000,000, and more than 3,000 persons are employed in the Spalding factories and stores. [See THE INDIA RUBBER WORLD, January 1, 1908—page 127.]

SPORTING GOODS TRADE.

THE "Sporting Goods Trade Directory" for 1910 is the third annual edition of this useful index of sporting goods manufacturers and of dealers in this class of goods. The book is issued from the office of *The Sporting Goods Dealer*, an excellent monthly published by Charles Spink & Son, St. Louis.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for four weeks, ending July 23:

COMMON STOCK, \$25,000,000.

[The treasury of a subsidiary company holds \$1,344,000.]

Last Dividend, April 30, 1900—1%.

Week	Date	Sales	Shares	High	Low
Week	July 2	Sales	7,350 shares	High 40½	Low 36
Week	July 9	Sales	3,900 shares	High 38¾	Low 35
Week	July 16	Sales	1,110 shares	High 37½	Low 36½
Week	July 23	Sales	3,600 shares	High 36¼	Low 32½

For the year—High, 52½, Jan. 3; Low, 32½, July 22.
Last year—High, 57½; Low, 27.

FIRST PREFERRED STOCK, \$39,824,400.

Last Dividend, April 30, 1910—2%.

Week	Date	Sales	Shares	High	Low
Week	July 2	Sales	2,300 shares	High 110¼	Low 107
Week	July 9	Sales	625 shares	High 109	Low 107
Week	July 16	Sales	900 shares	High 109½	Low 108
Week	July 23	Sales	1,000 shares	High 107¾	Low 105½

For the year—High, 116½, Jan. 10; Low, 105½, July 23.
Last year—High, 123½; Low, 98.

SECOND PREFERRED STOCK, \$9,965,000.

Last Dividend, April 30, 1910—1½%.

Week	Date	Sales	Shares	High	Low
Week	July 2	Sales	300 shares	High 76	Low 74
Week	July 9	Sales	200 shares	High 74½	Low 74½
Week	July 16	Sales	100 shares	High 73¾	Low 73¾
Week	July 23	Sales	400 shares	High 72½	Low 71

For the year—High, 84, Jan. 3; Low, 71, July 21.
Last year—High, 89½; Low, 67½.

SIX PER CENT. TRUST GOLD BONDS, \$19,500,000.

Week	Date	Sales	Bonds	High	Low
Week	July 2	Sales	50 bonds	High 102½	Low 102
Week	July 9	Sales	29 bonds	High 102½	Low 102
Week	July 16	Sales	121 bonds	High 102½	Low 102½
Week	July 23	Sales	17 bonds	High 102½	Low 102½

For the year—High, 104½, Jan. 15; Low, 102, July 9.
Last year—High, 106; Low, 102¼.

TRADE NEWS NOTES.

THE Severin-Lumbard Tire and Rubber Co. has lately been established in Dallas, Texas, at No. 492 Commerce street.

The Diamond Rubber Co. (Akron, Ohio), have leased for ten years the premises Nos. 807-809 Race street, Cincinnati, at a reported price of \$25,235 for the term. They plan an expenditure of \$6,000 for improvements.

Vancouver Rubber Co., Limited (Vancouver, British Columbia), have removed to larger and better premises, No. 550 Beatty street. The company were incorporated some three years ago, succeeding the business carried on formerly at Vancouver as a branch of The Gutta Percha and Rubber Manufacturing Co., of Toronto, Limited.

The Pennsylvania Rubber Co. (Jeannette, Pennsylvania), have established a branch in Detroit, Michigan, at No. 882 Woodward avenue, in charge of George E. Goble, who for some time represented the company in the Middle States.

The advertising department of the United States Rubber Co. has to do with making known the merits of that company's goods in eight languages besides English.

Contracts amounting to \$145,000 for paving streets in Westmount, a suburb of Montreal, were awarded recently by the municipal authorities to the Canadian Mineral Rubber Co., Limited.

MR. VOORHEES'S BEREAVEMENT.

A most regrettable accident occurred on July 16 in Jersey City, New Jersey, when Mr. John J. Voorhees, Jr., and his wife and child were driving. Their horse, becoming frightened, ran away, throwing the three from the carriage, and Mrs. Voorhees was killed. Mr. Voorhees and the child were very seriously injured, but have been improving. Mr. Voorhees is the treasurer of the Voorhees Rubber Manufacturing Co., of which his father was the founder and is the present head.

PERSONAL MENTION.

MR. EDWARD R. RICE, a director of the United States Rubber Co., and their manager of sales, is at present in Europe, on a tour of inspection of the company's foreign agencies.

Major J. Orton Kerbey, some time consul at Pará and later connected with the Bureau of American Republics in Washington, has in press a book entitled "An American Consul in Amazonia," which is understood to contain much interesting information regarding northern Brazil and its people.

Mr. Walter Ernest Tuthill and Miss Edith Maud Tuthill were married on June 28 at the home of the latter. Mr. and Mrs. Tuthill will reside at Cambridge, Massachusetts., Mr. Tuthill being in the employ of the Boston Woven Hose and Rubber Co. He is a graduate of Brown University, Class of '01.

Mr. William S. Katzenbach, of Katzenbach & Bullock Co. (Trenton, New Jersey), spent the month of July on vacation in the Adirondacks.

TRADE NEWS NOTES.

THE board of directors of the United States Rubber Co. have declared from net profits a quarterly dividend of 2 per cent. on the first preferred stock and a quarterly dividend of 1¾ per cent. on the second preferred stock, payable July 30 to holders of record on July 15.

The Atlantic Insulated Wire and Cable Co. (New York), have appointed Mr. Samuel D. Gloss, formerly with the Simplex Electrical Co., sales manager, to succeed the late Mr. George F. Porter.

The United States Whip Co. (Westfield, Massachusetts), while not to be classed as rubber goods manufacturers, use a considerable quantity of vulcanized and unvulcanized sheeting in the manufacture of certain lines of whips. Their business as a whole is very large, the company being capitalized at \$1,000,000.

The Liverpool Rubber Co., Limited, are represented in Canada by Mr. M. B. Steine, No. 86 Grey Nun street, Montreal, who carries a stock of the Liverpool rubber footwear.

Mr. Everett S. Benson has been elected secretary of the Hartford Rubber Works Co., which position he assumed on July 1. He was previously for several years identified with this company, at one time filling the position of branch manager in New York, after which he was called to the factory. Toward the end of 1906 he went to Indianapolis to become secretary and treasurer of the G & J Tire Co., which position he has since held.

The Toledo Rubber Co. (Toledo, Ohio), have filed with the secretary of state of Ohio a certificate of increase of capital from \$25,000 to \$50,000. The company were organized 20 years ago for the sale of rubber clothing and novelties, to which lines they have added rubber goods generally.

The Chicago Rubber Clothing Co. (Racine, Wisconsin), capitalized at \$125,000, have been licensed to do business in Illinois, as a foreign corporation.

The directors of the Walpole Rubber Co. have declared a quarterly dividend of 1¾ per cent. on the preferred stock and 1 per cent. on the common stock, payable on July 15 to holders of record on July 1.

The Imperial Belting Co. is a new concern in the mechanical rubber goods trade, with a store at No. 166 West Kinzie street, Chicago. Arthur R. Shurtleff is manager. A specialty is made of the lines of the Voorhees Rubber Manufacturing Co. (Jersey City, New Jersey.)

THE PRICES OF AUTOMOBILE TIRES.

THE change in the prices of automobile tires announced on July 1 by the leading makers has led to a variety of comments in the trade, and particularly in the columns of newspapers of that class which suppose that the cost of crude rubber is kept up at an inordinate figure by large manufacturers who consume this material. It is asserted by the tire makers that the advance in prices this season is due solely to the higher cost of rubber than prevailed a year ago, when prices were last made before. It is denied that any such combination exists among the manufacturers as was claimed by the instigators of a suit filed in the New York supreme court on July 6 by the Moto Block Import Co. The plaintiffs in this action were called upon to show why they should not be proceeded against for maintaining a combination in restraint of trade. It is asserted by more than one manufacturer that the last combination of pneumatic tire manufacturers was held together by the G. & J. clincher tire patent, and that when this patent expired there was gone the only incentive manufacturers would have to form a close alliance.

TRADE NEWS NOTES.

The second semi-annual dividend of 3½ per cent. of the Converse Rubber Shoe Co. (Malden, Massachusetts) is payable July 1.

Katzenbach & Bullock Co., Inc. (Trenton, New Jersey), issue a catalogue of their chemical specialties, including several of interest to the rubber trade, which they will be pleased to supply to any applicants.

Mr. N. Lincoln Greene, who for 18 years past has had charge of the clothing department of the Boston Rubber Co., has been appointed manager of the same department for the American Rubber Co. This does not mean the relinquishment of the first named line of goods. On the contrary, it means that Mr. Greene will hereafter be the responsible head of the clothing departments of both these companies.

A New York journal devoted to the trade in waste materials contains this paragraph in a recent review of the rubber scrap market: "Dealers report that they are now receiving a smaller quantity of auto tires, by reason of the fact that a number of collectors are selling the material to people who make a specialty of dealing in automobile sundries. The tires are patched up and resold by the latter as second hand for further use on the road."

The St. Louis Rubber Cement Co. have entered extensively into the manufacture of vulcanizing cements for repairing automobile tires and report a large demand for these goods. They are making their cement of Pará rubber, and it is claimed by those using it that they have no further trouble with loose treads or separated fabric as the cement stands hard usage without powdering.

A new office has been created in the management of the United States Rubber Co.—that of comptroller—to which Mr. R. F. Spencer has been appointed. Mr. Spencer has been for some years connected with the Hamilton, Brown Shoe Co., of St. Louis, and actively interested in The Western Association of Shoe Wholesalers.

Colonel Samuel P. Colt, president of the United States Rubber Company, was a recent subscriber of \$5,000 toward the endowment of the Rhode Island School of Design.

MEXICO has been invited to send delegates to the International Rubber and Allied Trades Exhibition, to be held in London in June, 1917. This invitation was sent to Reginald Tower, British minister to Mexico, who notified the government through the department of foreign relations. This department, in turn, handed the invitation over to the department of fomento, which will make the appointment of a commission in case this government decides to be represented at the exposition.

THE BRITISH RUBBER CRAZE.

THERE has been a very marked decrease of late in the registration in London of new companies for forming rubber plantations and promoting forest rubber enterprises. So far as our records show, the registrations during June amounted to 24, with a total capital stated of £3,135,000 [= \$15,256,477.50]. Up to date the new companies we have mentioned as registered since January 1 of this year number 318, with a total capital stated of \$191,704,161, though these figures may be subject to revision. The new companies are:

CEYLON.

Northumberland (Ceylon) Rubber and Tea Estates, Limited, June 10 £95,000
Panagula Rubber Co., Limited; June 11 100,000

FEDERATED MALAY STATES.

Gula-Kalumpung Rubber Estates, Limited; June 3 £500,000
Sungei Reyla (F. M. S.) Rubber Estate, Limited; June 9 70,000
Carnarvon (Selangor) Rubber Co., Limited; June 15 50,000
Cluny Rubber Estates, Limited; June 16 100,000
Rajang Rubber Estates, Limited; June 22 75,000
Siginting (Negri Sembilan) Rubber Estates, Limited; June 23 40,000
Seaport (Selangor) Rubber Estate, Limited; June 25 200,000
Batak Rabbit Rubber Estate, Limited; June 30 75,000

NATIVE MALAY STATES.

Hevea Johore Rubber Plantations, Limited; June 9 £150,000

BURMA.

Rangoon Pará Rubber Estates, Limited; June 14 £250,000

DUTCH EAST INDIES.

Soember Ajoë Rubber Estates, Limited; in Java, June 3 £85,000
Djasinga Rubber and Produce Co., Limited; in Java; June 16 500,000
Molio Ardjo (Java) Rubber and Produce Estates, Limited; June 30 200,000

FIJI.

Lami River Rubber, Cocoa, and Banana Plantations, Limited; June 10 £50,000

SEYCHELLES.

Seychelles Rubber and Coconut Estates, Limited; June 14 £100,000

GERMAN EAST AFRICA.

Kifulu Rubber Estates, Limited; June 15 £100,000
Manihot Rubber Plantations, Limited; June 21 50,000

BRAZIL.

Island (Pará) Rubber Estates, Limited; June 1 £70,000

DUTCH GUIANA.

Belwaarde Rubber and Cocoa Plantations, Limited; June 6 £75,000
Anglo-Dutch Guiana Rubber and Trading Co., Limited; June 10 25,000

GENERAL.

Rubber, Petroleum, and Finance Co., Limited; June 3 £25,000
Consolidated Rubber Trust, Limited; June 9 150,000

INCREASING MALAYSIAN RUBBER YIELDS.

IN its issue for June 14 the *Malaya Mail*, of Kuala Lumpur, prints a list of rubber plantations in the Malay peninsula with reports of yield by months since the beginning of 1910. In the case of some of them, but not all, the details are given for each month, January to May inclusive. The product of 81 estates is taken into account for the month of May, and we have fuller accounts for 53 estates. The rate of production is shown by the figures which follow to be progressive:

	Pounds.
Total of 53 estates for January	573,598
Total of 53 estates for February	540,777
Total of 53 estates for November	651,955
Total of 53 estates for April	624,810
Total of 53 estates for May	657,054
Total of 53 estates for 5 months	3,048,194

THE United States consul general in London has sent an official report to Washington, outlining the plans of the coming rubber exhibition. A special feature of his report is a statement that the management will be pleased to have an exhibit of crude rubber produced in the Philippines or any other dependencies of the United States.

A NEW article of manufacture for the purposes of a roller, bumper, or the like, consists of a fibrous rope core, provided with a covering of vulcanized material compressed radially thereon. The patentee is Harry F. Pendleton, of Brooklyn, New York, assignor to The American Wringer Co.

Review of the Crude Rubber Market.

THE month has been one of constant fluctuation, prices rising at times and falling later, the close being a sharp decline from the quotations at the first of July. There are no changed conditions to report in relation to the production of rubber. Such material changes in the selling market have relation to the present and prospective rates of consumption, of which no analysis will be attempted here.

NEW YORK QUOTATIONS.

Following are quotations at New York for Pará grades, one year ago, one month ago, and July 29—the current date:

PARA.	Aug. 1, '09.	July 1, '10.	July 29, '10.
Islands, fine, new	—@ 181	225@226	208@210
Islands, fine, old	—@ 185	227@228	210@212
Upriver, fine, new	—@ 195	238@239	215@
Upriver, fine, old	—@ 198	240@241	218@
Islands, coarse, new	—@ 75	104@105	95@
Islands, coarse, old	—@ 78	none here	none here
Upriver, coarse, new	—@ 120	150@160	147@
Upriver, coarse, old	none here	160@161	none here
Cameté	—@ 92	120@121	110@
Caucho (Peruvian), ball	—@ 112	153@154	147@
Caucho (Peruvian), sheet	—@ 90	none here	none here
Ceylon, smoked sheet	—@ 195	—@ 227	—@ 209
Ceylon, pale crepe	—@ 102	—@ 225	—@ 202
Ceylon, sheet and biscuits	—@ 186	—@ 220	—@ 196

AFRICAN.

Lopori, ball, prime —@ 125 none here 175@
Lopori, strip, prime —120@ 107@108 170@
Aruwimi —@ 115 none here 160@

Upper Congo, ball, red	—@ 123	none here	none here
Ikelemba	none here	none here	none here
Sierra Leone, 1st quality	—@ 125	167@168	167@
Massai, red	—@ 125	167@168	167@
Soudan niggers	—@ 118	none here	none here
Cameroon, ball	—@ 108	none here	none here
Benguela	—@ 80	none here	none here
Madagascar, pinky	—@ 104	none here	none here
Accra flake	—@ 24	none here	none here

CENTRALS.

Esméralda, sausage	—@ 98	131@132	130@
Guayaquil, strip	—@ 85	none here	110@
Nicaragua, scrap	—@ 97	126@127	128@
Panama	—@ 88	90@ 91	90@
Mexican, scrap	—@ 98	126@127	127@..
Mexican, slab	—@ 85	none here	none here
Mangabeira, sheet	—@ 60	none here	none here
Guayule	—@ 40	94@ 95	80@

EAST INDIAN.

Assam	95@ 96	133@135	none here
Pontianak	—@ 434	7½@ 8	6½@7
Borneo	—@ 40	none here	none here

Late Pará cables quote:

	Per Kilo.	Per Kilo.
Islands, fine	9\$100	Islands, coarse
Upriver, fine	10\$900	Exchange
Upriver, coarse	10\$600	16 11/16d.

Latest Manáos advices:

	Per Kilo.	Exchange
Upriver, fine	11\$200	16 23/32d.
Upriver, coarse	10\$700	

NEW YORK RUBBER PRICES FOR MAY (NEW RUBBER).

	1910.	1909.	1908.
Upriver, fine	2.35@2.80	1.26@1.35	.83@.94
Upriver, coarse	1.60@1.82	.96@.98	.58@.65
Islands, fine	2.26@2.72	1.23@1.31	.80@.90
Islands, coarse .....	.93@1.09	.59@.67	.43@.48
Cameta	1.10@1.27	.69@.78	.48@.57

NEW YORK PRICES FOR JUNE (NEW RUBBER).

	1910.	1909.	1908.
Upriver, Fine	2.23@2.45	1.35@1.51	.88@.94
Upriver, Coarse	1.50@1.63	.98@1.05	.62@.65
Islands, Fine	2.13@2.30	1.31@1.42	.84@.89
Islands, Coarse .....	.93@1.05	.67@.70	.43@.46
Cameta	1.10@1.25	.78@.82	.53@.56

Statistics of Para Rubber (Excluding Caucho).

NEW YORK.

	Fine and Medium.	Coarse.	Total 1910.	Total 1909.	Total 1908.
Stocks, May 31.....tons	91	15	106	101	370
Arrivals, June	197	204	401	1549	1324
Aggregating	228	219	507	1650	1604
Deliveries, June	143	203	346	1258	1347
Stocks, June 30.....	145	16	161	392	347

PARA. ENGLAND.

	1910.	1909.	1908.	1910.	1909.	1908.
Stocks, May 31.....tons	675	555	635	1550	600	1595
Arrivals, June	945	1040	1220	662	545	987
Aggregating	1620	1595	1855	2212	1145	2582
Deliveries, June	1320	1350	1482	752	825	1347
Stocks, June 30.....	300	245	373	1460	320	1235

	1910.	1909.	1908.
World's visible supply, June 30.....tons	2,665	1,490	2,854
Pará receipts, July 1 to June 30.....	31,515	30,080	29,640
Pará receipts of caucho, same dates.....	7,740	8,000	6,950
Afloat from Pará to U. S., June 30.....	199	88	371
Afloat from Pará to Europe, June 30..	545	445	528

African Rubbers.

NEW YORK STOCKS (IN TONS).

	1910.	1909.	1908.
June 1, 1909	156	January 1, 1910.....	228
July 1	268	February 1	134
August 1	130	March 1	161
September 1	123	April 1	121
October 1	67	May 1	125
November 1	134	June 1	90
December 1	134	July 1	120

Rubber Scrap Prices.

	July 1.	August 1.
Old rubber boots and shoes—do-		
mestic	10 3/4 @ 10 7/8	10 3/8 @ 10 1/2
Old rubber boots and shoes—		
foreign	10 1/8 @ 10 1/4	9 3/4 @ 9 7/8
Pneumatic bicycle tires	7 1/4 @ 7 3/8	7 @ 7 1/4
Automobile tires	10 1/2 @ 10 7/8	9 3/4 @ 10
Solid rubber wagon and carriage		
tires	10 1/4 @ 10 3/4	10 @ 10 1/4
White trimmed rubber	10 @ 11	11 1/2 @ 12
Heavy black rubber	6 1/2 @ 6 3/4	6 1/2 @ 6 3/4
Air brake hose	6 @ 6 1/4	5 1/2 @ 5 3/4
Garden hose	2 7/8 @ 3	2 3/4 @ 2 7/8
Fire and large hose	3 3/8 @ 3 1/2	3 1/4 @ 3 1/2
Matting	1 3/4 @ 1 7/8	1 1/2 @ 1 3/4

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weight in Pounds.]

JULY 5.—By the steamer *Hubert*, from Manáos and Pará:

IMPORTERS:	Fine.	Medium.	Coarse.	Caucho.	Total.
Poel & Arnold.....	18,300	2,000	44,400	47,000	111,700
New York Commercial Co.	19,000	1,400	25,700	.....	46,100
Hagemeyer & Brunn.....	27,200	1,400	17,800	.....	46,400
L. Johnson & Co.....	.....	.....	20,700	.....	29,700
Edmund Reeks & Co.....	10,700	1,500	7,300	.....	19,500
A. T. Morse & Co.....	2,100	.....	11,200	.....	13,300
Henderson & Korn.....	2,100	.....	2,600	.....	4,700
William E. Peck & Co.....	2,100	.....	2,000	.....	4,100
Crossman & Sielcken.....	1,100	700	1,600	.....	3,400
Total	82,600	7,000	142,300	47,000	278,900

JULY 12.—By the steamer *Rio de Janeiro*, from Pará:

Poel & Arnold.....	62,800	15,000	37,000	4,600	119,400
New York Commercial Co.	10,400	700	26,400	1,300	38,800
A. T. Morse & Co.....	3,600	.....	33,000	.....	36,600
Hagemeyer & Brunn.....	6,900	700	3,300	.....	10,900
L. Johnson & Co.....	.....	.....	11,800	.....	11,800
Total	83,700	16,400	111,500	5,900	217,500

JULY 16.—By the *Amazonense*, from Manáos and Pará:

Poel & Arnold.....	133,800	12,500	71,700	84,400	302,400
New York Commercial Co.	52,300	21,000	38,600	65,000	176,900
A. T. Morse & Co.....	20,900	1,200	16,600	400	39,100
Edmund Reeks & Co.....	14,600	1,200	6,000	22,700	44,500
Hagemeyer & Brunn.....	2,500	500	400	2,300	5,700
William E. Peck & Co.....	1,800	.....	2,600	.....	4,400
Total	225,900	36,400	135,900	174,800	573,000

JULY 25.—By the steamer *Cearense*, from Manáos and Pará:

Poel & Arnold.....	147,800	18,800	96,800	157,100	420,500
New York Commercial Co.	34,700	10,000	14,800	20,100	79,600
A. T. Morse & Co.....	20,100	1,000	33,200	12,300	66,600
G. Amsinck & Co.....	4,300	1,400	12,700	.....	18,400
L. Johnson & Co.....	5,000	.....	9,900	.....	14,900
Crossman & Van Sielcken.....	.....	.....	12,000	.....	12,000
F. Rosenstern & Co.....	3,200	.....	2,200	1,900	7,300
William E. Peck & Co.....	700	300	2,000	.....	3,000
Edmund Reeks & Co.....	.....	.....	.....	2,100	2,100
Total	215,800	31,500	183,600	193,500	624,400

PARA RUBBER VIA EUROPE,

	POUNDS.
JUN 5 24.—By the <i>Lusitania</i> =Liverpool:	
N. Y. Commercial Co. (Fine).....	56,000
W. H. Stiles (Fine).....	4,500
Poel & Arnold (Coarse).....	7,000
JUNE 27.—By the <i>Arabic</i> =Liverpool:	
H. A. Gould Co. (Fine).....	2,500
JUNE 29.—By the <i>Jaurez</i> =Iquitos:	
Edmund Reeks & Co. (Fine).....	3,500
JUNE 30.—By the <i>Teutonic</i> =London:	
Poel & Arnold (Coarse)	15,000
JULY 2.—By the <i>Campania</i> =Liverpool:	
Livesey & Co. (Coarse).....	4,500
JULY 5.—By the <i>Laramaca</i> =Bolivar:	
General Export Co. (Fine)....	13,500
General Export Co. (Coarse)....	10,000
American Trading Co. (Coarse) ..	2,500
JULY 15.—By the <i>Lusitania</i> =Liverpool:	
N. Y. Commercial Co. (Caucho).....	112,000
JULY 18.—By the <i>Celtic</i> =Liverpool:	
W. H. Stiles (Fine).....	3,500
Raw Products Co. (Coarse)....	2,500
JULY 18.—By the <i>Cleveland</i> =Hamburg:	
N. Y. Commercial Co. (Fine)....	20,000
Poel & Arnold (Fine).....	22,500
N. Y. Commercial Co. (Coarse) ..	16,000

JULY 20.—By the <i>Carmania</i> =Liverpool:	
Robinson & Co. (Fine).....	22,500
Robinson & Co. (Coarse).....	11,500
JULY 21.—By the <i>Atrato</i> =Mollendo:	
General Rubber Co. (Fine).....	3,000
JULY 23.—By the <i>Aug. Victoria</i> =Hamburg:	
N. Y. Commercial Co. (Fine).....	22,500
JULY 23.—By the <i>Campania</i> =Liverpool:	
A. T. Morse & Co. (Fine)....	22,500
Livesey & Co. (Coarse).....	7,000

OTHER NEW YORK ARRIVALS.

CENTRALS.

[*This sign, in connection with imports of Centrals, denotes Guayule rubber.]

	POUNDS.
JUNE 24.—By the <i>Allianza</i> =Colon:	
G. Amsinck & Co.....	12,000
Isaac Brandon & Bro.....	7,000
Piza, Nephews & Co.....	5,000
L. Johnson & Co.....	3,000
Roldan & Van Sickle.....	2,500
Suzarte & Whitney.....	2,500
New York Commercial Co.....	2,500
A. M. Capen's Sons.....	1,500
Lanman & Kemp.....	1,500
F. Lambrada & Co.....	1,500
Demarest Bros. & Co.....	1,000
Kunhardt & Co.....	1,000
Graham, Hinkley & Co.....	1,000

JUNE 24.—By the <i>El Paso</i> =Galveston:	
Continental-Mex. Rubber Co ..	*60,000
C. T. Wilson & Co.....	33,000
JUNE 25.—By the <i>Arabic</i> =Liverpool:	
C. P. dos Santos.....	11,000
JUNE 25.—By the <i>Mexico</i> =Frontera:	
Harburger & Stack.....	7,000
E. N. Tibbals & Co.....	5,500
H. Marquardt & Co.....	2,500
International Products Co.....	2,000
E. Steger & Co.....	1,500
Graham, Hinkley & Co.....	1,500
A. T. Morse & Co.....	1,000
General Export Co.....	1,000
J. W. Wilson & Co.....	1,000
A. Klepstein & Co.....	1,000
JUNE 27.—By the <i>Momus</i> =New Orleans:	
A. T. Morse & Co.....	3,000
G. Amsinck & Co.....	1,500
Eggers & Heinlein.....	1,000
JUNE 27.—By the <i>Monterey</i> =Tampico:	
Ed. Maurer	*200,000
New York Commercial Co.....	*135,000
Poel & Arnold	*45,000
For Hamburg, etc.	*75,000
JUNE 27.—By the <i>Attar</i> =Colombia:	
Maitland, Coppell & Co.....	7,500
L. Delius & Co.....	5,000
T. Leitgang & Co.....	2,000
R. del Castillo & Co.....	2,000
Isaac Brandon & Bro.....	2,500

JUNE 29.—By the August H'm.—Colon: Pablo Calvet & Co. 3,500 G. Amsinck & Co. 4,000 A. Rosenthal & Son. 1,500 9,000

JUNE 29.—By the El Dia—Galveston: Continental-Mexican Rubber Co. 75,000

JULY 1.—By the Colon—Colon: Piza, Nephews & Co. 6,500 G. Amsinck & Co. 5,000 General Rubber Co. 5,000 Isaac Brandon & Co. 4,000 F. Rosenstern & Co. 2,000 New York Commercial Co. 3,000 A. Rosenthal & Son. 1,000 26,500

JULY 1.—By the President Lincoln—Hamburg: A. T. Morse & Co. 11,000

JULY 1.—By the Morro Castle—Frontera: E. Steger & Co. 6,000 E. N. Tibbals & Co. 4,000 General Export Co. 2,000 International Products Co. 2,000 Harburger & Stack. 1,500 New York Commercial Co. 6,000 21,500

JULY 5.—By the Verdi—Bahia: A. Hirsch & Co. 11,500 T. H. Rossbach & Bros. 7,000 Poel & Arnold. 10,000 28,500

JULY 5.—By the Matanzas—Tampico: Continental-Mex. Rubber Co. 150,000 Poel & Arnold. 30,000 Ed. Maurer. 65,000 New York Commercial Co. 33,000 For Hamburg. 313,000

JULY 5.—By the Sarnia—Colon: J. H. Rosshach & Bros. 4,000 J. A. Pauli & Co. 2,000 A. Latham & Co. 2,000 Graham, Hinkley & Co. 2,000 G. Amsinck & Co. 1,500 New York Commercial Co. 1,500 Eggers & Heinlein. 1,000 14,000

JULY 5.—By the Antilles—New Orleans: A. N. Rotholz. 3,500 A. T. Morse & Co. 1,500 G. Amsinck & Co. 1,500 Eggers & Heinlein. 2,500 9,000

JULY 7.—By the Clyde—Colombia: Suzarte & Whitney. 4,000 A. M. Capen's Sons. 3,000 Mecke & Co. 2,500 M. Goyanecke Co. 2,000 Kunhardt & Co. 1,000 J. Lambrada & Co. 1,000 13,500

JULY 7.—By the Corsican—Bahia: J. H. Rossbach & Bros. 70,000 A. Hirsch & Co. 56,000 Poel & Arnold. 58,000 M. Ullmann Co. 4,500 188,500

JULY 7.—By the President Grant—Hamburg: Rubber Trading Co. 7,000

JULY 7.—By the El Valle—New Orleans: New York Commercial Co. 3,000 G. Amsinck & Co. 2,000 5,000

JULY 9.—By the Merida—Frontera: Harburger & Stack. 5,500 E. Steiger & Co. 2,500 E. N. Tibbals & Co. 2,000 International Products Co. 1,500 H. Marquardt & Co. 1,000 American Trading Co. 1,000 13,500

JULY 11.—By the Lapland—Antwerp: R. Badenhoff. 11,000 Poel & Arnold. 33,500 44,500

JULY 11.—By the Vigilanca—Tampico: Continental-Mex. Rubber Co. 175,000 Ed. Maurer. 100,000 Poel & Arnold. 45,000 New York Commercial Co. 33,000 For Europe. 25,000 378,000

JULY 11.—By the Creole—New Orleans: A. T. Morse & Co. 6,500 Robinson & Co. 1,000 Eggers & Heinlein. 1,500 9,000

JULY 11.—By the Cincinnati—Hamburg: Ed. Maurer. 45,000

JULY 11.—By the El Norte—Galveston: Continental-Mex. Rubber Co. 260,000 C. T. Wilson & Co. 225,000 282,500

JULY 12.—By the Panama—Colon: Isaac Brandon & Bros. 4,000 L. Rosenstein & Co. 2,500 G. Amsinck & Co. 2,000 American Trading Co. 1,500

Bartling & De Leon. 1,000 R. Favien & Co. 1,000 12,000

JULY 12.—By the Joachim—Colombia: A. Santos & Co. 4,500 L. Delius & Co. 2,500 Caballero & Blanco. 2,000 Delima Cortissoz & Co. 1,500 Wessels, Kulenhamppf & Co. 1,500 Isaac Brandon & Bros. 1,000 13,000

JULY 14.—By the El Paso—Galveston: Continental-Mex. Rubber Co. 75,000 E. L. Churchill. 22,050 97,500

JULY 16.—By the Esperanza—Yucatan: H. Marquardt & Co. 3,500 E. N. Tibbals & Co. 2,500 General Export Co. 2,500 Harburger & Stack. 1,500 Geo. A. Alden & Co. 1,000 R. Fabien & Co. 1,000 12,000

JULY 16.—By the Bayamo—Tampico: Ed. Maurer. 175,000 New York Commercial Co. 33,000 For Havre, etc. 33,000 241,000

JULY 16.—By the Oregonian—Mexico: George A. Alden & Co. 5,500

JULY 16.—By the El Siglo—Galveston: Continental-Mexican Rubber Co. 110,000

JULY 16.—By the Amazoncuse—Clara: Emile Boris. 22,500

JULY 18.—By the Sigismund—Colombia: Maitland, Coppell & Co. 6,500 L. Delius & Co. 4,000 R. del Castillo & Co. 3,500 Pablo Calvet & Co. 2,000 G. Amsinck & Co. 2,000 Stanley Jordan & Co. 1,500 E. Wolf & Co. 1,000 20,500

JULY 18.—By the Allianca—Colon: G. Amsinck & Co. 3,000 Mecke & Co. 3,000 Suzarte & Whitney. 3,500 United Trust Co. 1,500 Isaac Brandon & Bros. 1,500 12,500

JULY 18.—By the Proteus—New Orleans: Manhattan Rubber Co. 2,000

JULY 19.—By the El Dia—Galveston: Continental-Mex. Rubber Co. 75,000 C. T. Wilson & Co. 22,500 E. L. Churchill. 11,500 109,000

JULY 21.—By the Atrato—Colombia: Gravenhorst & Co. 3,500 Pablo Calvet & Co. 3,500 Maitland, Coppell & Co. 1,000 Gillespie Brothers & Co. 1,000 For Antwerp. 3,500 12,500

JULY 22.—By the Antilles—New Orleans: A. N. Rotholz. 2,500 A. T. Morse & Co. 1,500 Eggers & Heinlein. 2,500 G. Amsinck & Co. 2,000 8,500

JULY 22.—By the Mexico—Frontera: Harburger & Stack. 8,000 E. N. Tibbals & Co. 3,500 E. Steiger & Co. 3,500 General Export Co. 2,000 International Products Co. 2,000 J. Lambrada & Co. 1,500 A. Klepstein & Co. 1,000 21,500

JULY 23.—By the Victoria—Hamburg: Ed. Maurer. 9,000

AFRICAN.

JUNE 27.—By the Arabic—Liverpool: George A. Alden & Co. 56,000

JUNE 28.—By the Finland—Antwerp: A. T. Morse & Co. 34,000 Livesey & Co. 30,000 64,000

JUNE 30.—By the Teutonic—London: General Rubber Co. 7,000

JULY 1.—By the Lincoln—Hamburg: A. T. Morse & Co. 25,000 Rubber Trading Co. 11,000 George A. Alden & Co. 4,500 Poel & Arnold. 3,500 Robert Badenhop. 11,200 55,200

JULY 5.—By the Vaderland—Antwerp: A. T. Morse & Co. 70,000 Poel & Arnold. 25,000 Livesey & Co. 5,000 100,000

JULY 5.—By the Baltic—Liverpool: Raw Products Co. 15,000 George A. Alden & Co. 15,000 W. L. Gough Co. 3,500 33,500

JULY 6.—By the Caronia—Liverpool: Poel & Arnold. 35,000 A. T. Morse & Co. 22,500 57,500

JULY 6.—By the Oceanic—London: Poel & Arnold. 33,500

JULY 7.—By the President Grant—Hamburg: A. T. Morse & Co. 22,500 Livesey & Co. 22,500 W. L. Gough Co. 4,500 George A. Alden & Co. 5,000 54,500

JULY 11.—By the California—Havre: Poel & Arnold. 70,000 A. T. Morse & Co. 56,000 126,000

JULY 11.—By the Lapland—Antwerp: A. T. Morse & Co. 61,000 Poel & Arnold. 80,000 Robert Badenhop. 13,400 154,000

JULY 11.—By the Cincinnati—Hamburg: George A. Alden & Co. 82,000 A. T. Morse & Co. 22,500 104,500

JULY 11.—By the Celtic—Liverpool: A. T. Morse & Co. 8,000 C. P. dos Santos. 5,000 George A. Alden & Co. 2,500 15,500

JULY 14.—By the Inglsfinge—Lisbon: General Rubber Co. 55,000 W. L. Gough & Co. 22,500 77,500

JULY 14.—By the Majestic—London: Rubber Trading Co. 6,500

JULY 15.—By the Lusitania—Liverpool: Poel & Arnold. 14,000 George A. Alden & Co. 8,000 Livesey & Co. 3,500 25,500

JULY 16.—By the Pennsylvania—Hamburg: George A. Alden & Co. 25,000 A. T. Morse & Co. 27,000 W. L. Gough Co. 3,500 55,500

JULY 18.—By the Cedric—Liverpool: Poel & Arnold. 22,500 Rubber Trading Co. 9,000 31,500

JULY 18.—By the Cleveland—Hamburg: A. T. Morse & Co. 52,000 George A. Alden & Co. 35,000 Rubber Trading Co. 17,000 104,000

JULY 20.—By the Carmania—Liverpool: Rubber Trading Co. 11,500 H. A. Gould Co. 5,500 17,000

JULY 20.—By the Kroonland—Antwerp: A. T. Morse & Co. 15,000 Raw Products Co. 5,000 20,000

JULY 23.—By the Augta-Cictra—Hamburg: George A. Alden & Co. 45,000 A. T. Morse & Co. 11,000 Raw Products Co. 5,500 Livesey & Co. 7,000 W. L. Gough Co. 3,500 62,000

JULY 23.—By the Pleatca—Lisbon: Poel & Arnold. 45,000 General Rubber Co. 115,000 150,000

EAST INDIAN.

[*Denotes plantation rubber.] POUNDS.

JUNE 24.—By the Bloomfontein—Colombo: New York Commercial Co. 30,000 A. T. Morse & Co. 11,500 41,500

JUNE 27.—By the Philadelphia—London: Poel & Arnold. 6,000 Poel & Arnold. 13,500 19,500

JUNE 28.—By the Finland—Antwerp: A. T. Morse & Co. 13,500

JUNE 29.—By the Mcsaba—London: A. T. Morse & Co. 7,000

JUNE 30.—By the Teutonic—London: Poel & Arnold. 30,000 New York Commercial Co. 30,000 W. H. Stiles. 7,000 67,000

JULY 1.—By the President Lincoln—Hamburg: George A. Alden & Co. 35,000

JULY 5.—By the Paderland—Antwerp: A. T. Morse & Co. 9,000

JULY 5.—By the St. Louis—London: New York Commercial Co. 55,000 Poel & Arnold. 33,000 88,000

JULY 5.—By the Inveric—Singapore: Poel & Arnold. 11,000 W. L. Gough Co. 3,500 Malaysian Rubber Co. 38,000 52,500

JULY 5.—By the <i>Minewaska</i> —London: General Rubber Co..... *11,500	
JULY 6.—By the <i>Oceanic</i> —London: Poel & Arnold..... *90,000 New York Commercial Co..... *20,000 Poel & Arnold..... 7,000 117,000	
JULY 11.—By the <i>New York</i> —London: New York Commercial Co..... *45,000 Poel & Arnold..... *25,000 W. H. Stiles..... 7,000 77,000	
JULY 12.—By the <i>Rovenfels</i> —Colombo: A. T. Morse & Co..... *18,000 New York Commercial Co..... *16,000 *34,000	
JULY 12.—By the <i>Erroll</i> —Singapore: W. L. Gough Co..... 35,000 Heabler & Co..... 11,000 Robinson & Co..... 7,000 George A. Alden & Co..... 11,000 Brinkman & Co..... *5,000 69,000	
JULY 12.—By the <i>Minneapolis</i> —London: A. T. Morse & Co..... *15,000 Ed. Maurer..... *9,000 Robinson & Co..... 60,000 Raw Products Co..... 3,500 87,000	
JULY 14.—By the <i>Mojestic</i> —London: Poel & Arnold..... *135,000 New York Commercial Co..... 2,500 Poel & Arnold..... 5,500 143,000	
JULY 16.—By the <i>Koronga</i> —Colombo: New York Commercial Co..... *35,000 A. T. Morse & Co..... *13,500 Thomsen & Co..... *4,500 *53,000	
JULY 18.—By the <i>St. Paul</i> —London: New York Commercial Co..... *85,000 Poel & Arnold..... *45,000 W. H. Stiles..... *2,500 *133,500	

JULY 19.—By the <i>Minnetonka</i> —London: A. T. Morse & Co..... *15,000	
JULY 20.—By the <i>Kroonland</i> —Antwerp: A. T. Morse & Co..... *33,500	
JULY 21.—By the <i>Adriatic</i> —London: Poel & Arnold..... *70,000 New York Commercial Co..... *7,000 *77,000	
GUTTA-JELUTONG.	
JULY 5.—By the <i>Inveric</i> —Singapore: W. L. Gough Co..... 250,000 L. Littlejohn & Co..... 200,000 Poel & Arnold..... 175,000 Heabler & Co..... 355,000 George A. Alden & Co..... 55,000 1,035,000	
JULY 12.—By the <i>Erroll</i> —Singapore: George A. Alden & Co..... 600,000 Poel & Arnold..... 325,000 Heabler & Co..... 275,000 W. L. Gough Co..... 155,000 L. Littlejohn & Co..... 250,000 1,605,000	
GUTTA-PERCHA.	
JULY 5.—By the <i>Inveric</i> —Singapore: Otto Isenstein & Co..... 22,500 Heabler & Co..... 11,500 34,000	
JULY 18.—By the <i>Chicago</i> —Havre: Heabler & Co..... 22,500	
JULY 23.—By the <i>Kois'n Aug. Vict'a</i> —Hamburg: E. Oppenheim..... 11,500	
BALATA.	
JUNE 23.—By the <i>Coppename</i> —Trinidad: Ed. Maurer..... 11,500 C. Tennants, Sons & Co..... 2,000 13,500	
JULY 1.—By the <i>Porima</i> —Demerara: Poel & Arnold..... 5,000 Suzarte & Whitney..... 2,500 7,500	

JULY 5.—By the <i>Saramaca</i> —Bolivar: Ed. Maurer..... 20,000 G. Amsinck & Co..... 9,000 29,000	
JULY 12.—By the <i>Suriname</i> —Demerara: Ed. Maurer..... 5,000 B. Williamson Co..... 1,500 6,500	
JULY 15.—By the <i>Guiana</i> —Demerara: Ed. Maurer..... 11,000 Middleton & Co..... 5,500 16,500	

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—JUNE.		
Imports.	Pounds.	Value.
India-rubber.....	4,896,136	\$5,218,957
Balata.....	33,563	23,994
Gutta-percha.....	10,619	5,502
Gutta-jelutong (Pontianak).....	6,503,970	399,713
Total.....	11,444,288	\$5,648,166
Exports.		
India-rubber.....	167,019	\$226,248
Balata.....	2,254	1,100
Gutta-percha.....		
Reclaimed rubber.....	156,832	17,578
Rubber scrap, imported....	2,955,846	\$255,841
Rubber scrap, exported....	258,987	18,898

BOSTON ARRIVALS.

JUNE 10.—By the <i>Dacoha</i> —Singapore: State Rubber Co. (Jelutong).... 350,000 Heabler & Co (Jelutong)..... 150,000 500,000	
JUNE 16.—By the <i>Saxonia</i> —Liverpool: Raw Products o. (Africans)..... 2,200	
JUNE 28.—By the <i>Inveric</i> —Singapore: State Rubber Co. (Jelutong)... 280,000 Heabler & Co (Jelutong).... 150,000 430,000	

PARA EXPORTS OF INDIA-RUBBER, MAY, 1910 (In KILOGRAMS).

EXPORTERS.	NEW YORK.					EUROPE.					TOTAL.
	Fine.	Medium.	Coarse.	Caucho.	TOTAL.	Fine.	Medium.	Coarse.	Caucho.	TOTAL.	
Gruner & Co.....	15,410	1,562	66,179	5,200	88,351	106,408	10,634	37,562	107,380	261,984	350,335
E. Pinto Alves & Co.....	12,240		42,240	20,700	75,180	30,090			36,867	66,957	142,137
Adeibert H. Alden, Ltd.....	17,178	2,169	12,934	990	33,271	40,786	5,783	22,891	25,810	95,270	128,541
Mello & Co.....						46,352	2,550	13,609	22,101	84,612	84,612
R. Suarez & Co.....						50,955		3,742	8,046	61,843	61,843
J. Marques & Co.....						17,980	4,321	12,300	7,584	42,185	42,185
R. O. Ahlers & Co.....											
The Alves Braga Rubber Estates and Trading Co.....						24,243		6,334	5,706	36,283	36,283
Scholz, Hartje & Co.....	170	170	13,200	330	13,870	8,285	1,474	4,815	1,635	16,209	16,209
Guilherme Augusto de Miranda Filho.....	2,120	422	1,678	3,436	7,656						7,656
Sundry small shippers.....	2,890	340	4,620		7,850	45,520	2,855	8,737	1,857	58,969	66,819
Itacoatiara direct.....						2,165	259	1,860		4,284	4,284
Manaos direct.....	10,138	7,137	4,696	8,461	30,432	88,370	18,455	39,964	145,317	292,106	322,538
Iquitos direct.....						2,011	183	3,390	165,269	170,853	170,853
Total, May.....	60,146	11,800	145,547	39,117	256,610	462,265	46,514	155,204	527,572	1,191,555	1,448,165
Total, April.....	204,724	43,018	72,196	66,087	386,025	1,408,348	192,871	684,155	1,220,324	3,505,698	3,891,723
Total, March.....	616,977	117,403	328,517	210,772	1,273,669	1,636,222	238,439	538,807	922,083	3,335,551	4,609,220
Total, February.....	1,249,571	259,296	762,781	318,830	2,590,478	1,274,751	155,070	470,983	975,370	2,876,174	5,466,652
Total, January.....	1,540,151	325,343	831,917	400,144	3,097,555	1,119,634	91,349	340,073	565,228	2,116,284	5,213,839

PARA AND MANAOS INDIA-RUBBER EXPORTS FIRST HALF OF 1910 (IN KILOGRAMS.)

EXPORTERS.	UNITED STATES.					EUROPE.					TOTAL.
	Fine.	Entrefine.	Sernamby.	Caucho.	TOTAL.	Fine.	Medium.	Coarse.	Caucho.	TOTAL.	
Gruner & Co.—Pará.....	1,588,140	308,933	690,611	525,321	3,122,005	1,937,653	229,487	740,556	1,598,291	4,505,987	7,627,992
Dusendschön, Zarges & Co.—Manaos.....											
Scholz, Hartje & Co., Pará.....	333,819	81,665	266,917	163,133	845,534	1,053,973	151,524	235,251	590,505	2,031,253	2,876,787
Scholz & Co., Manaos.....											
Gordon & Co., Pará-Manaos....	942,300	185,267	340,637	38,032	1,506,236	331,682	66,623	119,561	467,827	985,693	2,491,929
Ad. H. Alden, Pará-Manaos.....	503,208	152,439	256,141	282,221	1,194,009	306,803	78,708	272,661	206,453	954,628	2,148,634
E. Pinto Alves & Co., Pará.....	171,099	19,947	553,604	23,666	768,316	654,742	64,823	220,949	268,664	1,209,178	1,977,949
J. Marques, Pará.....	147,576	18,094	129,278	879	295,827	333,761	55,216	195,503	81,262	665,742	961,509
R. Suarez & Co., Pará-Manaos....						580,654	10,683	68,155	135,642	795,134	795,134
Alves Braga Rubber Est. & Trading Co., Ltd., Pará.....						390,871	57,276	79,867	32,970	560,984	560,984
R. O. Ahlers & Co., Pará.....	9,908		6,825	73,856	90,569	215,846	3,393	38,419	43,021	300,679	391,248
Ahlers & Co., Manaos.....											
De Lagotellerie & Co., Pará-Manaos.....	104,229	15,122	45,036	2,802	167,189	63,843	17,621	27,099	19,589	128,155	295,344
S. A. Atmazens Andresen, Manaos.						57,854	17,001	29,939	103,290	208,093	208,093
Pires Teixeira & Co., Pará.....	42,500		74,250		116,750	35,020		43,890		78,910	195,660
Mello & Co., Pará.....						15,452	3,400	16,409	25,401	96,662	96,662
J. G. Araujo, Manaos.....	7,854	517	2,828		11,199	32,939	3,420	40,589	5,599	82,547	93,746
Guilherme Augusto de Miranda Filho, Pará.....	11,400	5,382	13,258	3,436	33,476	3,840	800	10,440		15,080	48,556
E. Kingdon & Co., Manaos.....	4,709	425	1,154	21,625	27,913	11,772	1,696	1,247	267	14,982	42,895
Braga Sobrinho & Co., Pará.....						15,563	2,663	7,250	2,980	28,456	28,456
Leite & Co., Inc., Pará-Manaos..						10,154	2,932	2,600	1,019	16,705	16,705
Sundries.....	11,220	1,360	18,590	2,523	33,693	151,954	20,253	75,106	202,556	449,869	483,562
Itacoatiara direct.....						28,400	4,269	20,720	2,161	55,550	55,550
Iquitos direct.....	41,504	2,325	13,810	18,702	76,341	224,198	23,884	130,425	84,485	1,226,992	1,303,333
Total.....	3,919,466	791,476	2,421,939	1,156,176	8,289,057	6,492,974	815,675	2,376,636	4,725,991	14,411,276	22,700,333



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Antwerp.

RUBBER STATISTICS FOR JUNE.

DETAIL.	1910.	1909.	1908.	1907.	1906.
Stocks, May 31 ..kilos	543,863	689,238	771,577	752,914	725,251
Arrivals in June	425,601	430,074	461,063	296,779	298,358
Congo sorts	356,288	273,079	397,745	256,350	203,562
Other sorts	69,313	156,995	63,318	40,429	94,796
Aggregating	969,464	1,119,312	1,232,640	1,049,693	1,023,609
Sales in June	508,947	642,892	547,774	377,900	404,775
Stocks, June 30.....	460,517	476,420	684,866	671,793	618,834
Arrivals since Jan. 1..	2,085,208	2,403,504	2,605,825	2,578,734	3,026,806
Congo sorts	1,655,626	1,716,209	2,257,536	2,194,578	2,313,641
Other sorts	429,582	687,295	348,289	384,156	713,165
Sales since Jan. 1....	2,166,203	2,522,819	2,927,853	2,565,125	3,143,159

RUBBER ARRIVALS FROM THE CONGO.

JUNE 27.—By the steamer *Bruxellesville*:

Bunge & Co. (Societe Generale Africaine) kilos	135,200
Do	7,300
Do	5,600
Do	8,000
Do	1,200
Societe Coloniale Anversoise. (Belge du Haut Congo)	13,300
Do	4,000
Do	10,500
L. & W. Van de Velde..... (Cie. du Kasai)	74,000
Do	2,000
M. S. Cols.....	800
Charles Dethier..... (American Congo Co.)	2,400
	264,300

Rubber Receipts at Manaos.

DURING June and twelve months of the crop season, for three years (courtesy of Messrs. Scholz & Co.):

FROM—	JUNE			JULY-JUNE.		
	1910.	1909.	1908.	1909-10.	1908-09	1907-08.
Rio Purus-Acre	112	113	83	10,153	8,742	8,939
Rio Madcira	184	81	57	3,540	3,154	3,009
Rio Juruá	59	88	141	4,408	4,305	4,337
Rio Javary-Iquitos	20	18	18	2,626	2,476	2,524
Rio Solimões	13	7	3	1,206	1,014	1,137
Rio Negro	10	8	12	698	591	608
Total.....	398	315	314	22,631	20,282	20,554
Caucho	486	350	483	7,417	6,756	6,310
TOTAL.....	884	665	797	30,048	27,038	26,864

For Shipment from

Manaos	756	536	735	21,685	19,670	20,145
Para	128	129	62	8,363	7,359	6,719
Total.....	884	665	797	30,048	27,038	26,864

Manaos Receipts for Former Years.

[CAUCHO INCLUDED.]

1900-01	18,371 tons	1904-05	22,086
1901-02		1905-06	23,649
1902-03		1906-07	26,775
1903-04		1907-08	26,864

Manaos Exports—1909-10 (Kilograms).

To—	Fine.	Medium.	Coarse.	Caucho.	Total.
New York	5,045,701	1,086,715	1,472,513	1,132,273	8,737,202
Liverpool	3,648,273	638,757	956,360	2,724,315	7,967,705
Havre-Hamburg	1,472,218	149,162	394,257	1,125,714	3,141,351
Total	10,166,192	1,874,634	2,823,130	4,982,302	19,846,258

A NEW WATERPROOF COMPOUND.

RUBBEROLINE is a term applied to a new compound for various waterproofing purposes, which is described as impervious to gas and acids, with the further advantage that it is flexible. The ingredients in addition to india-rubber are not mentioned, but the effect of their combination is mentioned as forming a liquid rubber of any consistency desired. Uses mentioned for it are in waterproofing paper bags for transporting various commodities; for lining paper for barrels and boxes, particularly for shipments over sea; gas tubing, insulation of electrical wires; painting structural iron work; for steam and water packings; lining fire hose, and so on. For the purpose of marketing this material the Rubberoline Manufacturing Co. (Garfield, New Jersey) has been organized.

Liverpool.

C. F. DORN & Co., rubber and produce brokers, Harley buildings, 11, Old Hall street, announce the admission to their firm of Mr. Arthur Harding, of London, and the change of their firm style to Dorn, Harding & Co., at the old address.

WILLIAM WRIGHT & Co. report [July 1]:

Fine Para.—In the absence of any general trade demand, prices have been subject to violent fluctuations; hard fine dropped within a week from 105. 10/9s., and within ten days reacted to 105. 6d., since declined to 105. 1d. [—\$2.45]. America has held severely aloof for the near past months, but has bought fair quantities October-December up to 95. 11d. We would point out that shipments from June, 1909, to May 31, 1910, to America from Brazil and Liverpool (allowing for reshipments here) have been 3,400 tons less than the corresponding period last season. Brazil news is firm, and the bulk of the stock which was held back has been disposed of. Market closes steady. Value: hard fine July-August 105. 1d., August-September 105. 2d.

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CAOUTCHOUC

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DICHOPELS GUTTA

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SEPTEMBER 1, 1910.

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F. H. WARD, General Manager.

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A QUESTION OF PRICES.

THE fact that crude rubber has been sold lately at much lower prices than manufacturers were obliged to pay a few months ago has revived the question that follows every decline in rubber—why don't the prices of their products come down in proportion? We have just seen this question discussed at length in an important daily trade paper, but with the result of its missing the point entirely.

If a manufacturer should be stocked up with rubber bought at \$3 a pound he would feel obliged to realize a corresponding price for his goods made from that material, no matter how far the price of the crude might fall meanwhile. Again, if a manufacturer is contracting to-day for rubber at a reduced price, it may be weeks or months before it reaches the ultimate consumer, and it is the ultimate consumer who pays the price.

The rubber footwear makers are busy to-day turning out boots and shoes for sale to the public next winter, on contracts with jobbers booked as long ago as April. Already the prices of raw material have fluctuated this season to a most unusual degree, and more fluctuations may happen before winter again drives people to buy overshoes. But the manufac-

turers must fix prices before the goods are made, and this must be done on the theory of averages for the year that will yield a profit. Like conditions obtain in the matter of automobile tires, garden hose, or babies' rattles.

Unlike many articles of commerce, rubber goods are not sold at a base price subject to fluctuations in unmanufactured or crude materials; hence the impracticability of changing quotations with every rise and fall in the raw product.

CRUDE RUBBER POLITICS.

AT the Philadelphia Centennial International Exhibition, in 1876, among the exhibits from Mexico was a specimen of crude rubber obtained from a shrub not known before to yield this substance. Then as now rubber was regarded by manufacturers as too high priced, and every possible new source was regarded with interest. The Mexican shrub came in for much notice but, although recognized experts worked hard over the problem, it was practically thirty years before commercial results were obtained, through the marketing of the grade of rubber known everywhere to-day as "Guayule."

The introduction of guayule rubber has been of inestimable benefit to the world. Without it the price of other rubbers doubtless would have attained a much higher level; in other words, rubber goods would have cost the consumers very much more. The relative importance of guayule is indicated by the fact that of the total imports of crude rubber into the United States during the fiscal year ended June 30, 1910, of 101,044,681 pounds, no less than 23,486,384 pounds came from Mexico, and at least 22,000,000 pounds of this was guayule. This is, roundly, 22 per cent. of the whole.

It would seem reasonable that those who developed this important new supply of rubber should be congratulated upon conferring so important a benefit upon the public, not alone of the United States but wherever rubber goods are used. It is true that the pioneer experimenters and the investors in guayule rubber worked for their individual profit, but so do the workers in so many fields who in Europe are rewarded with orders of merit by their sovereigns.

In the case of the founders of the guayule interest in America, however, we see professional politicians trying to make capital out of the fact that a United States senator has invested some of his money in rubber, the implication being that his official position has been used for his individual profit and against the public welfare. And newspapers of influence have taken the matter up at length, indulging in such public insinuations as are calculated to sweep away the reputation of even the strongest of men.

We have no brief for the defense of anybody engaged in the preparation and sale of guayule or any other rubber. Many persons engaged in this business

have not found it to pay; some others have made profits, and this, of itself, does not occur to us to be intrinsically wrong. The size of one of the guayule companies has been spoken of in the press as a damaging fact. It is doubtful, however, if guayule would now be found on the market had not its production been undertaken on such a large scale as to require a great deal of capital.

The most amazing thing in the late outbreak about rubber in the daily press is the fact that in no case has appeared any evidence of any rubber man having been interviewed or approached for correct information on the subject. Considering how many intelligent men are connected with the rubber industry, and men willing to supply facts regarding it, there can be no excuse for such witless jumbles about rubber trusts and tariffs and profits as the newspaper reading public has been treated to lately.

THE TAPPING OF "CASTILLOA."

PLANTERS of *Castilloa* rubber six months ago were, many of them, quite discouraged. They did not acknowledge it to every one, but their trees were not producing the amount of rubber annually that they had counted upon. They were awakening to a knowledge of the fact that they could only tap the trees, once, twice, or possibly three times during the year profitably. Not that it killed the tree, but it did not show the same type of wound response that the *Hevea* did.

The remarkable rise in the price of crude rubber, however, put a premium on their efforts, and many of them are now making money. They have taken up very seriously the subject of scientific tapping, and it is a reasonable probability that the tree will eventually be proved profitable from a planting standpoint.

No man had put more thought upon this problem than the late Mr. J. B. Carruthers, of Trinidad. He argued that, as the tree does not show wound response, it should be practically drained of latex at one tapping, and then allowed to rest until the lactiferous tubes fill up again, whether it take three months, six months, or a year. Instead of stripping the bark with any sort of cutting tool, he suggested the use of a pricker that should puncture nearly every tube, an apron at the foot of the tree to catch the latex, and a jet of water, if necessary, as a vehicle to carry all of the latex down into the apron.

The suggestion is of much merit. Pricking the *Castilloa* bark, every square inch of it, from the ground to the first permanent branches, should not injure the tree in the least. The wounds ought to heal and leave practically no scar, and several times the present amount of latex be secured.

Were the problem solved along these lines it would be a great boon to the thousands who have invested

in *Castilloa* plantations throughout Mexico, the Central American states, and the West Indies.

For the encouragement of the *Castilloa* planter, the following is worth pondering upon: The scientific tapping of *Hevea* trees, for example, on the Linggi plantation, produced 10.7 pounds from 12 year old trees. By the native method of tapping the production probably would have been about 3 pounds. If, therefore, the *Castilloa* can be tapped scientifically there is no reason why a notable increase cannot be obtained over that secured by the present method.

THE PASSING OF THE "BATELAO."

THE *batelao* has been passing up and down the upper Madeira and some other streams of landlocked Bolivia for a long time, but very slowly. Perhaps the navigation of no rivers has ever been accomplished with such hardships and risk and relative expense. Soon we shall be able to chronicle the final passage of this peculiar boat of antique type.

On another page is given a photographic view of a *batelao* as it appeared on the rocks over which it was necessary to convey it for more than a mile around one of the many cataracts which interrupt the Madeira. No wonder fine Bolivian rubber has been so expensive when the *batelao* has had to be depended upon for transporting it to market.

A new régime, however, is being ushered in by the progress of the Madeira-Mamoré railway, details regarding which appear in these pages in connection with the picture of the *batelao*. The new railway has begun carrying rubber, having been completed, at last accounts, for 88 kilometers [=55 miles]. On June 26 it took on rubber at Jacy-Parana which it delivered to San Antonio five hours after it was received. The journey by *batelao* would require from five to six days at double the rates charged by the railroad. When one considers also the safety of transport, and the lack of shrinkage, it will be seen that the old time *batelao* will never be able to compete with the railroad,

THE CHEMIST IN THE RUBBER INDUSTRY.

IF one stops to think of the day when crude rubber was purchased principally on the strength of its general appearance, it seems hardly credible that such purchases are now made to a large extent with a chemists' analysis as a basis, and the day appears to be not far off when this control will be developed to such a degree that products possessing certain properties can be made and duplicated with mathematical nicety. Before the manufacturer can hope to obtain the best results he must, however, forget that a chemist is an "analyst," a mechanic who potters in chemicals. The true chemist, the man who has taken his post graduate course at college, is well equipped to take a "long

distance" view of the various processes and operations through which the rubber must pass. His systematically acquired knowledge of *chemical principles* enables him to discern defects and their causes long before the other man is aware of their existence.

There is another point which the manufacturer must bear in mind when he concludes to consult a chemist and have his raw materials and his processes examined. Money expended for professional advice is "capital invested" and should be so entered on the books—for the money spent in fees will enable the manufacturer to make better goods, sell more goods, and declare larger dividends. If he makes the error of entering these fees under the "expense account" he may during dull times be tempted to curtail these expenses, and thus strike at the very root of his welfare. The more progressive corporations in the leather, textile, and paper industries have long since realized the benefits to be derived from systematic chemical control of their processes and their raw materials.

It may be that many of the claims for damaged and defective goods could be eliminated and the cause remedied by retaining a qualified chemical engineer for a careful inspection of the works. We say chemical engineer, for a man who is to investigate industrial processes must at once have a knowledge of machines and the chemical operations which are carried out in those machines. It may be that here, as in other instances, no particular attention will be paid to chemical control until a lawsuit with its dire consequences is instituted by some particular dealer. Then suddenly the chemist will be called upon to "explain away" some of the more obvious defects:

AN INTERESTING ILLUSTRATION of a new tendency on the Amazon is to be found in the amount of space devoted to rubber culture in the excellent agricultural magazine, *A Lacoura Paraense*, published at Pará. A few years ago nothing on this subject was thought worth publishing in the land of "Pará" rubber; now full reports on rubber cultural progress everywhere are printed there, and, what is more, read with interest. The rubber lords of northern Brazil cannot afford to be outdistanced by the British in Asia.

A RECENT LIST OF PRODUCTS of an important rubber manufacturing company includes a page the heading of which carries the words "Low Grade" and "Not Warranted." This is interesting, because it is not usual. It is interesting, also, as typical of the growth of sound business morality. There are other goods in the list which are described as "high grade," and they are "warranted"; goods marked plainly with the name of the company, or with one of their widely advertised brands. But the "low grade" goods—openly offered as such, for people who want something at a low price—do not bear any indication of their source. We like the idea of the name of a company being reserved for use on its higher grade products, for otherwise purchasers unable to discriminate might be led, by the appearance of a well-known name, to buy inferior goods under the impression that the best was being obtained. We also like the idea of "low grade" goods being so described, for in this

case no one can be deceived. Of course, when it comes to the ultimate consumer, he must depend upon the honesty of the retailer, but we do not doubt that a better tone in business honesty is developing throughout every stage of trade, and that purchasers in general can depend upon being told whether any article, in staple lines, is "low grade" or "high grade." It is indispensable, of course, that goods should be made in different qualities to fit different purses or tastes, and no wrong is involved so long as the seller doesn't deceive his customers.

THE FACT THAT THE GOVERNMENT OF DUTCH GUIANA is now planting 500 acres to *Hevea* rubber draws attention to the possibilities of that country for the same sort of development that has taken place in the Far East. There are at present many going plantations that are producing cacao and sugar, where the land has been dyked and drained and upon which there are substantial plantation buildings. The partial failure of the cacao crop and the far greater profit in rubber has turned the attention of the planters to it. The movement seems to be in favor of a joint planting of bananas and rubber, there being a good market for the former now that the United Fruit Co. have established a regular weekly service between Paramaribo and New York. That the *Hevea Brasiliensis* will do well is proved in that a number of experimental plantings already exist. These plantations are about a dozen in number, the oldest containing some 300 trees ten years old recently producing 3 pounds contains 14,000 *Hevea* trees from 1 to 1½ years old. With a stable government and absolute freedom from unjust taxation, and a climate and soil fittest for such cultivation, it would seem likely that considerable will be done in rubber in the next five years. Added to all of the above is the government's assistance in providing British cool labor under the indenture system. At only a normal cost to the planter it would seem that *Hevea* could not only be grown as well, but nearly as cheaply as in the Far East.

AMONG THE MANY LETTERS WHICH CONTINUE to reach THE INDIA RUBBER WORLD in relation to the articles on "*Castilloa* Rubber in Chiapas (Mexico)" by Mr. J. L. Hermessen, A. M. I. E. E., published in THE INDIA RUBBER WORLD earlier in the year one points out a misspelling in the issue of February 1 (page 163) of the name of the *Castilloa* species designated by Mr. O. F. Cook as *lactiflua*. The spelling in these pages, *lactiflora*, was due to an error in printing which the author had no opportunity to correct. Mr. Cook's report on species of the Central American rubber tree, by the way, appeared in *Science* (New York) XVIII: 436.

PROFITS OF WIRELESS.

AT the late annual meeting of Marconi's Wireless Telegraph Co., Limited, the reports showed a profit for the year 1909, in spite of the serious set back by the disastrous fire which destroyed the station at Glace Bay, Canada. This station has been rebuilt, leading to the resumption of their trans-atlantic service, and the prospects for the future are regarded as most favorable. The profit for the year was £11,432. Several of the wireless companies in which the Marconi company own an interest are beginning to show profits. The French company declared a dividend for the year of 5 per cent., and the Belgian company of 10 per cent. The directors recommended the payment of the cumulative 7 per cent. dividend upon the preference shares to June 30, 1909, and an intimation was given that before long an announcement of a similar dividend for the remaining six months of the year would be made. The capital outstanding ranking for dividend is £250,000.

The wireless service established to connect with the rubber district of the upper Madeira, mentioned on another page, is under the Marconi system.

RUBBER AND THE ELECTRICAL TRADE.

[FROM "THE ELECTRICAL REVIEW" (LONDON), JULY 24.]

RUBBER has now for some years been steadily rising in price as the demand has increased, furnishing as it does the basis for the manufacture of the thousand and one indispensable articles, from the cycle and motor tire to the pipe stem. That prices are so high is not only due, however, to the enormous consumption of rubber, but, so it seems to us, to the fact that even with the many sources of supply which have so far been available, the supply has not been nourished and tended as it might have been. In some cases, as everyone knows, rubber has been obtained in a haphazard fashion, and with a constant and ever-increasing drain upon the source and no corresponding replacement or replenishing, there has come the inevitable lessening in the yield.

It is now more difficult to obtain the raw material, since those concerned have been reaping much and sowing little. With the present boom in the flotation of so many new concerns to cultivate and produce rubber in various parts of the world, on a scientific and commercial basis, a few years should see the supply less uncertain and more easily obtained, and, consequently, prices ought then to recede to a more rational level.

In the meantime, electrical people see visions of larger wiring bills, for the price of vulcanized india-rubber cables and wires always rises in sympathy with that of rubber, and consumers are hard enough to get, in all conscience, even at present. Prime cost has long since ousted rubber insulation from the market for large cables, and, presumably, there is a point at which the vulcanized cable of a smaller size cannot compete with its rivals in the matter of price. For long life and efficiency a vulcanized rubber cable, with a well-tinned conductor and the insulation properly vulcanized, can hardly be surpassed, or even equalled, but cost is a factor which has little respect for old age or long service.

We do not suppose that rubber will ever be supplanted for use with the modern form of flexible cord, where the pure rubber strip is simply lapped on in conjunction with silk or cotton coverings, but it does seem that vulcanized rubber must soon give way for small cables, larger than, say 7/17's, and for such there is now another rival in addition to the paper lead-covered form. We have seen vulcanized bitumen or paper bitumen cables as small as the size mentioned above, and when it is remembered that this class of insulation is, like rubber, non-hygroscopic and needs no other covering than an ordinary tape and braid, it would appear that bitumen is likely to be the insulation of the future, where, up to date, the vulcanized india-rubber cable has more than held its own.

And bitumen has many good points. After being vulcanized or "cured," it is equal to rubber in homogeneity, and elastic enough to stand all bending to which the ordinary cable is subjected in erection. Exhaustive tests made on large bitumen cables, such as those used commonly in coal mines, have shown that the insulation is not appreciably affected by considerable pressure, so that decentralization cannot take place under the normal working conditions. One of the disadvantages, however, of this form of cable is that if not carefully constructed the conductor will be found slightly decentralized, and, of course, should such fault prove to be more than local, there may be a weak place in the cable which will provide the location of a future breakdown.

Jointing affords some difficulty, though not more than is presented by other forms of insulation. Further, a paper insulated cable sheathed with bitumen, and protected by tape and braid or serving, ought certainly to have as long a life as the best grade rubber cable, since the former is free from the fatal chemical action which in the rubber cable spoils wire and insulation alike.

When copper is dear a fair sized paper cable always pays for stripping and reinsulating, whereas, on the other hand, the rubber

cable, no matter what the size, always finds its way to the scrap heap, *en bloc*.

Naturally, much depends upon the course taken by the price of the raw material in the near future. Even now the price is such as ought to attract a chancellor of the exchequer in search of new sources of revenue. A few years should see the supply largely augmented, and, let us hope, the price largely decreased. Should the present level become permanent, and cable makers increase the prices to the same tune as the golf ball makers, who have already drawn the ire of certain indignant golfing correspondents, then it is not improbable that a cheaper article will supersede the old and valued vulcanized rubber cable altogether.

RUBBER WONDERS IN SINGAPORE.

THE transformation of Singapore through the agency of rubber is thus referred to by the United States consul general, in *Daily Consular and Trade Reports* of August 5:

"The wide reaches of waste land on the island of Singapore, which have been of no use since the culture of gambier, coffee and pepper was given up, are now the scenes of great activity. Rubber plants are being set out over these deserted wastes, and seem to do well. In the suburbs of Singapore city a considerable area of swamp land has been drained and converted into a nursery for Pará rubber plants, which are sold at a good profit to the planters on the island. In Malacca there were formerly many square miles of land covered with langang, the hiding place of the tiger and other big game, which have been transformed into fine rubber plantations, and now Malacca, which has for years been largely neglected, is in a flourishing condition. A short time since there was no banking institution in the town of Malacca; today three banks are doing a good business and the place is rapidly becoming an important center.

"The eastern rubber boom has caused the flotation of 75 companies with 35,000,000 shares, capitalized at nearly \$80,000,000 gold. A large portion of the shares has been used as part payment of purchase price. In many cases only a portion of the total capital has been issued. The public has taken great financial interest in these flotations. The amount actually expended represents only a modest part of the total value set upon these properties by the speculating public."

INCREASED PRODUCTION OF BALATA.

THE production of balata continues to increase at a steady rate, though the annual growth of the trade may not be very large. The figures for the three past calendar years have been as follows—with the exception that the 1909 output is missing:

	1907.	1908.	1909.
Venezuela pounds	3,203,141	3,512,485	3,573,753
British Guiana	991,280	1,124,530	1,033,895
Dutch Guiana	765,120	999,227	.....
Total	4,959,541	5,636,242	

The total for 1902 was only 2,891,091 pounds.

A British consular report from Venezuela says: "The high price prevailing for this article has stimulated its production. The system of felling the trees to collect the gum still continues, and the productive forests are growing more and more distant from the base. The extent of country bearing the balata trees appears to be, however, so great that as soon as one district is exhausted another is discovered, further away of course. Considering the total absence of modern transportation facilities and that the products has to be carried from the forests over bad roads and tracks on donkey back or in wagons for distances exceeding 200 and 300 miles, it is surprising that the production is so well maintained."

A BOOK for rubber planters—Mr. Pearson's "What I Saw in the Tropics."

Pará, Manáos and the Amazon.

By The Editor of "The India Rubber World."

SIXTH LETTER.

The Opening of a New Avenue to the Rich Rubber Fields of Bolivia.—The Madeira-Mamoré Railway, Now Under Construction.—Camp Life With the Engineers.—Interest in Rubber Planting on the Amazon.—Legislation in Pará for the Encouragement of Planting.

I HAVE already mentioned the great number of workers, engineers and others, whom we met going and coming from the headquarters of the Madeira-Mamoré railway, but it was not until I got to Manáos that I really appreciated what a great undertaking it was, and how energetically it was handled.

One of the partners in the contracting firm that was putting the road through resided there, and I got to know him well. His official headquarters were at Manáos. But Iticoatiara, at the mouth of the Madeira river, was the place where supplies were stored, and many of the men housed going and coming from the railroad camps.

The Madeira, it will be remembered, is the Amazon's greatest tributary. It comes from Bolivia and furnishes about the only outlet for that landlocked republic. From where it enters the Amazon to San Antonio, nearly 300 miles away, it is navigable by ocean steamers. Then come 250 miles of rapids, in which there are nineteen cataracts. When the water is high the big rubber scows, or *batelões*, are able to get through by floating part of the way and making portages around the falls, but shooting the rapids. These portages are furnished with narrow gauge tracks. The *batelões* are unloaded, pulled upon a small truck, and dragged up over the hills, and then eased down on

the other side. The return trip involves 25 portages, and three trips a year are all that is possible.

The enormous effort required in moving these heavy boats can hardly be imagined. Every season at low water new roadways must be made by clearing the great boulders out of the river bed, and then laying a corduroy road of green poles, over which the keel of the *batelões* can slip. Where it is possible they use tackle block to help in the pulling, but sometimes everything must be done by main strength.

There is a loss of 10 to 15 per cent. of the rubber sent down by the upsetting of the scows. Not only that but many men are drowned. The *batelões*, by the way, are flat bottomed scows 30 feet long and 8 feet wide, and carry about 10 tons of rubber. They are manned by 16 paddlers, or *bateleiros*, and usually make the journey down in 20 days, while it takes 60 to return.

LIFE IN A RAILROAD CAMP.

The headquarters of the construction camp was not at San Antonio, but at Porto Velho, where were assembled from 4,000 to 5,000 men. Of these 300 to 400 were Americans. Here were built substantial quarters for the engineers, bunk houses for the men, an up-to-date thoroughly equipped hospital, an ice plant, and large storehouses. The company had also drilled wells for water, and was making every effort to keep the men well. In spite of that there were sometimes nearly 300 men in the hospital, and seven to ten doctors and eight male nurses were



HAULING A BATELÃO AROUND THE FALLS OF GIRAO, MADEIRA RIVER.



A "Balsa" Transporting Rubber.



"BATELAG" Approaching Rapids on the Madeira.

constantly employed. The experiment of having female nurses was tried, but they were married and carried away so constantly that it was voted a failure.

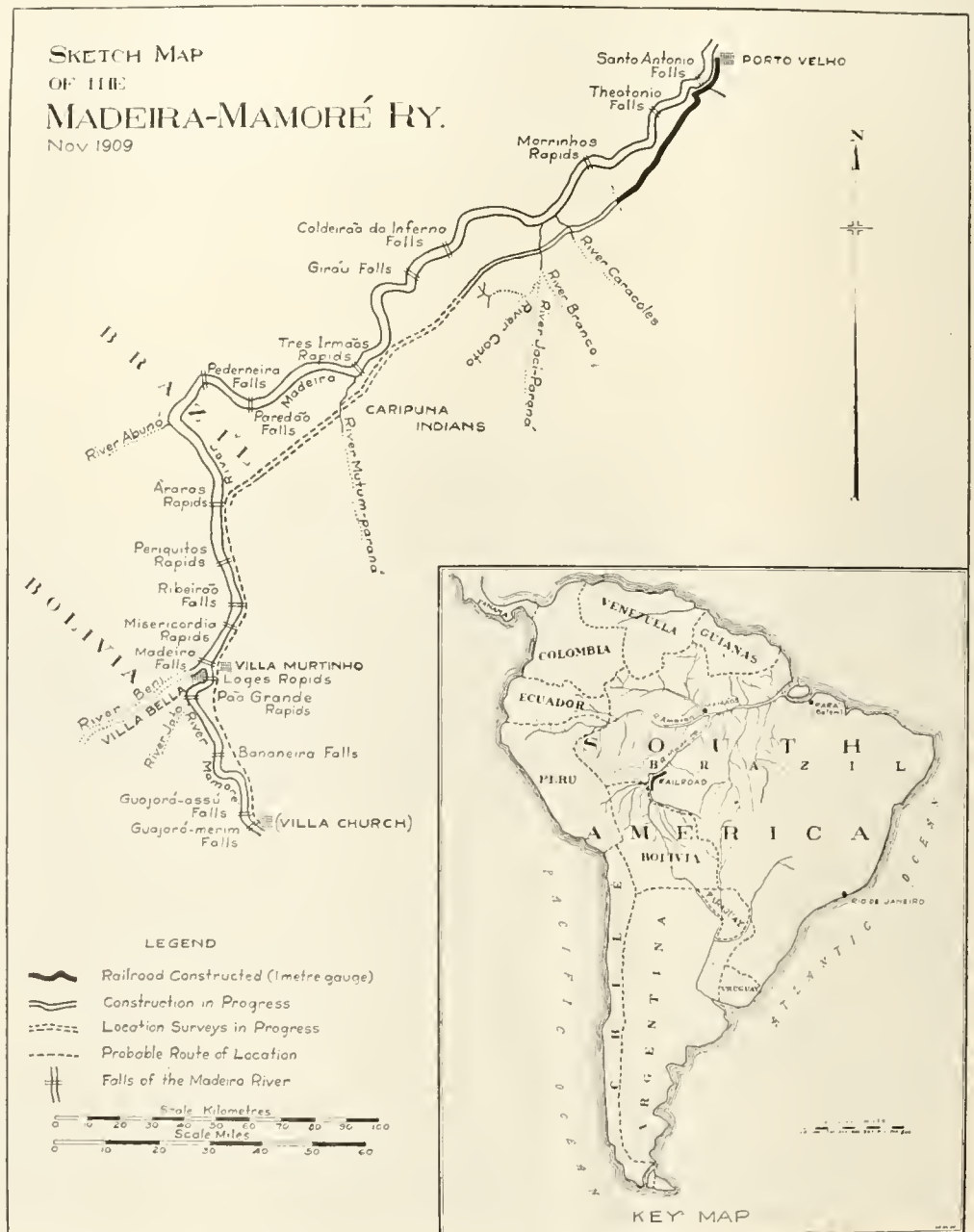
The camp was under military discipline, and liquor was taboo. In spite of this the native laborers smuggled in more or less "cachaca." The most troublesome diseases were beriberi, blackwater fever, and dysentery. Quinine, of course, was the remedy generally used and most potent. It was bought by the ton, and three laboratory men were kept busy from morning until night making it up into pills.

The town was noted as publishing the only English paper on the Amazon, called *The Porto Velho Times*. The first issue appeared on typewritten sheets. Then the company sent in a font of type and a printing press, and the paper appeared with more or less regularity. It was a remarkable looking sheet, typographically. There were no "w's" in the font, and two "v's" placed close together were the alternative.

The paper was full of camp news and genuine fun, and everybody subscribed. Under the general announcements of the paper's scope and policy appeared the subscription price, which was—

Six months, nothing.
Three months, half price.

The railroad workers were only in this camp at stated seasons. Some of them were far ahead with the preliminary party of engineers, who were



THE NEW OUTLET FOR BOLIVIAN RUBBER.

deciding upon the location, or they might be nearer the camp on construction. The company paid the men on the 10th of every month, and five men were in the employ of the pay office to prepare the \$175,000 that the paymaster carried in person to the various camps.

All of the men were obliged to sign a contract not to meddle with the Carapuna women, or to sell firearms to the men. If this contract was violated they were discharged without pay. The result of this wise policy was that the Indians were very friendly, and furnished the camps with many turtles and lots of fish. The company shipped in beef on its own steamers from Manãos, and furnished such delicacies as Boston baked beans and rice *ad libitum*.

SOME LABOR TROUBLES.

The day laborers were a mixed lot gathered from all parts of the world. An unfortunate experiment on the part of a German contractor took place while I was in Manãos. He brought in 600 laborers from Germany, mostly Polish Jews, and agreed to pay them 60 cents per cubic yard for digging dirt. He was to get \$1 a yard for it, and pocket the difference. The workmen in a few days after they were located discovered that other gangs were getting \$1. They promptly struck and walked 80 kilometers back to camp. The camp manager, when he heard

as a class, and those who are suited to the life really enjoy it.

I met two whom I had previously known in Panama. They were on their way to the states for their vacation. One was in perfect health; the other had chills and fever at regular intervals, but was filling up on quinine, and had no thought but to return when his vacation was over.

They had many interesting and unusual stories to tell of happenings up in the wilderness. One of them told of the possessor of an honored English name who was compelled to drop it and take another. It came about this way. Whenever a companion called him by his surname, it was greeted with shrieks of laughter on the part of the natives. Not only that, but if he met a native on the trail, the latter would speak his name and then go into convulsions of merriment. When he learned that his patronymic was a native word which meant the concrete and ultimate result of a strong cathartic pill, he promptly called himself "Smith."

EARLY RAILROAD WORK ON THE MADEIRA.

The story of the earlier efforts to build railroads around the falls of the Madeira is wonderfully interesting and singularly romantic. The first real attempt was made some forty years ago, under a concession to the Bolivian Steam Navigation Co., the con-



A LEVEL STRETCH OF THE MADEIRA.



ONE OF THE FALLS OF THE MADEIRA.

the whole story, promised to cancel the contract and give them \$1 per yard. This they refused. He then offered to put them at work on buildings and other jobs. This they also refused. He then offered them free transportation back to Manãos, but again met stubborn refusal. He was finally forced to disarm them and drive them from camp. They then built rafts and started to float down to Manãos. Many of them died, and the residue were picked up by a river steamer and taken to Manãos and placed in charge of the German consul. As I was leaving, the German government was getting busy with the idea of seeking redress.

Perhaps the greatest curse in this upper country was insects. There were flies innumerable, together with moyaquils (called "bachoburna" there), chiggers, ticks, and mosquitos by the million.

The railroad company established wireless stations at Manãos and Porto Velho, which worked perfectly from the start. Later they planned to have another station at Villa Bella, at the farther end of the road. It is quite possible, once these are installed, that the can communicate with Bolivian wireless stations, which would give Manãos another means of sending messages to the outside world.

The engineers go with the company under contract for a period of two years, with a three months' vacation, which they usually spend in a trip to the United States. They are very well paid,

tractors being the Public Works Construction Co., principally backed by English capital, and the actual work being done by P. & T. Collins, an American concern. The whole scheme originated in the enterprise of Colonel George Earl Church, a noted American civil engineer, who proved to both the Bolivian and Brazilian governments the necessity for such a road.

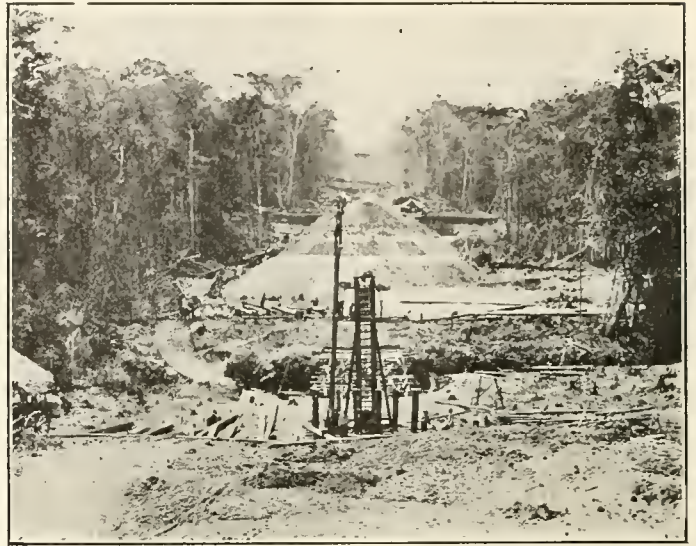
The Collins company made a survey, sent in much equipment and had laid about five miles of track, when the English bondholders got frightened, put an injunction on the funds of the company, and after much litigation got the money and the Collins company got nothing. The American loss was something like \$500,000. The Brazilian government later put through a new survey, but were not ready to finance the proposition at that time. Then came the Acre dispute and the cession of that rich rubber territory to Brazil, with the agreement that the railroad should be built at once.

According to common gossip in Brazil, the American engineering company who are putting it through agree to have it completed in three years' time. The Brazilian government pays all of the bills and the construction company gets 10 per cent. of the money expended, for its trouble. The road is narrow gage and many of the bridges now of timber construction will be replaced later with solid masonry.

Except in the towns very few traces of the Collins enterprise remain. The roadbed, rails and all had absolutely disappeared,



CONSTRUCTION CAMP, MADEIRA-MAMORE RAILWAY.



CONSTRUCTION WORK IN PROGRESS.



ROCK CUT ON RAILWAY LINE.



FILL AT STATION 54.



NATIVE WARD IN CAMP HOSPITAL.



MAKING QUININE CAPSULES IN HOSPITAL.



CONSTRUCTION TRAIN ON THE MADEIRA-MAMORE.

and only impenetrable jungle was to be found where once ran the pioneer Madeira-Mamoré railroad.

The Madeira river, above the falls, is fed by several great rivers that drain an immense territory which is rich in rubber. There is, for example, the Guaporé, that drains both Bolivia and Brazil, rising far up in Matto Grosso; the Mamoré, the Beni, and the Madre de Dios—all great rivers, together with hundreds of lesser. This upper country has many thousands of miles of navigable streams at the time of high water, and once the railroad is finished, hides, cinchona, and a great variety of other products, as well as rubber, will find their way out through the Amazon.

AS TO THE SUAREZ INTERESTS.

The completion of the Madeira-Mamoré railway will in a measure affect the Suarez interests. Suarez y Hermanos, or Suarez & Brothers, known in London as the largest shippers of Bolivian rubber, in which they have made millions, have their headquarters just above the first of the Madeira falls.

The creator of this company, Nicholas Suarez, although worth millions, is a quiet, thrifty, hard-headed man of business. Of Bolivian birth and speaking only Spanish, he has for years practically controlled the carrying trade up and down the Madeira, as well as the gathering and collecting of the rubber along many of the great waterways above the falls.

If Suarez's life history could be written it would prove a very stirring tale. He began as a trader for rubber, dealing with savages whom none other had dared to even communicate with. Soon he and his brothers began to acquire great concessions. They pushed further and further into the interior, trading with the Indians, practically ruling them, and avenging any insult or lack of faith most terribly. One of his brothers was murdered by savages, and it is said that Nicholas Suarez practically exterminated the tribe to whom his murderers belonged.

He employs probably about 4,000 men, and is said to be worth from \$35,000,000 to \$40,000,000. A born organizer, he is still a simple, saving man of the people. But his nephews, liberally educated, living in Europe, are genuine men of the world.

The Suarez rubber, by the way, is not put up in cases, but is shipped in bulk to London.

Bolivian rubber, although at present such a factor, dates back only a few years. It was first discovered in 1878, but it did not appear on the market until 1893, when the grade known as "Mollendo" began to be shipped from the Pacific port of that name. This, to be sure, was not wholly Bolivian, but was partly a Peruvian product. The tree that produces it is undoubtedly a



STEAMER AT PORTO VELHO.
[The starting point of the Madeira-Mamore railway.]

Hevea and is said by some to be the *Hevea lutea*. It grows on the uplands to an altitude of 3,000 feet, and on sloping well drained ground, and not in swamps or where it would be subject to inundations.

There are two collecting periods—from April to July and from October to March. The trees are tapped for about three months each year, and then are allowed to rest. The rubber when carried up the rivers, by muleback over the mountains, by boat across Lake Titicaca, and by railroad to Mollendo, is said to cost, exclusive of the export duties charged in Bolivia, about 40 cents a pound.

Bolivian rubber is gathered somewhat differently from that down river. There is used a *mango*—literally a handle to which is attached a flat disk 6 to 8 inches in diameter. This is used as the ordinary paddle is. Where much smoking is to be done a disk to which two handles are attached at opposite sides is substituted. These handles are supported by cross pieces which allow the disk to revolve rapidly over the *buyon*, or smoking pot. Indeed, to facilitate matters, there are sometimes three or four of these pots in a row.

Two methods of branding rubber are in use. One which is known as "fire" branding consists in heating a die and pressing it into the outside surface of the rubber. The other way is to have the name of the *seringal* cut on the surface of the paddle; then when the *pelle* is cut open the rubber is found to have taken an exact replica of the brand.

In the upper rivers, where the water is very shallow, the rub-



EMBARKING CATTLE AT CARSCARAY.
[An important food source for the rubber regions.]



STEAMER "SERINGUEIRO" ON THE ACRE.



CARAPUNA INDIANS AND NATIVE BOAT.

ber takes its first journey on *balsas*, or small rafts. If they are to pass over rough water, the logs of which they are made are hollowed out. These recesses are filled with rubber and whole is floored over, so even if the crew is upset or lost the rubber survives.

Two or more *balsas* joined together form a *callapo*, which is used when the river broadens to admit larger craft. Still further down the rivers the *batelão*—commonly pronounced "batalone," is used as freight carrier.

PRIMITIVE WATERPROOFING WITH RUBBER.

It would be strange in a rubber country if there were not some rubber manufacture. And there is much. Nearly all of the Indian tribes make rubber *pochos*, kit bags, and some very curious toys.

In making a rubber bag, they first make a bag of fabric, sometimes of prettily flowered calico, which they stretch over a frame until the surfaces are smooth and taut. Then they take caucho milk, never using *Hevea*, and stir into it powdered sulphur, the proportion being a tablespoonful of sulphur to each liter of latex. After stirring the liquid thoroughly they apply it to the cloth with a feather and give it a sure cure. If sulphur is not obtainable they use gunpowder.

When the sulphur compound is spread over flowered calico the colors show through and the bags are extremely pretty.

The gunpowder mixture, of course, is black and not transparent. These bags will outlast a dozen made of vulcanized rubber and are eagerly purchased by engineers and prospectors.

A great many other useful articles are made, such as cigar cases, tobacco pouches, and ammunition bags, and even rubber shoes. Of course the latter are not made for export. Occasionally a native makes a clay last, puts thirty or forty coats of latex over it, with additional coats for the sole and heel. Then a couple of days later he draws ornamental designs with a knife or a piece of wire, allows the shoes to stand a week to dry out and then they are finished.



RELIC OF THE COLLINS EXPEDITION.



RUBBER ARTICLES MADE BY BOLIVIAN NATIVES.

INTEREST IN RUBBER PLANTING.

The planting idea seemed to have taken a strong hold upon the residents of both Pará and Manaós. I talked long with one large operator in the Acre who assured me that his house had already planted more than 100,000 trees. There were those who were urging the governor of Amazonas to grant subsidies and concessions of all sorts, but while he was most favorable to the planting idea, he did not see his way clear to favor exactly the plans put before him.

The following is a translation of the planting laws for the state of Pará, which are very liberal and well worth a careful reading:

FOR AGRICULTURISTS IN THE STATE OF PARA.

THE Legislative Congress has decreed, and I sanction, the following Law.

ARTICLE I.—To agriculturists of this state who may, by themselves, or by societies formed for the purpose, satisfy the exactions of the present enactment, the following premiums, to be paid by the finance department of the state of Pará, will be awarded:

First, of 500 milreis, for each lot of 500 rubber trees conveniently planted.

Second, of 250 milreis, for each lot of 500 cacao trees conveniently planted.

ART. II.—In order to establish the right of receiving the premiums instituted by the present Law, planters or associations must follow the instructions given by the agricultural department of the state, to which must be communicated the intention to plant.

ART. III.—The premiums shall be paid in installments within the following periods:

a. Whenever rubber trees have been planted, the premiums shall be divided in four equal installments, which will be paid as follows: The first, in the end of the second year after the trees have been planted; the second, in the end of the third year after the trees have been planted; the third, in the end of the fourth year; and the fourth, in the end of the sixth year.

b. [Here follow similar provisions for the payment of premiums to planters of cacao.]

ART. IV.—Previous to the payment of any premium, the number of plants and their respective ages must be verified by an employé of the agricultural department appointed by the government, and a record will be written of all that is verified, all of which must be signed by the said employé, by the planter and two witnesses, in preference, two planting neighbors.

One.—If, on verifying one lot of plants, at the request of any planter, it is seen that newer trees have been planted, other than the ones to which the premium is applicable, notes will be taken to entitle the planter to the additional premium, in the proper period due.

ART. V.—If the planting has not been done in strict accordance with the instructions of the agricultural department, or does not appear to be thriving, in the opinion of the employé of the agricultural department, or any other person, the government may refuse the payment of the premium.

One.—In cases of disputes arising on such points as this, the planter has the right to require of the government the appointment of a committee composed of three professional agriculturists, who will decide as to the rights of the planter.

ART. VI.—If on counting trees for the payment of any portion of premiums due by the government it is ascertained that, receiving the first installment, the number of trees has diminished, the next installment will not be paid until the exact number of trees are replaced.

ART. VII.—To farmers or societies who will apprise the government of their intention to plant, the following favors may be conceded:

a. Gratuitous distribution of 500 kilograms of chemical manures, during four consecutive years;

b. Seeds, plants and complete instructions on the following of agricultural pursuits;

c. Gratuitous teaching for every branch of agriculture;

d. Free freights on all the steamship lines and railways subsidized by the government for all machinery materials, plants, seeds, manures, fertilizers and animals for draft or stud purposes.

ART. VIII.—The proprietors of farms organized under the protection of this Law shall be entitled to the following additional favors:

a. A reduction of 50 per cent. on the export duty on rubber produced the first 10 years, dating from first exportation, and 30 per cent. reduction on the following 10 years; 30 per cent. reduction on the railway freights and all steamship lines subsidized by the government.

b. For cacao: [Similar provisions].

ART. IX.—To enable these reductions to be obtained, all packages must bear a trade mark, registered at the Board of Trade at the city of Pará.

ART. X.—To farmers or associations who will petition for lands for the purpose of planting in accordance with this Law, parcels of not over 100 hectares [= 247 acres] will be sold for one-half of the current established rates for public lands.

One.—The sale of these lands will be made provisionally and the titles thereof shall not be issued until it is proved that it has been planted to an extent that will enable the owner to receive, in premiums, a sum exceeding the cost of the lands.

Sec. 2.—If, after the period of three years, it is proved that the condition of the previous section has not been complied with, the government may declare the sale of the said lands null and void, and take possession thereof, together with any improvements made, without any right of indemnification on the part of the government, or of the return of any moiety paid on account of the purchase.

ART. XI.—The government will decree, in the form of by laws, all provisions that may be deemed expedient for the proper operation of this Law, and will open the necessary credits for the payment of premiums herein instituted.

ART. XII.—All enactments to the contrary are hereby revoked.

The Secretary for Public Works, Public Lands and Ways will see to its execution.

Palace of the Government of the
State of Pará, November 6, 1909.
[Signed] JOAO ANTONIO LUIZ COELHO,
INNOCENCIO H. DE LIMA.

FOR PLANTING COMPANIES, NATIVE OR FOREIGN.

THE Legislative Congress has decreed, and I sanction, the following Law:

ARTICLE I.—The Governor is hereby authorized to contract with one or more companies, native, or foreign, the planting and exploitation of the rubber tree (*Hevea Brasiliensis*), under the concession of the following favors:

a. The concession of state lands, up to 20,000 hectares [= 50,000 acres, more or less], duly handing them over, after proper demarcation, for the necessary planting operations of the company;

b. A reduction of 50 per cent. to be made in the export duties of cultivated rubber produced, in the first ten years dating from the day of the first exportation, and 30 per cent. for another period of ten years.

c. A reduction of 30 per cent. in the freights of the railways and on steamers which may be subsidised by the state, during twenty years, on all rubber produced by the company;

d. Free transport on the Buzanca railway, and on steamship lines subsidised by the state, for all machinery and materials needed by the company to put up their buildings and appurtenances: for all immigrants to be located on the company's plantations, as well as for all seeds, plants, animals, manures, tools and implements;

e. Advances to be made by the government treasury, as a guarantee of interest at the rate of 5 per cent. per annum on all the shares and bonds issued by the company, to the extent of one-half thereof.

One.—This guarantee of interest shall be limited only to the issue of a capital of £400,000, if the capital of the company shall be double that sum, or more.

ART. II.—In exchange for these favors the company must undertake to do the following:

a. To plant a minimum of 20,000 rubber trees yearly.

b. Observe the instructions of the agricultural department of the state in the mode of planting.

c. Maintain an elementary rural school with accommodations to house at least 20 minors, orphans, and a practical demonstration ground for teaching the mechanical appliance of tools and implements to agricultural pursuits, and also an experimental ground for trial of plants and the effects of manuring on same.

d. Cultivate rice, corn, and beans, and prepare the same mechanically.

e. Furnish the department of agriculture of the state annually complete statistics of all the planting movement and its results, and the products of rubber and other plants obtained yearly.

f. Use in the packages to be shipped containing products of the plantation, a registered mark, to be deposited at the Board of Trade of the state of Pará.

g. Permit the government the right to superintend all the works accomplished, in the manner it may best think fit.

ART. III.—The guarantee of interest conceded by this Law shall cease as soon as the company begins to earn 6 per cent. on its invested capital; and as soon as the said earnings on the capital invested by the company shall exceed 7 per cent. per annum the company shall begin to indemnify the government, at the rate of 5 per cent. on the total sums advanced by the government.

ART. IV.—As soon as the company shall begin to earn profits, the guarantee of interest, as provided by this Law, shall be only complementary, and be limited to that sum which will enable the company to declare a dividend of 6 per cent. on all its issued capital.

ART. V.—The concession of state lands shall be made for a period of 99 years, gratuitously, the right of property reverting then unto the state, together with all improvements made thereon.

ART. VI.—So long as the government guarantee prevails, the company shall not be at liberty to augment its capital, without the full consent of the said government.

ART. VII.—The rules and regulations and by laws of the company shall be subject to the approval of the government.

ART. VIII.—So long as the government guarantee prevails, the said government shall have the right to appoint one of the directors of the company.

ART. IX.—As a guarantee of the good faith in the execution of its contract, the government shall have the right to demand that the company shall deposit up to the sum 10 per cent. of its debenture stock.

a. The dividends paid on these debentures shall be credited to the company at the state treasury.

b. After the government is indemnified by the company for all advances made the debentures may be withdrawn from the treasury, if they should have been deposited.

ART. X.—Any concessions made under this Law shall be considered null and void, for all intents and purposes, and all lands acquired and improvements made shall revert to the sole possession of the government, without any right to indemnity of any sort, if, after two years from the date of the signing of its contract, the company shall have failed to plant a minimum of 40,000 trees, which must be established, and growing in good condition, and also having complied with the exactions of Article II of the present Law, save and except, cases of *force majeure*, in which case the government reserves the right to judge.

ART. XI.—The government of the state shall use every effort to obtain from the federal government in favor of the company, exemption of all import duties on machinery and agricultural implements it may need to import for its uses in the cultivation of the soil.

ART. XII.—In the contract to be signed with the *cessionnaire*, the government shall secure the interests of the state, by inserting the necessary clauses, regulating how the lands conceded shall be populated, and determining the periods on which the guarantee of interest shall be paid.

One.—In any case, the 5 per cent. corresponding to the first year shall only be paid after the government ascertains that steps have been practically made to initial the works for which the company has been organized.

ART. XIII.—The government shall open the necessary credits to defray all the expenses originated by this Law.

ART. XIV.—All decrees and laws in any way contrary to this, are hereby revoked.

The Secretary of Public Works, Lands and Public Ways will see to the execution of this enactment.

[Signed] JOAO ANTONIO LUIZ COELHO,
INNOCENCIO H. DE LIMA.



FLOATING ISLAND ON THE AMAZON.

From a practical standpoint the trouble about any rubber planting concession in Brazil is that governors, like our own presidents, normally last only four years. An unfriendly governor may not be able to cancel a concession, but he can easily interpret the various articles so that it would be valueless. Not that there is any present indication of such change or such attitude, but the time might come when such action would be

My own hope was that the governments of both Pará and



NATIVE COATING CANVAS BAG WITH RUBBER MILK.

Amazonas would remove the tax on plantation grown rubber entirely for a series of years. That they refused to do, as there were decided difficulties in the way. For example, wild rubber prepared as is plantation rubber would be sure to appear, and if a company owned both wild and planted rubber the temptation would be to get most of both kinds upon the market without an export duty.

Nor is the clause placing the export duty of planted rubber at one-half that of wild rubber an attractive proposition. It should have been a definite sum like 5 or 10 cents a pound; or a definite percentage on the sales value of the rubber, say of 5 or 10 per cent. Another thing, the idea of the planter running an industrial school or orphan asylum in connection with a business venture will not appeal to any capitalist. It is more than likely that these laws will be amended and simplified. Indeed, their very presence is a decided advance, and a strong symptom of the desire of the government to encourage planting on a large scale.

I was fortunate enough to know the acting director of the Pará Agricultural Experiment Station and get his ideas on planting. He was a young American, was an instructor in botany in an American university, and later at the head of an important section in the United States department of agriculture. More than any other he has studied the problem of rubber planting in the state of Pará. I quizzed him very searchingly, and the following is his statement, almost *verbatim*, and it is worth serious consideration:

Although in itself the greatest rubber shipping port in the world, the immediate vicinity of the city of Pará seems never, except by a few better informed and more far sighted than others, to have been considered seriously as a factor in the production of plantation rubber. Nevertheless, this district possesses advantages and opportunities afforded by none other, and those seeking outlets for a profitable investment would do well to investigate it further.

The city's proximity to the sea and its natural advantages as a port are so well known and its advantage in this respect over upriver points, where higher freights would be unavoidable, are so apparent that they may be passed over. Then Pará possesses a railroad of 250 kilometers [=153 miles] in length, which



THE URUCURY PALM.

[Its nuts are used for smoking rubber.]



CUTTING RUBBER FROM PADDLES. BOLIVIA.



FIRE BRANDING OF RUBBER, BOLIVIA.

affords access, ignoring the still much too prevalent belief that *Hevea* delights in wet and swampy locations, to a tract of well drained and healthful territory, immune to the caprices of annual floods, which is capable of producing a grade of rubber comparable to any now coming from the Amazon valley. This territory was personally inspected by the writer with the express purpose of investigating its suitability for rubber culture.

This section, speaking of the more accessible portion south of the river, forms part of the great forest system of the lower Amazon and extends in an unbroken stretch, practically without variation, eastward to the sea and southward to the mountains. The formation is a typical tropical rain forest; the large trees, among which are some veritable giants, stand comparatively far apart and represent almost innumerable species; the undergrowth is somewhat more compact, the small trees are straight and slender, while the whole is intertwined with *lianas* and made practically impenetrable without the help of a *machete* or axe. Extremely hard and durable woods are plentiful, some defying both the axe and the agencies of decay, but the trees of any one given species are so isolated and difficult to find and reach that remunerative lumbering is out of the question. The small trees and *lianas*, or *cipos*, serve many useful purposes in the construction of houses, fences, and tools.

In this forest the rubber tree is no exception to the general rule, as it is scattered and found in isolated locations like the other native species. The large size of the specimens found,

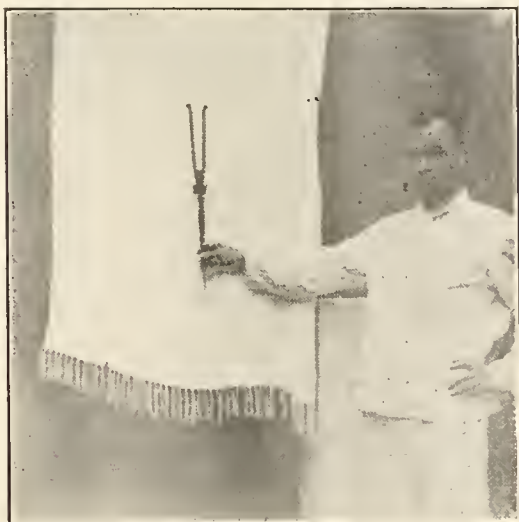
however, even when in competition with other and often times more vigorous denizens of the forest, testifies to its adaptability to its surroundings. In some localities it is, of course, more plentiful than in others, as those who remember recent newspaper accounts of discoveries made near the borders of Maranhão will know. There are also in the city and along the Bragança railroad, Pará rubber trees of a foot or more in diameter, which were planted and are now producing rubber of the finest grade. These are large, strong and productive, even in exhausted soil or when much crowded and neglected.

Labor does not present any unusual difficulties near Pará, nor are the forests difficult to remove. Raw labor is available in almost unlimited quantities near the city. It is easy also to import men from southern Europe and the Madeiras, a class which rapidly accustoms itself to the climate, which is not at all unhealthful, especially in the higher districts away from the vicinity of the rivers.

The native custom of clearing the land of forests is to fell the small trees and ring or kill by fire such of the large trees as have not yet been removed for their valuable timber, and then to set fire to the whole when somewhat dry. This practice destroys the most valuable elements of the soil for the time being, making it useless for more than one or possibly two crops of corn or cassava, but the supply of potash made available by the combustion of the timber serves as a stimulant for plant growth, which can be improved upon later by mulching or by a system of green manuring.

In what is known as *capoeira* land—i. e., abandoned clearings which have been covered by second growth—the cost of clearing is, of course, much less; the humus has been restored to the soil, oftentimes in greater quantities than ever before, and a clearing can be made simply by felling the young growth of trees, which can be left to decay. This does away almost entirely with the extra expense of burning and cleaning up after felling; besides it preserves the humus in the soil and adds an additional amount with a mulch by its own decay.

[TO BE CONTINUED.]



INDIAN SLING SHOT (WITH RUBBER).

AN Edinburgh correspondent states: An interesting phase is provided to the present rubber boom in interviews with a number of Scottish money lenders. The men in an extensive way in this class of business all stated they had advanced large sums during recent weeks, for periods of three and four months, to borrowers who secured the money for the express purpose of buying new rubber shares in the expectation of selling at an enhanced price and repaying on the special settlement. The interest charged by these money lenders varies from 40 to 100 per cent.—*The Financial News* (London).

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

ALTHOUGH I have always referred to this topic in a tone of extreme skepticism as regards its commercial importance, it has not been from any desire to distort the facts or to subserve any particular interests. I refer to the matter again more particularly in connection with German developments.

SYNTHETIC RUBBER.

With regard to the production of synthetic rubber by Professor Tilden some years ago, a little somewhat acrimonious discussion has been going on between the friends of Professor Tilden and those of Professor Dr. Harries, of Kiel. The latter have it that the product obtained by Tilden was not exactly identical with rubber, though almost so. Dr. Harries, I am assured by a German chemist cognizant of his work, has gone a step farther, so to speak, and has produced a 100 per cent. pure rubber of high quality from isoprene synthesized by a new method. Patents have been taken out in Germany and are now being applied for in Great Britain. I understand that Dr. Harries' rights have been made over to the great chemical manufacturing firm Farbenfabriken vormals Friedr. Bayer & Co., of Elberfeld—generally known by the abbreviated name of Bayer.

This means, of course, that the process will have the highest chemical skill, and ample capital resources behind it. It is understood that a factory is now in course of erection near Kiel to manufacture the new rubber, and that the only hitch likely to occur in the enterprises is the cost of production. This has already been considerably reduced, I am told, but still even if the new rubber can be produced at a cost to enable it to compete with Pará rubber today, what will be the case two or three years hence, when the inevitable fall in price takes place? However, there appears to be plenty of optimism about those associated with the Harries process, and it is to be expected that the chairmen of plantation companies will be interrogated on the subject by nervous shareholders. Of course what I have said above as to the difference between the Tilden and Harries rubbers comes from a German interested source. I merely pass the statement on and it may be that its truth is not accepted by Professor Tilden and his friends.

THE developments which have been made in the last few years with regard to the solvents used in rubber works seem to merit a brief reference. The tendency has been to do without refrigerating plant such as has been supplied in the past by Liddeley's, of Liverpool. In one of the modern arrangements in use on the continent the hydrocarbon vapors are condensed by immediate contact with cold water. I understand that the recovery is satisfactory and the cost of plant quite small compared with refrigerating machinery. Another system is the absorption of the vapors in a heavy and their subsequent separation by distillation. This, I may say, is a process in regular operation for the recovery of benzol from coke oven gases. I understand that a plant of this sort has recently been put up in a balata belting works. Another method of considerable interest is that used in connection with Vincent's patent vertical spreader and naphtha condenser. In this cold water alone is used without any refrigerating machinery and 90 per cent. of the naphtha used is stated to be recovered. This vertical spreader is a French patent and quite novel. I understand that it costs from £800 to £900 complete with condenser, and that it is in operation at the North British Rubber Co.'s, the Helsby works of the British Insulated and Helsby Cables, and also at Pirelli's, in Milan.

It will be interesting to see how these various new processes progress. Of course their advantage depends a good deal on the price of the solvent, and I believe it was mainly owing to the

low price of naphtha at the time that the recovery plant, patented some years ago by Frankenburg and Weber, was not put into operation. Having regard to the bulk of solvent used in the rubber industry, the amount which has been recovered in the past has really been quite trifling. In other industries where volatile solvents are used, for instance in oil extraction from seeds, dry cleaning of fabrics, and the manufacture of cordite with acetone, the recovery of the various solvents used has always been one of the main objects in view. In the rubber works the conditions of spreading are such as to complicate the recovery of solvents, and the business has been generally looked upon as more trouble than it is worth. Petroleum spirit, however, is now being more widely used than of old, and as this has gone up in price it is clear that where close competition exists those firms who can recover their solvent with profit have an advantage over those who let it all go to waste.

In the Edinburgh courts judgment was recently given in favor of Messrs Hepburn, Gale & Rose, Limited, in applying for an injunction against the British Balata Belting Cos., Limited, to restrain them from infringing their trade mark of a bull dog. The plaintiffs are now in a large way of business as balata belting manufacturers, having works at Bermondsey and Mitcham, both in the London area.

BALATA BELTING SUIT.

GUAYULE RUBBER.

AMONG the Americans attending the annual meeting of the Society of Chemical Industry at Glasgow was Mr. H. van der Linde, formerly of the Gutta-Percha and Rubber Manufacturing Co., of Toronto, Limited, but now prominently connected with the Intercontinental Rubber Co., of New York. I was pleased to have a visit from him, and to renew the acquaintance made some years ago. Mr. Van der Linde is a great believer in guayule rubber, and does not agree with those who predict the extinction of the industry in a few years' time owing to the extinction of the shrub. The present output of his company, he says, is about 1,250,000 pounds per month, and I gather that the whole output is sold for months ahead. Though not engaged in selling guayule, Mr. Van der Linde has taken the opportunity of conversing with some British rubber manufacturers on its properties, and has found that some prejudice exists against it. I remember that when it was first introduced to England the amount of resin was objected to. Later on the bulk of the resin was taken out before sale, but now I understand this procedure has been found too costly, and that it is sold with the resin, which appears to be more part and parcel of the guayule rubber than is the case with, say, African rubbers of high resinous content.

Guayule rubber is much cheaper than Pará and gives good results for goloshes, not cracking at all if properly manufactured. I understand, also, that in connection with the manufacture of railway bore it stands the somewhat severe test of the Master Car Builders' Association in a perfectly satisfactory manner. Some remarks on guayule, which recently appeared in the *Boston News Bureau*, have been reproduced in an English financial journal. One of the statements is to the effect that guayule rubber cannot compete with Pará grades, its price being only one-third of that of fine Pará. At the statutory meeting of the Guayule Rubber Co., Limited, one of the London boom flotations, the chairman, Mr. A. G. Augier, complained of the criticisms that had been made about the company and read a report from a Mr. William Perkins testifying that guayule really was rubber and not something else. I should hardly have thought it mattered what the public thought; the trade knows that it is true rubber,

though it is certainly a fact that the British manufacturer is not as cognizant of it as is the American and German, who so far have taken the bulk of the output. The experts of this company seem to have no doubt whatever of the continuity of supply of the shrub.

I READ with interest the article dealing with Gare's waste rubber process in THE INDIA RUBBER WORLD (July 1—page 358)—a process which has already been referred to more than once in this correspondence. The article, of course, dealt specially with Gare's process, and it was not incumbent on the writer to go beyond this. As, however, it might be imagined that in the matter of reforming rubber Gare's patent confers a monopoly, it may be of interest to say that there are other patents in the field which claim to effect the same end in a somewhat different manner. The first patent is the French one granted to Karavodigue, and it was this patentee who opposed the granting of Gare's patent, though without avail. Then there is the patent of Hutchinson and Milne, of Glasgow, already detailed in these notes. The next on my list is the patent of Hyatt and Penn (No. 13,599—1908), the amended specification of which was dated April 26, 1909. In this patent, which was ineffectually opposed by Gare—Mr. Grist giving evidence before the court—the novel application of a vacuum to remove the air from the mold is protected. The latest patent I have to mention is that of Immisch, which was granted, I believe, at the end of last year. In this case the air is expelled from the mold by means of a small quantity of a volatile oil.

Besides the £150,000 company referred to in the article, which I presume is the Simplex Rubber Co., owning the Gare patents, there is also the Premier Reforming Co., Limited, of £150,000 capital, working the Immisch patent. There seems to have been some delay in raking in the large profits adumbrated in the prospectus, but according to the remarks made by Mr. Rawson at the recent meeting of the Endurite Manufacturing Co., which promoted the Prenner company working Immisch's patent, the latter company is now going ahead. It will be seen, then, that there is by no means a monopoly in the reforming business, though I do not say that all the patents are of equal merit. Gare heats his crumb rubber to 400° F., to effect solidification, while in Hyatt and Penn's vacuum process perfect solidification is effected at 280° F. In this process, while any oxidation as well as revulcanization is prevented owing to the complete absence of air, the reforming of the goods from crumb rubber at the vulcanizing temperature produces a rubber of the greatest uniformity throughout its mass and with its content of free sulphur reduced to a minimum. I understand that the reformed rubber made by this process has been very favorably reported upon by rubber manufacturers and excellent prospects would seem to await any company formed to work the patent.

SOME exception has been taken by this company to the observations I made in the June issue of THE INDIA RUBBER WORLD.

CRUDE RUBBER WASHING CO., LIMITED.

In the first place, they say they are not interested either directly or indirectly in the London Venture Corporation, or the Madagascar Rubber Co. My reference to the business arrangements existing between the latter company and the Crude Rubber Washing Co. was solely with regard to the Guignet machine, and I hasten to correct any impression that other relations exist. With regard to the London Venture Corporation, I did not suggest that any business relations existed. I said that the Venture Corporation promoted the Crude Rubber Washing Co.; this is not disputed by the latter. I quite understand that the two concerns are widely different in character, the one being engaged in promotion and finance work, while the other is a purely technical concern formed for the specific object of supplying washed rubber to the trade. I don't know that I inferred that the company were "concerned in the share market or the promotion of companies," but I gladly make their disclaim-

ance known. In my further remarks I allowed myself to suggest that competition might arise from the use of another patented washing machine. If I enlarged on this topic I might involve myself in further correspondence, and I don't feel inclined to do more than give publicity to the statement made by the Crude Washing Co., that they are using their own machine, which is different from any other, because they have proved it to be the most satisfactory. They are quite disposed to use any other machine if it can be shown to be superior. To conclude I may say that I was commending on a published prospectus quite impartially and the reference to another machine was quite justifiable under the circumstances.

IN the interesting account of the Liverpool Rubber Co.'s changes published in THE INDIA RUBBER WORLD for July 1

A CORRECTION.

there is a note with reference to the re-arrangement of capital in the new company. This is obviously incorrect, but as the necessary correction may be beyond the power of many readers I may say that the paragraph should read: "The terms under which the new company gains control of the old are that for each ordinary £5 share is given two preferred shares of £1, debenture stock of £1, and about £1 in cash—or a total of nearly £4."

A COMPANY capitalized at £80,000 has recently been formed to take over the business and works of the New Motor and General Rubber Cos., Limited. Its title is the rather peculiar one of Almagam, Limited, this being the name given to

NEW COMPANY FLOTATION.

a product or a process connected with the re-treading of tires. This is put forward as the main asset of the company. Some of the papers hail Almagam as a substitute for rubber, but as far as I understand the prospectus it consists of rubber treated in a special manner which is stated to confer on it novel and important properties. The process is said to have proved very satisfactory during the few weeks it has been in operation, and the profits are certified by chartered accountants. A financial paper, however, says that a much longer period ought to have elapsed in order to thoroughly favor the invention before going to the public. The works are situated at Harpenden, near London, and some of the directors of the new concern have been identified with them for many years.

GUAYULE AS A MONEY TREE.

THE story is told in the New Orleans *Times-Democrat* of one Henry Clausner, who, in search of fortune, landed in Mexico with only a few hundred dollars. Happening to be in Saltillo at the time of the starting of the first guayule rubber factory there, he felt that he foresaw a great future in this industry, and determined to invest his savings in it. He started to look for a tract of good guayule land, and near Mazatil, in the state of Zatecas, he bought 5,000 acres of land at 25 cents (Mexican) per acre, or about \$625 in United States currency. Mr. Clausner then found work on a neighboring ranch as foreman, and there he has been working since, refusing all sorts of offers for the guayule shrub upon his land. Recently he accepted an offer of \$200 (Mexican) per ton for the shrub, based upon an estimate of one-and-a-half tons an acre, the proceeds working out at \$1,500,000 (Mexican), or one-half this amount in United States currency. And he has the land left. This fortunate young man is quoted by the New Orleans newspaper as saying: "I resigned my job on the ranch, and am off to Europe to spend the summer."

INTEREST in rubber planting continues to be developed in South India. The formation is reported of the Malankara Rubber and Produce Co., in the State of Travancore, at the southern extremity of the peninsula, in which district several rubber plantations have been formed already.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED JULY 5, 1910.

- N**O. 963,048. Tire fastener. R. W. Jordan, assignor to Jordan Demountable Rim Co., Boston.
- 963,130. Hose nozzle. H. Gibbs, assignor to W. D. Allen Manufacturing Co., all of Chicago.
- 963,172. Dental plate. J. Petry, Pittsburgh, Pa.
- 963,304. Vehicle wheel. [With pneumatic tire.] W. W. MacFarren, assignor to W. H. Donner, both of Pittsburgh, Pa.
- 963,308. Rubber heel protector. G. G. Mirlach, Beaver Dam, Wis.
- 963,320. Tire. [Cylinder type; with solid interior body sections.] I. F. Peck, Cranston, R. I.
- 963,365. Holder for rubber type. H. S. Folger, Chicago.
- 963,482. Vaginal syringe. I. L. Stevens, St. Louis.
- 963,667. Pneumatic tire protector. G. Vergote, Marshall, Minn.

ISSUED JULY 12, 1910.

- 963,806. Manufacture of india-rubber for elastic tires of vehicle wheels. E. Poizat, Glos, France, assignor to L. Alexandre, Condom, France.
- 963,882. Armored tire. W. H. Eynon, Cleveland, Ohio.
- 964,004. Air brake hose. C. T. Driggs, Erie, Pa.
- 964,049. Pneumatic tire. M. T. J. Ochs, Allentown, Pa.
- 964,131. Shield for tires. R. J. Stone, Detroit, Mich.
- 964,303. Automobile tire protector. J. G. Anthony, Detroit, Mich.
- 964,446. Reinforcement for pneumatic tires. A. L. Murray, Grand Rapids, Mich., assignor of one-half to Shawmut Tire Co.
- 964,462. Vehicle wheel. [With pneumatic tire.] J. M. Denham and G. W. Slater, Oakland, Cal.

Design.

- 40,763. Ornamental design for rubber hose. W. F. Bowers, San Francisco.

Trade Marks.

- 49,820. Continental Rubber Co. of New York. The word *Hexagon*, surrounded by a hexagonal design. For rubber that has been treated for the removal of extraneous matters.

ISSUED JULY 19, 1910.

- 964,551. Hoof pad. B. J. Porter, New Brighton, Pa.
- 964,578. Hose coupling. J. H. Stephens, Vernon, Tex.
- 964,579. Hose coupling. *Same.*
- 964,610. Anti skidding device for vehicle wheels. M. Clark, Chicago.
- 964,727. Resilient tire. I. O. Wilson, El Toro, Cal.
- 964,769. Syringe. J. H. L. Eager, New York.
- 964,783. Armor for pneumatic tires. C. E. Huxley, Chicago.
- 964,888. Foot ball, punch ball, and similar playing ball. J. Turner and A. Buxton, Manchester, England, assignors to The Rubber Patents, Ltd., Cowley, England.
- 964,903. Syringe. [Combined with water bottle.] J. L. Fisher, Providence, R. I.
- 964,977. Tire protector. J. L. La Driere, Albuquerque, N. Mex.
- 965,008. Process for separating caoutchouc from resinous products. G. F. Flamant, Paris, France.
- 965,127. Overshoe. L. B. Trafton, Limestone, Me.

Trade Marks.

- 48,302. C. H. Oakley, Trenton, New Jersey. A monogram formed of the letters X and S, in outline. For rubber soles and heels.
- 48,303. C. H. Oakley, Trenton, New Jersey. The same design as No. 48,302. For rubber quoits and croquet balls.
- 50,435. The B. F. Goodrich Co., Akron, Ohio. The word *Economy*. For belting.

ISSUED JULY 26, 1910.

- 965,281. Pneumatic tire. J. Corwin, Chicago.
- 965,331. Anti skid tire. H. G. Raflovich, Jersey City, N. J., assignor to Rubber B. B. Co., Bloomfield, N. J.
- 965,443. Emergency tire. C. M. Culp, South Bend, Ind.
- 965,539. Automobile wheel. [With rim for pneumatic tire.] C. Ramussen, assignor of one-half to P. W. Steinbeck, both of New Haven, Conn.
- 965,594. Non slipping rubber tread horseshoe. T. S. Moffett, G. F. Baker, and A. Robeson, Spokane, Wash.; Moffett assignor to Baker and Robeson.
- 965,620. Portable vulcanizing apparatus. M. Bouchet, Paris, France.
- 965,621. Non skidding device. H. P. Brown, Mount Vernon, N. Y., assignor to General Device Manufacturing Co., New York city.
- 965,642. Armor for pneumatic tires. A. H. Macheth, Fort Wayne, Ind.
- 965,695. Tire protector. W. T. Dorgan, assignor to W. J. Wickes and A. D. Eddy, all of Saginaw, Mich.
- 965,698. Protector for automobile tires. J. S. Ehrich, Lynchburg, Va.
- 965,715. Demountable rim for automobile. C. Johnson, Buffalo, N. Y.
- 965,765. Sealing composition. [Consists in part of a gum closely resembling rubber.] J. C. Talianferro, Baltimore, Md.

Trade Marks.

- 46,620. C. H. Oakley, Trenton, N. J. A monogram formed of the letters X and S, in outline. For valves and packing.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the application, which in the case of these listed below was in 1909.

- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JULY 6, 1910.]
- 66,003 (1909). Rubber tread for roller skates vulcanized directly to the body of the roller. G. H. Fennell and J. H. Ganson, London.
- 6,034 (1909). Rubber mouthpiece for removing wrinkles from the skin. J. E. Kollinger, Munich-Solln, Germany.
- 6,101 (1909). Spring wheel with rubber tread. J. Spyker, Amsterdam, Holland.
- 6,121 (1909). Single or multiple solid rubber tire. T. Wood, Withington, Lancs.
- 6,140 (1909). C. H. Crawley and T. D. Hiden, Lenton, Notts.
- 6,175 (1909). Pneumatic tire valve. J. Hall, Birmingham.
- 6,227 (1909). Pneumatic tire with mud guard as an integral part. F. F. Mott, Birmingham.
- 6,300 (1909). Hydraulic packing, composed of metal, rubber, and fabric. G. H. Cook, London.
- 6,305 (1909). Flying toy. H. Spranger, Gelsenkirchen, Germany.
- 6,512 (1909). Flying toy. W. Waegemann, Kemton, Germany.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JULY 13, 1910.]

- 6,508 (1909). Flying toy. C. E. Richardson, Sheffield.
- 6,707 (1909). Nasal douche. R. J. Baker, Cardiff.
- 6,730 (1909). Spring wheel with two or more tires side by side. G. Dehladis, Paris, France.
- 6,744 (1909). Solid tire with special means of attachment. A. Mans, Dieghem-Brussels, Belgium.
- *6,844 (1909). Pneumatic tire tread. T. J. Mell, Youngstown, Ohio.
- *6,851 (1909). Detachable rim of the split type for pneumatic tires. C. G. Hawley and E. K. Baker, Chicago, Illinois.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JULY 20, 1910.]

- 7,283 (1909). Tire with sectional air tube. C. Jeffs, Newport.
- 7,302 (1909). Combination of cellulose with caoutchouc, by adding a basic solution such as viscoso to latex. Société Française de la Viscose, Paris, France.
- 7,309 (1909). Tire tread in which fabric on edge is embedded in rubber. G. C. Taylor, Helsby.
- 7,418 (1909). Spring wheel with solid tire. C. A. Chertemps, Soisy-sur-Montmorency, France.
- 7,433 (1909). Centrifugal machine for separating rubber from latex. H. S. Smith, Caledonia, Tobago.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JULY 27, 1910.]

- 7,871 (1909). Heel pad. J. H. Pemberton, Manchester.
- 7,878 (1909). Spherical spring for golf ball cores, and other purposes. J. Childs, Bolton, and E. S. Atwood, Manchester.
- 7,889 (1909). Heel pad. W. Ackerman, Berlin, Germany.
- 7,908 (1909). Rim for pneumatic tire. W. D. Venning, London.
- 7,959 (1909). Cupping apparatus for treating the skin. J. Muretz, Berlin.
- 7,963 (1909). Solid rubber tire. L. Baradue-Müller, Paris, France.
- 8,062 (1909). Process for making articles from india-rubber. H. Dogny and two others, Paris France.
- 8,106 (1909). Fabric without weft, made by gumming threads together. P. Chevalier, Moulins-sur-Allier, France.
- *8,313 (1909). Puncture closing device for tires. C. L. Baldwin, New York city.
- 8,327 (1909). Heel protector. A. Fearnside, and C. Fearnside, Bradford.

THE FRENCH REPUBLIC.

PATENTS ISSUED (with Dates of Application).

- 410,942 (Nov. 9, 1909). W. C. State. Machine for manufacturing open tire treads.
- 411,157 (Dec. 30). Gustave Boinet & Cie. Rubber check buffer for carriage springs.
- 411,455 (Jan. 11, 1910). A. Lefaix. Emergency wheel, adaptable to wheels of automobiles and other vehicles.
- 411,460 (Jan. 11). P. Vandervelde. Method of attaching pneumatic tires.
- 411,540 (Jan. 13). Hirtz, Michel Levy & Bloch. Tire protector.
- 411,711 (Jan. 19). D. Moriarity. Elastic tire.
- 411,721 (Jan. 20). W. Loebinger. Tire valve.
- 411,760 (Jan. 20). K. E. Smith, Jr., and The Lynton Wheel and Tyre Syndicate, Ltd. Improvement in vehicle wheels.
- 411,802 (Jan. 22). R. Latour. Envelope for pneumatic tire.
- 411,860 (Jan. 19). L. E. Finelle. Improved rim and tire.
- 411,860 (Dec. 29, 1909). Estelle. Improved automobile wheel.
- 411,977 (Jan. 27). M. A. Kennedy. Tire protector.
- 411,991 (Jan. 26). The Continental Co. Process of manufacture of pneumatic tires.
- 412,065 (Jan. 31). E. J. Duff. Elastic tire.
- 411,911 (Jan. 25). Carteret. Horseshoe pad.
- 411,937 (Jan. 25). J. Smith. Caoutchouc compound.
- 411,963 (Jan. 27). The Rubber Tanned Leather Co., Ltd. Treatment of leather to render it waterproof.

The Inventor of the Pneumatic Tire.*

THE dispute arose about a statue. Who invented the pneumatic tire? To whom should Edinburgh give honor in bronze or marble? To a Mr. R. W. Thomson, who patented an air filled tire in 1845, or to John Dunlop, who invented the pneumatic tire in 1888? The dispute carries the imagination back over one of the most astonishing episodes in our industrial history. It begins with a mystery of invention. It culminates in financial operations on a scale unexampled in our day, and the development of innumerable industries connected with the use of rubber.

It was, indeed, in 1845 that Thomson patented the idea of affixing a "belt" filled with compressed air to the rim of a carriage wheel, and although his invention never came into practical use, he showed great knowledge of the good effects which would follow from the use of the pneumatic tire. Thomson, however, was ahead of his time, and his tire found no favor.

Forty-three years later John Dunlop, without any knowledge of the Thomson invention, patented a pneumatic tire. More than once I have heard from Mr. Dunlop himself the simple tale of how he came to invent this device. The "safety" bicycle had then come into vogue, but its wheels were shod with solid rubber tires. Mr. Dunlop's little son possessed a tricycle, and as the Dunlops then lived in Belfast, and the Irish roads were of very bad surface, this veterinary surgeon applied his mind to contrive some means for minimizing the harsh jolting to which his boy was subjected when he rode his tricycle.

A rubber tube filled with compressed air was evolved, and it afforded such comfort to the rider that Mr. Dunlop brought the idea before adult cyclists, and some enthusiasm was aroused among them. But Mr. Dunlop would have hardly been more successful in 1888 than Thomson in 1845 had not another man appeared on the scene.

Mr. Harvey du Cros was at that time a prominent figure in Irish sporting circles, and his sons were famous for their prowess in cycle racing. With true business instinct Mr. du Cros saw the immense possibilities of the pneumatic tire for cycles, and he threw himself heart and soul into the work of making this crude invention practicable. His early efforts were greeted with derision. Cyclists and cycle manufacturers scoffed at the clumsy "bolster" tire offered to them, and almost without exception experts declared against it.

Then Mr. du Cros brought a band of Irish cyclists, including his sons and R. J. Mecreedy, to England, and they gained sweeping victories with the pneumatic tire on the racing track. It was evident now that the new invention would eventually triumph, but a long and desperate fight against conservatism and prejudice had still to be waged, and it is reasonable to assume that but for the enterprise and ability of Mr. Harvey du Cros Mr. Dunlop's invention might have lain dormant for many years. Had this been the case the whole progress of modern locomotion from motoring to airmanship would have been checked, for we can trace the direct influence of the air-filled tire in all the astonishing developments of the last twenty-two years. So from the bad state of Irish roads, from the solicitude of a fond parent to make smooth progress for his son's cycle over rough roads, Thomson's idea was recreated, and this time the right man was at hand to develop the idea.

From the pneumatic tired bicycle there evolved naturally the idea of fitting air tires to motorcars, and in this direction France led the way. The crude mechanism of the early motors was saved from the rough vibration of the roads, and the automobile improved with amazing swiftness as soon as these tires were employed. With the progress of the motor car came the

perfecting of the petrol engine and its application to manifold purposes. Last of all, it made the airship and the aeroplane possible, and in each of these vessels rubber fabric is extensively employed.

Follow the evolution from small to great. Today cycles are numbered in millions, the total in the United Kingdom being over 3,000,000. There are close on 180,000 motor vehicles in the United Kingdom, and the world's total must soon approximate to half a million. All over the globe the trail of the air filled tire has been laid by millions and millions of wheels, and the road is becoming once more the main artery of our social system. In the air, too, we are tracing new routes by the aid of the petrol engine. Airships are being built by every great power, and of aeroplanes France alone has already nearly two hundred, most of them fitted with pneumatic tired wheels. With all this has come the creation of many important trades and the encouragement of innumerable allied industries, perhaps the most remarkable industrial development being that in connection with the production of raw rubber.

And this colossal factor in our industrial life has come into existence because of the discomfort to a child cycling along the rough roads of Ireland. Whether of Dunlop or of Thomson, Edinburgh's statue will not be without significance as a symbol in our industrial history.

* * *

It has been decided finally to recognize Dr. Dunlop as the one entitled to be considered the inventor of the pneumatic tire, and he is to be honored by the erection of a bronze statue in Edinburgh.

HOW RUBBER TREES ARE SCATTERED.

THE *Ceylon Observer* regards as a "most original and extraordinary advertisement" one offering for sale rubber forest properties in South America. The editor is moved to comment particularly on the estimate of 25 *Hevea* trees per acre, evidently with the idea that so small a number cannot be of consequence. But more than half the rubber produced today is derived from forest trees located more sparsely than 25 to the acre. By the way, the *Times of Ceylon* two years ago published this communication from an expert observer:

"SIR: Your reporter misunderstood me as to the number of rubber trees per acre I believe to be roughly the average in the Amazon region. What I intended to say was that 6 or 7 trees per acre is the maximum I have ever seen myself on an *estrada* of 150 trees, not that 6 or 7 trees per acre is usual. In fact, I very much doubt if there is a single square mile of forest on the Amazon with 1,500 trees on it [or 5 trees to two acres.] I quite agree with Mr. W. W. Bailey that one or two trees is nearer the average. Ninety million pounds of rubber come from probably about 60,000,000 trees scattered over at least 1,000,000 square miles of land—640,000,000 acres—in the Amazon region annually.

R. W. WICKHAM.

"Holmwood, Agrapatna, April 17, 1908."

REGARDING rubber fabrics for aeroplanes, Mr. Robert A. Warren, whose exhibition of a glider at the outing of the Rubber Club of America was mentioned in the last INDIA RUBBER WORLD, writes that while he has been using other materials, in his opinion rubberized fabric is the best aerial cloth. As this is very smooth it offers little resistance to the wind. Its cost, however—about \$1.50 per yard—tends somewhat to limit its use.

*From the London Daily Mail.

The Obituary Record.

JOHN B. CARRUTHERS.

IT is with great regret that the death is recorded here of Mr. John Bennett Carruthers, F. R. S. E., F. L. S., assistant director of agriculture of Trinidad. Mr. Carruthers returned from a visit to the island of Tobago suffering from an attack of fever, which was followed by pneumonia, the end coming on July 17.

The subject of this sketch was the younger son of Dr. William Carruthers, F. R. S., some time keeper of botany at the British Museum. He was educated at Dulwich College, in England, from which he passed to the Royal School of Mines, and later to Griefswold University, in Germany. At the latter institution he developed the interest in botany that was to shape his successful career.

Leaving the university, Mr. Carruthers became assistant to his father, who then held the post of consulting botanist to the Royal Agricultural Society, and distinguished himself by his work in testing seeds and the study of diseases of cultivated plants. Subsequently he filled many positions of importance in the line of work which he had laid out for himself and made numerous contributions of value to botanical literature. In time

Trinidad as assistant director of agriculture. His heart was in the Malay States and he hated the thought of change, but, like a good soldier, he obeyed. Had he wished to leave the government service and take any one of a score of remunerative positions with Malaysian planting companies, he could in a short time have retired with a fortune. His profession, however, and his loyalty to the service prevented this.

In Trinidad he attacked problems there with intense enthusiasm and with absolutely no thought of sparing himself. His desire was to bring about some method of extracting the maximum amount of latex from the *Castilloa* tree without injury. He hoped, as long as there were large areas of *Castilloa* planted, to be able to make that tree nearly as great a profit producer as the *Hevea*. In the last chat that the writer had with Mr. Carruthers, only a few months ago in Port of Spain, Mr. Carruthers said:

"I do not want this for my own glory, as that is the very last thing I am looking for. But I do want to see the *Castilloa* planters win out on a large scale, and I believe that with the proper method of collection they can do it."



FRANK C. HOWLETT.



JOHN B. CARRUTHERS.



HENRY O. CANFIELD.

he found himself in Ceylon, in the government service, and later in the Federated Malay States. His last work was done in the British West Indies.

Mr. Carruthers was in his forty-second year, having been born in January, 1860. He married Frances Helen, daughter of the late Mr. A. B. Inglis, of Calcutta and Edzell, Forfarshire, Scotland.

Mr. Carruthers was in many respects a very unusual man. His ambition was wholly in the line of his profession, which was that of mycologist, or plant and tree doctor. What he did in discovering the origin of certain cacao diseases and stamping them out is a matter of record among tropical planters the world over. When canker developed in the Para rubber plantations in Ceylon, Mr. Carruthers was one of the first to devise means for checking it and finally stamping it out. His whole thought after he became director of agriculture and government botanist for the Federated Malay States was for the furtherance of scientific planting. He was particularly interested in rubber planting, and did much for the great plantations that have since proved so profitable.

A little over a year ago the home government sent him to

That wish to be of value to the rubber planter and to be an honor to his profession was his one ambition. In his death the British government has lost a most capable servant, while rubber planters the world over have lost one of their truest friends.

HENRY O. CANFIELD.

HENRY O. CANFIELD, who died at Bridgeport, Connecticut, on July 25, was born in Naugatuck, in that state, November 9, 1847, being a son of Jared Huntington Canfield and Mary Andrews. At the age of 13 he accompanied his parents to Europe, where he remained for several years, his education being completed by private tutors in France and Germany. Returning to America, he found employment with A. T. Stewart & Co., dry goods merchants in New York, going later with The Diamond Match Co., at Detroit, Michigan, and then to a railroad position at Pekin, Illinois. He remained in the transportation business for several years, rising to the position of chairman of the Illinois Railroad Freight Association.

The father of H. O. Canfield [see sketch in THE INDIA RUBBER WORLD, May 15, 1892—page 241] was a friend of Charles Good-year, with whom he did much important work in rubber at

Naugatuck and whom he represented later in Europe, finally establishing the business at Bridgeport now operated under the name Canfield Rubber Co. In 1885 the subject of this sketch assumed active management of this corporation as its secretary. In 1889 he withdrew to establish himself at Bridgeport in the manufacture of a line of mechanical rubber goods, which business was incorporated in 1904 as The H. O. Canfield Co., Mr. Canfield filling the office of president until his death.

In addition to being a successful business man, Mr. Canfield had numerous interests in life. He became a member of many branches of the Masonic order, in which he took several of the highest degrees. He was an attendant at the Episcopal church, and his charities, though unostentatious, are known to have been many. Mr. Canfield, on April 17, 1875, married Emmagene C. Freshour, of West Greece, New York, who survives. There are two sons—A. H. Canfield, vice president, and H. B. Canfield, secretary, of The H. O. Canfield Co. When Mr. Canfield retired from the Canfield Rubber Co. he sold his interest to his brother-in-law, the late Ratcliffe Hicks.

Mr. Canfield was always a striking, interesting figure. He was large, manly, optimistic, and unalterably genial. He numbered his friends by hundreds, and loved dearly to see and entertain them.

FRANK C. HOWLETT.

FRANK C. HOWLETT, of Syracuse, New York, one of the most successful and best known rubber goods merchants in the country, died on July 29 at Watkins Glen, where he had gone for his health, which for some time had not been robust. Mr. Howlett was born 53 years ago, at Cambridge, Massachusetts, and educated in the Boston schools. He was employed at first by Clapp, Evans & Co., a firm succeeded by the American Rubber Co., which latter was merged into the United States Rubber Co.

While quite a young man Mr. Howlett went to Syracuse with H. B. Hall, son of H. A. Hall, then a prominent member of the New England rubber trade. Mr. Hall opened a rubber goods store in Syracuse; he took a partner, O. W. Clary, under the style of Clary & Hall, and afterwards sold out to Clary. In 1881 Mr. Howlett went into business for himself at Syracuse as F. C. Howlett & Co. The next year a branch house was organized in Rochester, under the name Howlett Brothers. In 1886 a third store was opened at Buffalo.

Through these three houses Mr. Howlett controlled a goodly share of the jobbing trade in rubber goods in western New York. They were handlers of the products of United States Rubber Co., and about four years ago the three businesses were incorporated, each with capital contributed by the United States Rubber Co.—Syracuse Rubber Co., the Rochester Rubber Co., and Iroquois Rubber Co., each with Mr. Howlett as president and treasurer. The combined business of the three houses was estimated locally at something like \$1,500,000 per year. In 1895 Mr. Howlett bought out the business of Mr. Clary already mentioned in this sketch.

Mr. Howlett is survived by a widow, who was Miss Ella Phelps; also by a brother, Eugene, at Cambridge.

Frank Howlett had a generous, whole souled nature that made life richer for those who knew him. He was distinctly a good citizen, as well as a good business man, but he declined to accept political honor. He was a member of the Masonic order and of several country clubs, and an attendant at the Presbyterian church. He was exceptionally gifted as a tenor singer.

DR. S. AXELROD

THE rubber industry, particularly on its scientific side, has suffered a severe loss in the too early death of Dr. S. Axelrod, one of the more modern group of German rubber chemists. Born in Odessa, Russia, he went at an early age to Berlin to complete his studies, after which he entered the rubber laboratory of the late Dr. Robert Henriques, whom he served as an assistant for

some years. In 1897 he became chemist for the Allgemeine Electricitäts Gesellschaft's cable plant at Oberspree, in which position he remained until his death, and most of his research work on rubber was carried on during this period. Dr. Axelrod's investigations were conducted along practical as well as scientific lines, and rubber chemists in general are familiar with his improved methods for the analysis of rubber, together with his researches into the general problems of vulcanization, mastication, and the like. Along practical lines he was active in investigations into the valuation and working of crude rubber, and in improvements in the manufacture of rubber-covered wire. Dr. Axelrod died on July 28.

PASSING OF A GERMAN RUBBER PIONEER.

THE death will be widely regretted in the trade of Herr Robert Friedrich Metzeler, of Munich, the founder of the india-rubber industry in Bavaria, who passed away at his home during the night between July 15-16.

Born in 1833, in Memmingen, Mr. Metzeler was compelled at an early age to enter the battle of life. After having tried various lines of business in his native and other countries, he reached Munich in 1860, with the intention of opening in that city a rubber goods store. However, the men who were at that time burgomaster and councilmen of Munich, harbored the opinion that a man would not be able to make a living from such business (the rubber trade being then a complete novelty in that city), and they refused to grant him a license. Nothing daunted, however, Mr. Metzeler repeated his applications during the next three years, until he finally succeeded, in 1863, in obtaining permission to start in business.

The growth of his trade, exceeding his most sanguine expectations, induced Mr. Metzeler in 1873 to establish a rubber works, which was removed in 1888 to a new and much more extensive plant. In 1890, Mr. Metzeler became a candidate for the reichstag, but was unable to win out against the candidate of the Social Democratic party. In consideration of his eminent services to the home industry, the title of Royal Bavarian Kommerzienrat was conferred on him in 1891. In the year 1910—under date of May 7—the firm of Metzeler & Co., was converted into a joint stock company, and Mr. Metzeler tried from the management of the business. The new company began with a capitalization of 1,600,000 marks, which amount has been increased largely, to keep pace with the growth of its trade. The Metzeler family continue to be identified with the management in the person of Dr. Karl Metzeler, who may be said to have grown up in the business.

The *Gummi-Zeitung*, in an appreciative notice of the deceased, says: "In him we again lose one of those clear sighted men who, by their energy and practical experience, have created a new industry in their country. All who have had occasion to come in contact with this sterling German man of the old stamp, will cherish his memory."

A GOOD YEAR IN TENNIS.

THE tennis goods trade for the season just closed showed a very good increase over last year. It is stated from an authoritative source that if the weather had not been so cold and wet in May and June, 1910 doubtless would have been the banner year for the tennis trade in the United States. The succeeding two months, however, cleaned up stocks in the hands of jobbers and retailers, and the outlook for the next season is considered very good.

There will probably be a few changes for next year in the way of lasts and patterns, but the general styles will remain about the same. Prices and terms had not been settled in time to be reported in this issue, but it was expected that they would be ready for distribution to the trade by September 1, as usual.

THE GOLF BALL MANUFACTURE.*

BY ROBERT MILNE.

AMONG the games belonging to the whole range of sport, none has had such a distinct influence on the general public, as golf. It has had a most helpful influence in the furtherance of the public health. In England, the municipalities are trying to excel each other in providing for the working classes health giving recreations, whose great usefulness cannot be denied; and golf links are being laid out near all the large cities.

While golf has been played for centuries, the game recently has been greatly advanced and developed by the introduction of the Haskell type of ball. In olden times the balls consisted of solidly compressed leather shells, stuffed with feathers. Such balls were replaced with solid balls of gutta-percha, which were at first given an approximately spherical shape by means of peculiar hammer devices, but were made later in special molds. Still more recently the Haskell ball, consisting of a rubber cone and a gutta-percha shell, were placed upon the market and revolutionized the sport. For one thing, the game became more attractive to ladies.

There has been some very expensive litigation over golf ball patents, one result of which has been to open the industry to a much wider field than a few years ago. The manufacture of golf balls and the best methods of construction have meanwhile been generally and definitely systematized, but as the practical process of making these balls is very valuable, it is still being guarded with the greatest possible secrecy.

MANUFACTURE OF GOLF BALLS.

The center of the golf ball today consists of vulcanized, floating rubber waste, chiefly an entangled mass of torn rubber threads. In order to shape this mass and make it hard, it is wound with tightly stretched strips of rubber, measuring from 10 to 20 millimeters in width, until the ball measures 18 millimeters in diameter. The rubber strips used are similar to the insulating tape used for electric wires.

When this core has thus been prepared, it is given a covering of rubber threads. These threads are 1 millimeter thick and from 3 to 4 millimeters wide, and made of the highest grade rubber, not containing any sulphur in its free state. While winding the threads around the core, they are tightly stretched. This covering constitutes the most resistant part of the ball, and the rubber threads or strands of which it is composed must be very carefully wound. A number of different machines have been constructed for this purpose. One of these winding machines consists of an approximately spherical steel ball, operating on steel rollers of peculiar shape. This machine produces a very elastic core. The difficulties formerly encountered in manufacturing golf balls have been considerably lessened by the use of this simple machine.

After the core thus prepared has been carefully tested, it is provided with a covering of hardened gutta-percha or balata, composed of sections with special rims or flanges. These sections are laid over the core and are then joined together in pressure molds. The sections of the covering are made in cast iron molds, while the pressure molds are made of steel and equipped with the necessary trade marks and names, the impression of which appears on the finished golf balls. Great care is required for all of these operations, since the gutta-percha covering will otherwise soon come off. The pressure molds are heated in a common vulcanizing press and subsequently cooled, whereupon the balls are taken out and any gutta-percha that may adhere to the seams of the mold is removed. The method formerly used, of winding gutta-percha strips around the core, has consequently been abandoned.

A further important factor is the painting of the golf balls. The painting must be resistant as well as elastic, as it would

otherwise crack and scale off. The most practical method is to give the ball six coats, starting with a coat of boiled linseed oil, followed by several coats of paint, and finishing with two coats of high grade enamel.

After wrapping each finished golf ball separately in some ornamented fabric, they are packed in small, handsome boxes, containing one dozen each.

In England, the dealer's selling price for the balls ranges between 9 pence and 2 shillings 6 pence each, the selling price of the bulk of the highest grade golf balls being at the present time 2 shillings.

The average number of balls required each day during the golf season is estimated at from 450 to 500 gross, or 64,800 to 72,000 balls. The consumption is undoubtedly increasing, since golf is now being played in all parts of the world, and new golf clubs are being organized everywhere. Players are eager to test every new kind of golf ball placed upon the market, and if the new golf ball stands the test, its sale promises good profits for the dealer, providing he advertises the brand effectively.

GROWTH OF THE STOUGHTON COMPANY.

THE Stoughton Rubber Co. (Stoughton, Massachusetts) recently purchased land adjoining their plant, and at once plans were begun for an additional building which, it is understood, is to be of concrete, three stories high and 130 x 50 feet. The business of the Stoughton company, always successful, has been growing rapidly of late. The employé's number over 400, and the new buildings will provide for a larger working force.

This business was begun in 1877 as the Mystic Rubber Co., with \$13,000 capital paid in. The name Stoughton Rubber Co. was adopted early in 1889, and its capital increased to \$100,000. Later in the year the figure was raised to \$200,000, and the name and good will taken over of the Hall Rubber Co. (Watertown, Massachusetts). The capitalization is now \$250,000.

At the foundation of the business one of the traveling salesmen was Ira Foss Burnham. Four years later he was made factory superintendent, and since that time he has been in charge of the business. In 1893 he was elected president and general manager.

The concern at Stoughton was among the very first to make rubber gossamer garments. When the demand for such goods declined, the company added rubber service clothing to their products; later a full line of mackintosh rubber goods, and, finally, a cravenette department was organized. The company are thus in a position to supply all kinds of waterproof clothing. A Stoughton newspaper presents a picture of 32 employés who have been on the payroll for an average of 19½ years.

RUBBER IN ARGENTINA.

AN official report from the American minister at Buenos Aires quotes the government botanist of Argentina to the effect that the Mexican guayule plant (*Parthenium argentatum*) has not been discovered in that country. The minister states, however, that there is an abundant growth of what he calls "guayule arbustivo," also known locally as "yarillas," which is rich in resin, believed to be of value for use in varnish making. This plant constitutes almost the only vegetation in the arid portion of the republic, but its commercial exploitation is not known to have been commenced.

The same report mentions the existence on the eastern slope of the cordilleras of a small tree of the *Euphorbiaceæ* which is said to contain good rubber, but no rubber has yet been exported from Argentina. For the previous state of knowledge on this subject see THE INDIA RUBBER WORLD, April 1, 1906 (page 219).

*From the *Gummi-Zeitung*.

The New Malaysian Rubber.

THE statutory meeting of the United Malaysian Rubber Co., Limited, required under the British corporation laws, was held in London on July 27, when it was announced that plans had been completed by acquiring the whole of the stock of the Malaysian Rubber Co., incorporated in New Jersey, in the United States. [See THE INDIA RUBBER WORLD, June 1, 1910—page 302.]

The company has been formed for working gutta-jelutong into a rubber of high grade. Up to July 17 the factory of the company at Goebilt, Sarawak, had turned out 325,213 pounds of prepared rubber and the last sales had realized 5s. [= \$1.21 2/3] per pound. It was believed that the operation would have been much larger, but for the destruction by fire in Singapore of a great quantity of chemicals.

Concessions have been obtained of exclusive rights for tapping jelutong in the Federated Malay States, over an area officially reported at 4,945,608 acres. In addition to the company's interests at Sarawak, shares are held in two Dutch companies, the *Nederlandsch Indisch Boschproducten Maatschappij*, and

the *Karimon Rubber Maatschappij*, carrying important rights in South Borneo and the Karimon islands. The erection of a factory in the Karimon islands, to cost more than £60,000, is contemplated.

Dr. Philip Schidrowitz, of London, an expert in the chemistry of rubber, having just returned from a two months' visit to Sarawak, made a most favorable report on the prospects of the company. Dr. Schidrowitz regarded the future supply of gutta-jelutong as safely assured, and he did not believe that the production was likely to become so large as to result in a decline of prices to a figure which would cease to make the work of the company extremely profitable.

Later information is that the factory at Goebilt during the first week in August shipped 35,500 pounds of rubber, and it was expected that by the date of this paper the plant would be turning out more than 10,000 pounds daily. The Karimon Islands plant, about 30 miles from Singapore, expected to be in operation by the end of January next, is planned for a minimum capacity of 30,000 pounds of rubber product daily.



"GUTTA-JELUTONG" TREE IN JUNGLE.
[Showing Method of Tapping Now in Use.]



"GUTTA-JELUTONG" TREE IN JUNGLE.
[Dr. P. Schidrowitz and Native Tapper in Foreground.]

The new rubber is being biled in New York to American buyers as "Extract of Borneo," though it does not seem probable that this term will become permanent. When fine Para was quoted at \$2.90, the new Malaysian rubber sold in New York as high as \$1.30. It has since declined to 90 cents, and advanced again during the past month to \$1.10.

Speaking of the continuance of the trade in crude Pontanak, it may be mentioned that a single manufacturing concern imported at New York recently 6,000,000 pounds in a single month, and the company state that they have no fear of not being able to continue to obtain the crude gum as long as they may desire it. They are, however, buying some of the new raw rubber.



RUBBER READY FOR SHIPMENT AT GOEBILT.

The great extent of production and consumption of gutta-jelutong is indicated by the importation of this material into the United States alone. The figures which follow are compiled from official statements of receipts of Pontianak at New York for fiscal years ended June 30:

YEARS.	Pounds.	Values.
1910	52,392,444	\$2,419,223
1909	24,826,296	852,372
1908	22,803,303	1,039,776
1907	28,437,660	1,685,098
1906	21,390,116	733,074
1905	10,104,911	641,319
1904	14,887,416	430,231
1903	13,084,817	345,431
1902	16,850,821	501,418
1901	9,371,087	248,838

This large quantity, of course, comes in a crude form, as indicated by the fact that the import price for the last year averaged only 4.6 cents per pound. Various manufacturers in America have developed processes for desinuating jelutong, with presumably satisfactory results. It will be interesting, none the less, to see how far, if at all, the operations of the great new company in the Far East will influence the shipment of untreated gum to the United States.

GUTTA-JELUTONG IN EUROPE.

JELUTONG is brought upon the European markets by the Borneo-Sumatra Maatschappij, according to the American consul general at Hamburg, imports being made from Singapore. London is mentioned as the principal market for jelutong, but this must refer to the European trade alone. The principal consumption of gutta-jelutong is in the United States, to which country the importation is almost wholly from Singapore, the figure for a single year amounting to over 27,000,000 pounds. The consul reports: "The average price of jelutong, such as Bandjermassin, Pontianak, and Sarawak, during the last five

years, has been 45 to 50 pfennigs per kilogram [10.7 to 11.9 cents per 2.2 pounds]. The price is now 58 to 60 pfennigs [13.8 to 14.3 cents] per kilogram. Pontianak is the lowest grade, and is generally quoted a half cent below other kinds. At times the price has been as low as 9½ cents per kilogram."

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

THE following is an official statement of the value of exports of manufactures of india-rubber and gutta-percha from the United States for ten fiscal years, ending June 30:

YEARS.	Belting, Packing, and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
1909-10	\$1,060,825	\$1,984,739	\$5,115,331	\$9,060,895
1908-09	1,498,445	1,292,673	3,823,956	6,615,074
1907-08	1,347,775	1,614,290	3,743,040	6,705,105
1906-07	1,253,369	1,231,898	3,729,643	6,214,910
1905-06	1,221,159	1,505,082	2,966,144	5,692,385
1904-05	994,100	1,214,342	2,572,375	4,780,817
1903-04	879,476	1,086,364	2,469,750	4,435,590
1902-03	819,985	1,056,491	2,299,875	4,176,351
1901-02	634,146	1,046,315	1,781,941	3,462,402
1900-01	565,726	724,015	1,727,527	3,017,268

Exports of rubber boots and shoes (in pairs) have been as follows, by fiscal years ended June 30:

1902	2,594,708	1905	2,390,539	1908	3,080,253
1903	2,307,401	1906	2,693,670	1909	2,366,435
1904	2,310,808	1907	2,310,420	1910	3,791,084

Exports (in value) of reclaimed rubber and of waste rubber have been as follows:

	Reclaimed.	Waste.
1909-10	\$535,795	\$578,944
1908-09	414,861	402,897
1907-08	418,738	449,727
1906-07	665,109	548,695
1905-06	511,843	339,507
1904-05	522,902	204,945

IMPORTS INTO THE UNITED STATES.

YEARS.	India-Rubber.	Gutta-Percha.	TOTAL.
1909-10	\$1,154,347	\$80,567	\$1,234,914
1908-09	1,301,770	71,819	1,403,589
1907-08	1,956,590	93,545	2,050,135
1906-07	2,262,783	191,064	2,453,847
1905-06	1,992,413	208,172	2,200,585
1904-05	1,380,064	117,735	1,506,799
1903-04	821,562	335,480	1,157,042
1902-03	665,972	225,198	891,170
1901-02	449,756	127,780	577,536
1900-01	478,663	103,337	642,000

GREAT BRITAIN AND IRELAND.

OFFICIAL statement of exports of manufactures of caoutchouc for the first six months of three years:

	1908.	1909.	1910.
Boots and shoes	£79,477	£78,742	£86,988
All other	713,945	755,903	897,199
Total value	£793,422	£834,645	£984,187
In U. S. money	\$3,861,188	\$4,061,800	\$4,789,546

Value of "Apparel" waterproofed by any process—first six months of the year: In 1908, £148,482; in 1909, £125,466; and in 1910, £221,370. Exports of rubber footwear amounted to 77,475 dozen pairs in 1908; 79,814 dozen pairs in 1909; and 83,106 dozen pairs in 1910.

THE abundance of rain during the present traveling season has had its effect on the rubber trade, as evidenced by the lively sale of raincoats. Although it is, of course, our sincere wish that the summer excursionists and those who seek health at the "spas" may enjoy fine, pleasant weather, there is, on the other hand, reason for satisfaction in the thought that the rubber trade is being benefited by the wetness of the season—*Gummi-Zeitung*.

New Rubber Goods in the Market.

A SCOTCH BOWLING SHOE.

THE Douglas patent bowling shoe is a recent addition to sporting footwear. It is vulcanized over specially shaped lasts which allow the two sides of the counter to come close together, thus forming a spring attachment, sufficiently



DOUGLAS BOWLING SHOE.

strong to tightly grip the heel portion of the shoe. This grip is intensified by the lining of the heel seat with corrugated rubber, which is said to obviate slipping. There are no straps, laces, or buckles, the adherence of the shoe depending wholly on the spring attachment. Another desirable feature is a perfectly flat sole. [Waverly Rubber Co., Edinburgh, Scotland.]

A SERVICEABLE HUNTING BOOT.

THE new "Kalkalong" boot is one of the most serviceable for hunting as it will not scratch from briars, and is waterproof. It consists of the well known La Crosse "Red Fiber" sole, a vamp of black rubber, and an upper of heavy well oiled tan leather running to the knee. This top has a good sized snow and water excluder, extending from the vamp to the top of the boot, and is fastened by means of raw hide lacings, which pass through eyes near the vamp, but around hooks the rest of the way, making the boot convenient to slip on. The whole is a natty appearing, yet practical, boot for the hunter. [La Crosse Rubber Mills Co., La Crosse, Wisconsin.]

BLACKSTONE VACUUM MASSAGER.

THE Blackstone vacuum massager is an appliance to be used in any bathroom. As shown in the illustration it has a faucet connection, and a large rubber bulb to which is attached a rubber



BLACKSTONE VACUUM MASSAGER.

tube connecting with a small pipe on the side. The "applicator" or massager is attached to the other end of the tubing, through which the running water which operates the massage device passes. To cleanse the instrument the "applicator" should be placed in hot water while the suction is on, and the water will pass through the cylinder, carrying with it all refuse matter, which discharges itself through the bottom of the cylinder. [Blackstone Manufacturing Co., Chicago.]

THEY GUARANTEE FOR 5,000 MILES!

A TIRE renovating method for which much is claimed, is known as the "triple tread" process. With the old tire casing for a basis, the process consists of a heavy application of rubber, covered with two plies of French chrome leather. It is claimed that the close adherence of the two substances produces a com-

bined resiliency and durability. An outside coating of rubber studded with 3 to 6 rows (according to size of casing) of hardened steel studs tends to make the tire skid proof. This process may be applied to any tire. [Triple Tread Manufacturing Co., Chicago.]

"LUXURY" LATHER BRUSH.

A LATHER brush constructed on the old time "dauber" plan, with bristles attached to one side of a disk shaped end of the handle, and having 150 round red rubber fingers on its other side, is novel in shape and purpose, which is said to so soften the beard as to materially promote the comfort of shaving, strengthen the texture of the skin, and possess general massage properties. [Luxury Sales Co., Troy, New York.]



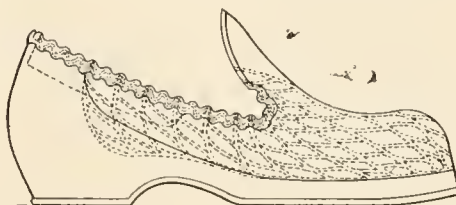
THE "LUXURY" BRUSH.

NEW FORMS OF RUBBERSET BRUSHES.

THE Rubberset Brush Co. (Newark, New Jersey), who have made a wonderful success in shaving brushes set in vulcanized rubber, have conferred a distinct service upon humanity in producing a rubberset tooth brush, the bristles of which stay where they belong instead of wandering around the roof of the mouth, and finally lodging in the epiglottis. The same company are also marketing a rubberset hair brush.

STILL ANOTHER OVERSHOE.

A NEWLY patented rubber overshoe has for its object the retention of shape, and at the same time to prevent the foot from sweating. Also it is intended to be proof against splitting at the points most subject to strain, and to so securely engage the leather shoe as not to pull off on becoming stuck in the mud. It has a thickened marginal edge, inclined on its inner face to provide an inside overhang, and a fluted formation and a corrugated reinforcing wire embedded in the thickened edge and corresponding in shape to the fluted formation, the upstanding portions of the corrugations extending into the upstanding portion



TRAFTON'S NEW OVERSHOE.

of the pleated surfaces of the thickened edge. [Leigh B. Trafton, Limestone, Maine.]

A CORK CENTERED BASEBALL.

AN innovation in baseball manufacture is a new cork centered ball, succeeding the ball with the rubber center in vogue since the early '80's. Instead of a solid rubber center, the new ball has a cork center with a corrugated Pará rubber covering $\frac{1}{8}$ inch thick. In weight and size it complies with the requirements of the official rules, and is claimed to be a decided improvement, both from a league and amateur standpoint, over any ball previously offered. It is said to be yielding and consequently more durable than the old type of ball. [A. J. Reach Co., Philadelphia.]

THE NEWEST BICYCLE GRIP.

THE "Wear-Well" rubber grip for use on bicycle handles, made over a single smooth metal tube, of fine Pará rubber, is soft and resilient, entirely seamless, and shaped to fit the hand. The rubber is firmly secured at either end by broad ferrules of German silver. The advantages claimed for it are that it will not slip, crack, peel, or sweat the hands. [Haverford Grip Co., Philadelphia, are the manufacturers.]



"WEARWELL GRIP."

SAFETY TIRE AIR GAGE.

A SMALL and inexpensive tire gage is practically a combination pump tire connection. Attached to valve stem, it opens the valve and allows the air to return to the gage, thus indicating at all times the pressure, but does not allow it to return to the pump. [Safety Tire Gauge Co., Chicago.]



A RUBBER TIRED TOP.

THE "Ideal" ball bearing top, consisting of a nickel plated ball bearing flywheel around which runs a rubber tire, and through the center of which passes a perpendicular spindle, is a toy unique in its line. With each top is packed a set of 6 brilliantly colored disks. The record spin is 5 minutes 43 seconds. [Cushman & Denison Manufacturing Co., New York.]



"IDEAL" BALL BEARING TOP.

intantly colored disks. The record spin is 5 minutes 43 seconds. [Cushman & Denison Manufacturing Co., New York.]

"KNEAD-IT."

A TIRE repairing substance called "Knead It" is claimed to be an inexpensive and quick operating substitute for vulcanized repairs. A small quantity applied to a cut will securely seal it, and prevent rotting of fabric, sand pockets and blow-outs. [The M. & M. Manufacturing Co., Akron, Ohio.]

NOVELTIES BRIEFLY MENTIONED.

ONE of the latest improvements is the manufacture of rainproof straw hats. Heretofore water either badly discolored the straw, spotting or turning it a sickly yellow, or else ruining it outright.

The users of dress shields will be glad to know that one need no longer sew, baste or pin them in. The Kleinert shields are now made with "snaps," which are fastened one at each end of the shield and with no trouble can easily be snapped into the sleeve of the dress. These snaps come either on the shields or can be bought separately.

A new line that the Chicago Rubber Clothing Co. (Racine, Wisconsin), have added is automobile top cloths.

The I. B. Kleinert Rubber Co. (New York) are marketing a hose supporter, the "Buster Brown." They claim for it the best quality of rubber, twice the usual quantity and much longer wear than other makes afford.

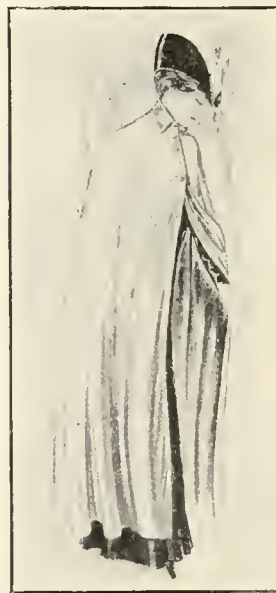
A unique use for worn-out automobile tire shoes is that of a tugboat bow fender. All tugs are fitted with fenders, usually of braided rope, padded with cork. They are essential, for tugs are continually nosing and rubbing against the sides of wharves and vessels. The rope fender, which really is a work of art, costs anywhere from \$20 to \$50, and at the best lasts barely two years. And old worn-out tire shoe, costing from \$2 to \$4 is therefore a decided saving.

A BOOK for rubber planters—Mr. Pearson's "What I Saw in the Tropics."

FALL STYLES IN LADIES' RAINCOATS.

THE new fall models of ladies' raincoats are very mannish in material and in cut. The length varies from 52 to 58 inches, coming well to the bottom of the skirt. For the loose fitting back the Raglan sleeve, patterned from the English models, is one of the best styles. The new combination collar is quite in vogue. It can be worn in three different ways—as a low collar, a high collar, or, in stormy weather, in military fashion. The materials vary from those with plaid backs to moires and fancy silks. Silk double textures are also attracting much attention, and are cut very mannish. The colors are all very quiet; gray, tan, dark blue, and dark red being preferred.

An advance fall style of ladies' rubberized wrap now being manufactured is a silk single-breasted cape, coming to the bottom of the dress, with a high turnover collar, and fastened with five metal buttons in the front. It is had in all ordinary sizes, and in colors of olive and tan. It can be worn in all weathers and as an evening wrap if so desired.



"AUTO" SILK RUBBERIZED.



CHILD'S STORM CAPE.

Storm capes for children are coming more and more into fashion. They are waterproof, of fast color material, light in weight, and chic in fit. The hood has a pretty plaid silk lining and ties; the buttons are "teddy bear" with pearl fasteners. The cape comes in a great variety of colors and in sizes to fit ages of 4 to 18 years.

THE FITTING OF RAINCOATS.

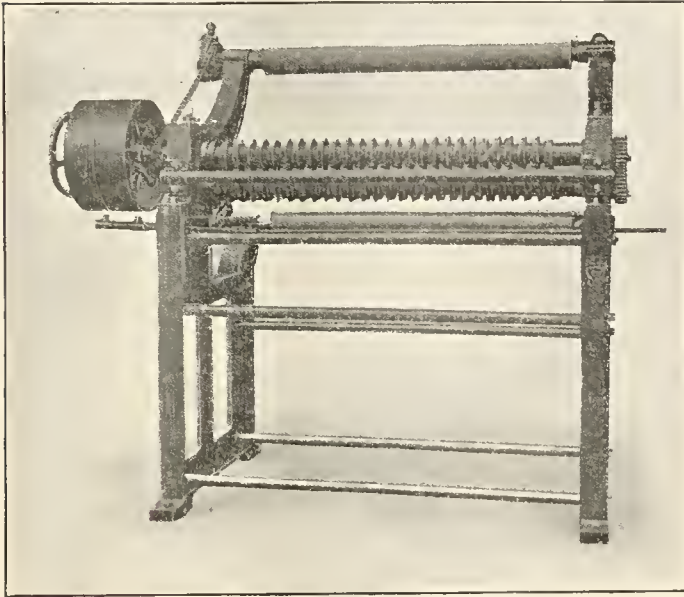
It is wonderful how ready-made clothiers are able today to fit the average man. This is done by keeping a careful record of changes asked for by customers during the year, averaging them up and cutting patterns to suit these averages. The same system obtains in making the better class garments in raincoats and mackintoshes. That is why such excellent fits are turned out by the best houses; it is also why the garments ten years ago could hardly find a market anywhere.

THE British chancellor of the exchequer (Mr. David Lloyd George) in a recent speech in Parliament mentioned that the stamp revenue from the London Stock Exchange had been largely augmented by the "boom" in rubber and in oil. He was inclined to think that during last year the increase in revenue from new promotion in rubber and oil amounted to something like £500,000 [= \$2,500,000]. Mr. Lloyd George was not certain whether the government could count upon a continuation of such revenue from the rubber "boom" very much longer.

New Rubber Factory Appliances.

RUBBER STRIP CUTTING MACHINE.

THE first illustration on this page is that of a machine designed for cutting rubber strips. The regular size has twenty-eight pairs of concave circular knives. The knives are placed on two steel shafts and are quickly adjusted to cut different widths from $\frac{3}{4}$ -inch up without moving spindles. The stock to be cut passes over a roll in front of the

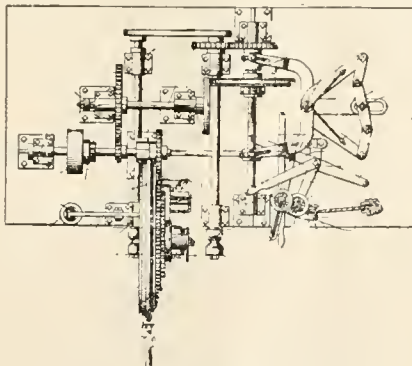


RUBBER STRIP CUTTING MACHINE.
[Made by Trenon Machine Specialty Co.]

knives, then on between the cutting disks and over another roll. This roll is driven at a greater speed than the knives so as to form an even tension. The stock is then divided and wound upon rolls with a friction device for increasing or decreasing the tension as the roll increases in diameter. The knives travel about 150 revolutions per minute.

TIRE WRAPPING MACHINE.

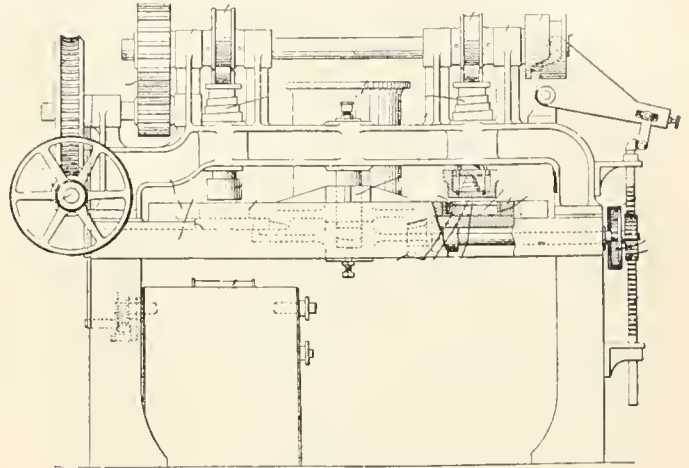
THE illustration shows a machine for wrapping as well as unwrapping tires. The construction of the machine is such that the tire can be rotated alternately and separately from the wrapping device, and in an opposite direction. In this manner tape is cross wrapped over the tire. In unwrapping the machine is reversed and the tape is wound upon a spool.



TIRE WRAPPING MACHINE.
[United States Patent to Nelson E. Raber.]

MACHINE FOR MOLDING RUBBER BISCUITS.

THIS machine is driven by a worm screw connected by a gear wheel to a shaft. On the shaft are two cams that operate plungers held in position by spiral springs. In the center of the machine is a vessel for holding the heated material. This passes from the vessel to the mold and is pressed by the plunger, passing by mechanical means to the other side of the

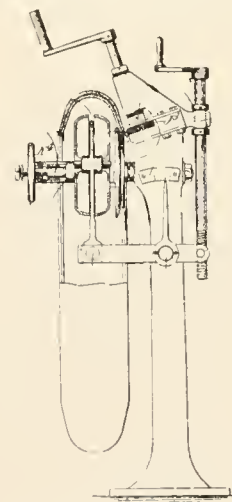


MACHINE FOR MOLDING RUBBER BISCUITS.
[Patent to British Murac Syndicate and M. M. Dessau.]

machine, where the plunger presses it through an opening into a conveyor belt by which the biscuits are drawn through water for cooling.

MACHINE FOR MANUFACTURING TIRES.

THIS machine is designed for pressing or rolling the fabric and rubber tight together after the tire has been wholly or partly built up. The tire is mounted on a stand, with two

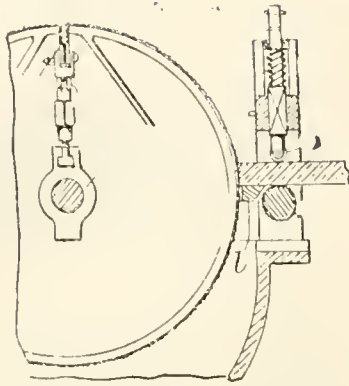


MACHINE FOR MANUFACTURING TIRES.
[British Patent to Thomas Sloper.]

pressure rolls, one inside and the other outside, worked in unison, while the tire is rotated. In this manner the parts are tightly pressed together.

POWDERING RUBBER WASTE.

A RASPING device for powdering rubber waste consists first of a cylinder with a roughened surface. Then running parallel to the cylinder is a spiked feed roll that presses the stock against

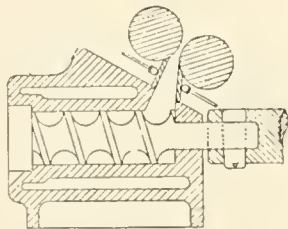


POWDERING RUBBER WASTE.
[British Patent to T. Gare.]

the rasping cylinder. Pressure rolls are mounted on rods with spiral rings to form a tension above the feed roll and hold the stock in position. The powdered rubber falls through a chute in the bottom of the device and is then ready for use.

SELF-FEEDING TUBING MACHINE.

THIS device may be described as an ordinary tubing machine, having a worm screw for forcing the stock through a die into tubes, tires, and the like. In addition, there are two feed rolls



SELF-FEEDING TUBING MACHINE.
[British Patent to J. C. Kay & Co.]

placed at an angle above the opening in the tubing machine. These rolls are driven so as to feed the stock into the machine as fast as necessary.

AN OLD TIME RAIN DEFIER.

SUCH rains as the oldest inhabitants had never seen the like of fell in England in the year 1801, on June 30, very opportunely for the proprietors of a then new patented process for waterproofing cloth. These gentlemen were enabled thereby to collect a lot of testimonials in behalf of their fabrics, more enthusiastic in character than any writers of these modern degenerate days could hope to produce. Wearers of the proofed garments who happened to be caught in that torrential rain had only to wipe them gently with a pocket handkerchief and they were as dry as ever, whereas less lucky individuals went to bed, while their clothes were obliged to be hung some hours before a large fire. Very many persons lost their lives in that memorable rain, but none who wore Ackerman, Suardy & Co.'s waterproof clothes.

In a quaint booklet got out in the same year to describe the wonderful process—but which gives no hint of its nature—one reads that it “does not in the smallest degree stop the interstices of the cloth, canvas, cotton, or silk”; that water poured on a cloth stretched over a glass will not run through, though you “repeatedly run a pin or needle through the cloth”; in the case of colored fabrics submitted to the waterproofing process, they “were rendered of a higher and more beautiful tint.”

“But without resorting to the regions of romance - - - what

an improvement would it be to the sheathing paper, with which the copper bottomed ships are lined!”

The leading text of the booklet is the danger of catching deadly colds from getting one's clothing wet from exposure to rain. And in this connection appears a gem of American history not found even in every great library:

The first settlers of America (Quakers), sensible of the dangers that resulted from their drab coloured suits being saturated with rain, adopted a curious expedient to evade it. When they were travelling, and saw a thunder storm approaching, they knew that taking shelter under a tree was dangerous; and therefore generally ran into the middle of a field, where they stripped off all their clothes, and having bundled them together fast upon them until the rain ceased.

How much more comfortable they might have been if provided with patent waterproofs! The Prince of Wales, to avoid any such possible embarrassment, “not only ordered all his own clothes should be made the same,” but that the dresses of all his household, “from the highest to the lowest,” should be waterproofed. All this and much more is recorded in the little work entitled:

ANALYTICAL HINTS

RELATIVE

TO THE PROCESS

OF

ACKERMANN, SUARDY, & CO'S.

Manufactories

FOR

WATERPROOF CLOTHS, AND WEARING-
APPAREL,

AT

BELGRAVE-PLACE, CHELSEA,

AND AT

MESSRS. DOUGLASS AND CO'S MANUFACTORY,
CUPER'S BRIDGE, LAMBETH,

London:

PRINTED FOR THE PROPRIETOR, AND SOLD BY T. HURST,

NO. 32, PATERNOSTER-ROW,

And all Bookfellers in Great Britain.

E. SPRAGG, PRINTER 27 BOW-STREET, COVENT-GARDEN.

The title page is undated, but there are internal indications that the pamphlet appeared before the end of 1801. The British patent office records show that on April 28, in that year, application was made for a patent—granted later as No. 2491—by Rudolph Ackermann and Peter James Cutteau, which is thus described:

“For a new improved method of rendering all sorts of woollen clothes, cotton, linen, silk, hats, paper, and other manufactures and substances, perfectly waterproof, and so as to be used on all occasions where a power of repelling rain, wet, or moisture may be required.” No specification was enrolled. The invention is not listed among British patents relating to india-rubber. There were, however, two British patents of earlier date for the use of rubber in waterproofing.

[NOTE.—This interesting relic of the early waterproofing trade has been brought to the notice of THE INDIA RUBBER WORLD through the favor of Messrs. Hodgman Rubber Co., of New York.]

Some Rubber Interests in Europe.

GERMANY'S RUBBER FOOTWEAR TRADE.

THE annual report of the Harburg Chamber of Commerce contains some remarks on the rubber shoe trade during 1909 that may be summarized as follows:

"The rubber shoe business was quiet at the beginning of the year. In 1908 snow did not fall until after Christmas, and dealers consequently still had full stocks left on hand. In the following year, however, as there were very heavy snowstorms in central and southern Germany during November, and a good deal of snow subsequently in northern Germany, business became considerably more effective, and the stocks left over from the previous season were consequently completely sold out.

"The entire German rubber shoe industry, however, is suffering to quite an extraordinary extent from foreign competition. The importation of foreign made rubber shoes continues very large, being four or five times larger than the German exports. Most of the imports come from Russia and the United States, both of which countries, favored by the low German import duty, are shipping their large surplus output to the German market, knowing its great power of consumption.

"According to the tariff schedule, the German import duty on rubber shoes is 100 marks per kilogram, but this figure has been reduced to 80 marks for all the most favored nations, greatly to the detriment of the German rubber shoe industry. Foreign countries have made rubber shoes subject to a much higher import duty, the same being, for instance—

"In Russia, 220 marks per kilogram.

"In the United States, 30 per cent. *ad valorem*, equal to about 180 marks.

"In Sweden, 130 marks per 100 kilograms.

"The result is that Germany is absolutely unable to export rubber shoes to these countries, while the foreign manufacturers are flooding our market with their products.

"The total imports of foreign made rubber shoes into Germany, during the first ten months of 1909, amounted in weight as follows:

From Russia	kilos	287,600
From the United States		115,800
From Sweden		56,900
From Great Britain		81,100
Total		541,400
[Equipment to 1,191,680 pounds.]		

PROFITS OF HUTCHINSON.

THE annual meeting of Etablissements: Hutchinson—Cie. Nationale due Caoutchouc Souple was held in Paris on June 20. The report showed profits of 1,017,344 francs [= \$193,295.36], against 1,333,080 francs for 1908, and 1,305,579 francs for the preceding year. The reduced earnings were attributed to the high cost of raw material, which was not offset by the advance made in the selling price of products. The dividends were 30 francs per preference share, [the usual 10 per cent.], and 40 francs for the ordinary shares, [12 per cent.], against 50 francs last year. [See THE INDIA RUBBER WORLD, September 1, 1909—page 429.]

GALALITH INDUSTRY IN GERMANY.

THE galalith industry in Germany showed an improvement during 1909, after having suffered from unfavorable market conditions in the preceding year. The factory at Harburg a/d Elbe showed during last year an increased amount of sales and was worked at full capacity. The last report of the Harburg Chamber of Commerce states that the galalith industry would be capable of still further development but for the high import duty in Germany on casein. It was pointed out that articles of general

consumption made from galalith must compete with the products of ivory nuts, horn, and the like. The crude materials for these latter goods, however, can enter Germany without paying an import duty. It is suggested in the Harburg report that casein be placed on the free list, to which suggestion *Gummi-Zeitung* adds that at least a drawback be provided for duties on casein used in Germany in the manufacture of galalith.

PROFITS OF THE RUSSIAN-AMERICAN RUBBER CO.

THE last report of the Russian-American India-Rubber Co. "Treugolnik" (St. Petersburg) shows a record profit for the fiscal year 1909. The figures in the following table relate to values in rubles [1 ruble=51.5 cents]:

	1907.	1908.	1909.
Gross sales.....	\$36,252,040	\$38,953,150	\$61,035,574
Net profits.....	4,016,443	5,845,999	7,868,701
Rate of dividend.....	25%	30%	20%
Amount of dividend..	2,000,000	2,400,000	3,600,000

The dividend rate for the last fiscal year, though the amount disbursed was so large, was smaller than in preceding years, on account of the increased capitalization from 8,000,000 rubles to 18,000,000 rubles. The reserve account is now nearly as large.

BERGOUGNAN'S CAPITAL DOUBLED.

THE shareholders of Etablissements Bergougnan, large makers of pneumatic tires at Clermont-Ferrand, have voted to double the amount of their capital stock, the increase being from 6,500,000 francs to 13,000,000 francs [= \$2,509,000]. A portion of the increase is to enable the company to participate in rubber planting. For the latter purpose the Société du Caoutchouc de l'Indo-Chine has been registered in Paris, with 1,500,000 francs capital, and with Mons. R. Bergougnan on the board.

ITALIAN IMPORTS OF TIRES.

WITHIN two years past the importation into Italy of tires for automobiles and bicycles has increased at an important rate. The figures below show the weights (in kilograms) of imports from the various countries as reported officially:

	1908.	1909.
From France	22,000	173,800
From Germany	32,000	160,400
From Great Britain.....	8,600	147,100
From other countries.....	1,600	11,600
Total	64,200	492,900

THE NORTH BRITISH IN FRANCE.

THE North British Rubber Co., Limited (Edinburgh), have been mentioned in these columns already [see THE INDIA RUBBER WORLD, July 1, 1910—page 355] as having undertaken the manufacture of their products in France. They have acquired by purchase the factory of the Société des Caoutchoucs, at Nos. 1-3 rue Henri Murger, Saint Denis, near Paris.

SWEDEN.

THE Russian-American Rubber Co. "Treugolnik," St. Petersburg, report that their only selling place in Sweden ("Galoschbolaget," Stockholm) has ceased to exist. It has temporarily taken the sale of its rubber shoes (with the triangle mark) into its own hands. The wholesale part of the business for Stockholm and the surrounding territory is looked after by the firm of H. Gullberg & Co.

ITALY.

THE growth of the india-rubber industry in Italy indicated by the constant increase of the importation of raw material. The imports of crude rubber during 1908 amounted to 3,192,080 pounds, and in 1909 to 3,448,280 pounds. As recently as 1903 the imports reached only 1,466,960 pounds.

The Editor's Book Table.

ALL THE WORLD'S AIR-SHIPS. (FLYING ANNALS.) FOUNDED and edited by Fred T. Jane, author of "Fighting Ships," etc. With a special chapter on "Aerial Engineering," by Charles de Grave Sell's. M. INST. C. E. London: Sampson Low, Marston & Co., Limited. 1909. [Cloth. Oblong. 8vo. Pp. 370. Price, £r 1s.]

A GLANCE at this sumptuous volume will give a clearer idea perhaps than anything else we can recall of the extent of the interest in aeronautics as a practical field of endeavor. It embraces not only a list of several hundred dirigibles and aeroplanes, but in most cases illustrations are given of these from photographs. There will thus be found the views of every type of machine in which aerial flight has been made in any country. In some cases diagrams are given indicating details of construction. This is true of the Zeppelin type for instance, of which four pages of plates are given. In nearly every instance the dimensions are specified, lifting power, motor, propelling and stirring apparatus, details of material used in construction, and so on. Flying machines manufactured in 22 different countries are described, and there is a long list of owners of standard machines. Several essays on aerial engineering are included, and the value of the work is enhanced by a glossary of technical terms in English, French, German and Italian. Considering how new is the art of aviation, its progress has been most astonishing and, as we have indicated, this book sets forth this progress very capably.

TERRY'S MEXICO. HANDBOOK FOR TRAVELERS. BY T. PHILIP Terry. City of Mexico: Sonora News Co. Boston: Houghton Mifflin Co. 1909. [Cloth. 12mo. Pp. ccxl + 595 + plates. Price, \$2.50 gold.]

THE highest standard of guide book making has been aimed at by the scholarly compiler of this new help to travelers in Mexico. Mr. Terry is thoroughly acquainted with the Mexican republic and its people; he is aware likewise what intelligent travelers are most likely to be interested in, whether in the way of antiquities or present day life; and last but not least he possesses the capacity to impart knowledge of the kind referred to in a pleasing and helpful way. Mr. Terry acknowledges his indebtedness to the Baedeker form of guide book as the basis of style of his own work, and Baedeker is widely acknowledged as the best in existence. This book not only tells how to get to any place on the Mexican map, but has general suggestions as to when to travel, how to understand local customs, and particularly how to figure in Mexican money. It has a good map of Mexico, 25 plans of cities and districts, and a very full index. The book is pocket size, printed on "Bible paper," and bound in flexible cloth.

THE GREAT STATES OF SOUTH AMERICA. A CONCISE ACCOUNT of Their Condition and Resources, with the Laws Relating to Government Concessions. By Charles W. Domville-Fife. London: G. Bell & Sons, Limited, 1910. [Cloth. 8vo. Pp. xv. + 235 + maps and plates. Price 12s. 6d.]

IN view of the growing interest in South American affairs in Europe and the United States, the appearance at this time of a book of the character indicated in the above title is particularly fortunate, and all the more so since it comes from a hand so competent. The author, who has published other South American studies, points out that in order to describe so large an area within a book of moderate size he has felt obliged to sacrifice literary style to bare statement of fact. None the less the style in which this book is written is attractive, and the business details are so intermingled with the author's comments as to make the whole alike readable. Besides, one who once gets the book in hand will be tempted to examine the unusually good half tone pictures, of which there are nearly a hundred, in addition to eight good maps.

This book ought to be interesting to North American readers just now if for no other reason than that their country is represented in the Pan-American Congress at Buenos Aires, which

meeting is likely to do so much towards fostering closer relations between the two greater divisions of America. Mr. Domville-Fife's book will be helpful in the matter of acquainting us as a people with our neighbors in the far South.

Our author makes numerous references to rubber, but they have not always been clear to some of his reviewers. When, for instance, he speaks of "rubber and caoutchouc" (page 88) there might have been a clearer use of definitions. At another place he does refer to the "caucho tree" (page 158) and this term should have been used throughout when *Hevea* rubber (Pará) is not referred to. *Caucho*, of course, is the Spanish word for rubber in general, and it came to be used in commerce because the first rubber exported from Spanish South America was of different class from Pará, which came from Portuguese-speaking Brazil. To-day, with both classes of rubber produced in all the countries bordering on the Amazon, it is still convenient to use the term *caucho* to distinguish the product of the *Castilloa* tree.

THE BRAZILIAN YEAR BOOK. ISSUED UNDER THE PATRONAGE of the Brazilian Government. Second Issue—1909. Compiled and Edited by J. P. Wileman, Editor of *The Brazilian Review*, and ex-Director of the Commercial Statistical Service of Brazil. Rio de Janeiro: Brazilian Year Book. London: McCorquobale & Co., Limited. [1910.] [Cloth. 8vo. Pp. xxiv + 826 + pocket map. Price 1 guinea; \$5.50 gold.]

THE admirable features of the first issue of this work have been repeated in the volume now before us, with the addition of other matters of interest. For one thing, the trade statistics have been brought forward two years. Mr. Wileman, while no longer at the head of the Brazilian statistical department, retains the intimate knowledge of the financial, commercial, and industrial conditions of the nation with which that position brought him into contact, to say nothing of his position, for so many years, as editor of an important financial paper at the Brazilian capital. While bearing the date 1909, the work has only just been issued from the press.

That Brazil is no unimportant factor in the world's progress, even a cursory glance at this volume will show. In the matter of area it is only slightly less than the United States. The distance from the national capitol to Manaus, the rubber center, is 3,204 miles, and there are other places of commercial importance in the country even more remote. There is a much wider range of commerce in Brazil than many readers probably are aware of. The export list is not so large in the number of items, but practically everything manufactured seems to be included among the imports. Speaking of exports, the statistics of rubber are given from 1827, when the transactions included only 69,003 pounds, of the estimated value of £1,053 [= \$5,124.42].

The development of planting as well as of commerce and transportation throughout Brazil has been promoted largely with foreign capital, mainly through joint stock companies, of which an extensive list is given in this book with a most satisfactory fullness of details as to their conditions. Such companies, for instance, are the American companies now improving the harbor at Pará and building the Madeira-Mamoré railway. Ample details are given likewise regarding the public debts, which are created by the several states rather than by the federal government.

Any one wishing to become acquainted with actual conditions in Brazil cannot hope to find in any dozen other sources so much information so well arranged and apparently so authentic as in this volume. A good map of the country is included, and the appearance of the book generally is exceedingly pleasing.

OTHER BOOKS RECEIVED.

INTERNATIONAL CABLE DIRECTORY OF THE WORLD. IN CONNECTION with Western Union Telegraphic Code System. Compiled and published by International Cable Directory Co. New York and London: 1910. [Cloth. 4to. Pp. 964. Price, \$7.50.]

NEW TRADE PUBLICATIONS.

THE BOSTON BELTING Co. issue a brochure devoted to the solid woven cotton belting which they manufacture under the trade mark "Eelskin." This brand is referred to as being adapted for power transmission under widely varying conditions, and also for conveying materials. [3½" x 6". 12 pages.]

HOOD RUBBER Co. (Boston) distribute in the footwear trade a brochure on "The Use and Abuse of Rubbers," the keynote of which is "More rubbers are destroyed from abuse than from actual use." Retailers may find it desirable to aid in the distribution of this pamphlet. [3½" x 5¾". 8 pages.]

B. F. STURTEVANT Co. (Hyde Park, Massachusetts) issue Catalogue No. 150 in their Engineering Series. It is devoted to Fuel Economizers and Air Heaters, and is of unusual interest, even for a Sturtevant catalogue. [6½" x 9". 40 pages.] Also, Bulletins Nos. 172, 173, 176, and 177, devoted to various appliances for power plants.

THE new "Engineers' Catalogue" of the NEW YORK BELTING AND PACKING Co., LIMITED, is devoted to Packings for all conditions of service, including, in addition to their long established lines of products in this field, a new line of combination and asbestos packings. The booklet is fully illustrated with detailed descriptions of the different brands of goods, and is intended for ready reference in the engine room. [5" x 7½". 72 pages.]

NEW YORK RUBBER Co. (New York) distribute to their patrons, in a substantial red leather cover, a "loose leaf" Price List, applying to their various products of mechanical rubber goods. There are included blank for discounts, and a four-page telegraph code. [3¾" x 7". 104 pages.]

THE B. F. GOODRICH Co. (Akron, Ohio), have issued many attractive advertising publications, all of them interesting to the trade, but probably none that outranks in these respects a booklet labeled "The Passing Show." It relates to the exhibits of Goodrich tires at the most recent automobile show in each of twenty-one cities. On each page appears a photographic view of the interior of one of the automobile shows. [6" x 7½". 24 pages.]

THE AMERICAN WRINGER Co. (New York), issue their Catalogue No. 9 of "Horseshoe Brand" clothes wringers and wringing machines. Clothes wringers are not as nearly all alike as one might suppose, as is indicated by the appearance in this book of illustrations of nearly a hundred different products of this one company. The illustrations are colored, indicating more clearly the appearance of the different wringers described. The wholesale price list of these wringers fills 12 good sized pages. [6¼" x 9¾". 104 pages.]

THE NEW YORK MACKINTOSH Co. (New York) issue a neat booklet showing their "Bestyette" rainproof "outer garments for the whole family," illustrated with styles which are least affected by changes in fashion; in other words, garments which they regard as staples. [3¼" x 6¼". 16 pages.]

RUBBERSET Co. (Newark, New Jersey) describe in their Catalogue No. 11 more styles of Rubber-set Shaving Brushes than might be supposed to exist by one who has not followed recently the rapid development in the growth of the demand for this class of brushes. The various styles, whether shaving brushes, tooth brushes, paint brushes, or what not, are illustrated. [5¾" x 7". 18 pages.]

W. D. ALLEN MANUFACTURING Co. (Chicago) issued during the month their Catalogue No. 28, which is the most extensive and complete production in its line which at any time has appeared in connection with the rubber trade. It will be remembered that Messrs. Allen do not specialize in rubber, their catalogues being devoted first to leather belting and accessories, and later on to a great variety of brass goods, which have a relation more or less to products of rubber factories. At the same time this

catalogue has a very extensive list of packings manufactured by the Allen firm, to which is added a catalogue of other standard packings, which they handle; also rubber belting and many other items of rubber, including many specialties, such as rubber coats for firemen, which are appropriate in a catalogue which covers so many fire department supplies. This firm is known to THE INDIA RUBBER WORLD's readers as the manufacturers of perhaps the most complete line of lawn sprinklers sold by any firm. All their specialties in this line are illustrated and fully described in the volume under review. This catalogue forms a handsomely got-up volume in red cloth, making of it a volume more substantial than is usual in the trade. [7" x 10". 638 pages.]

ALSO RECEIVED.

THE Hartford Rubber Works Co., Hartford, Connecticut.—Hartford Tires Will Not Slip. 12 pages.

Westinghouse Electric and Manufacturing Co., Pittsburgh, Pennsylvania.—Electrically Heated Matrix Driers. 8 pages.

The B. F. Goodrich Co., Akron, Ohio.—Straight to the Mark. [Relates to endurance of Goodrich tires.] 16 pages.

FIRE AT THE BRUSSELS EXPOSITION.

A FIRE started in the Belgian section of the International Exhibition at Brussels on the evening of August 14 and rapidly spread over the grounds, doing a great amount of damage. It has been estimated that the companies who had written insurance upon the exhibits will have to pay \$10,000,000 or more. No lives were lost, though something like 100,000 people were within the exhibition limits. This was one of the best exhibitions which has been held in Belgium, a country particularly skilled in organizing world shows. The exposition was closed to permit of the removal of debris and the later reopening of such sections as were not destroyed. The plan of the exposition provided for exhibits of rubber from many countries, and one such exhibit was the important collection of rubber specimens shown at Manáos, Brazil, in connection with the rubber congress there last February.

The fire destroyed a very complete display of rubber stamp vulcanizers and rubber stamps and like goods belonging to the J. F. W. Dorman Co. (Baltimore, Maryland). The Dorman company won a gold medal for this display last year at Earl's Court, London, after which it was transferred to Brussels.

REPUDIATED BY MR. MACBEAN.

IN the last issue of this journal (page 377) appeared, with credit to an esteemed contemporary, what purported to be an interview with Mr. Edward Macbean, of Glasgow, on the subject of reclaimed rubber. Mr. Macbean, who was the founder and is still the head of the important oil clothing and waterproofing house of Edward Macbean & Co., Limited, advises THE INDIA RUBBER WORLD that not only has he no views to express regarding synthetic rubber, but he has submitted to no interview on this subject for any journal whatever. He particularly would not like to be held responsible for certain expressions appearing in the article referred to.

A PATENT LAW AMENDMENT.

IT may be of interest to our readers who may have business pending with the United States patent office, or who have been applicants for patents in the past, to be informed that by an act of the Congress at the last session that portion of the patent laws relating to caveats was repealed to take effect from July 1, this year. In brief, a provision of the law formerly was that by filing a "caveat" in the patent office one who was engaged upon an invention was entitled to notice of any application for a patent for an interfering invention during one year, while he was perfecting his own. The new act is declared not to apply to any caveat filed prior to July 1.

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

FORTUNATELY for the good nature of the local merchants, there is always something to look forward to and always something developing which promises to bring back the long-lost period of prosperity. Just at present attention is being given to the election of a governor and other state and county officers. The primary election is supposed to practically determine who the future officers will be, and when this matter is settled it is hoped and believed that people can settle down to business again. Another matter which is expected to bring a great amount of business to this city and the coast is a proposed world's fair.

So artful have the politicians been by putting New Orleans into competition with San Francisco that this city and state are making gigantic efforts to make the fair certain, and although the United States congress has so far asked that the city put up at least \$7,500,000, the fear that New Orleans may subscribe a like amount has induced the present governor to plan to raise another \$5,000,000 by taxation, and the city proposes to raise \$5,000,000 by taxation, and as the people have already voluntarily subscribed the first amount required, there will be the sum of \$17,500,000 with which to make a show that will be worth while.

These two contingent events, taken in connection with the favorable crop reports, the unusual productiveness of the mines and oil wells, are enough to satisfy the most forlorn that conditions are ripe for the development of a flourishing business.

* * *

In the rubber trade those merchants who have sufficient capital are planning—probably ahead of their present incomes—to make preparation for the big business which they are certain is coming. None of the houses that can afford it is holding back in the matter of improvements simply because business just now may not warrant it. Others who are not financially strong enough to be reckless in expenditures are nevertheless working patiently and securing results which under present conditions are satisfactory.

The mechanical lines have had a turn at quiet business and the druggists' sundries branch is more active than usual. Trade throughout the interior sections of the coast territory is generally good, and if the trade of the larger cities were anywhere near proportionately good there would be no complaint anywhere.

* * *

THE Sanitary Plumbing Appliance Co. has recently been incorporated, with offices in the Sheldon building. The company has been organized by G. H. Brown as president and manager, and R. O. Mead treasurer, and is making a business of handling specialties, but principally a new sanitary toilet appliance invented by Mr. Brown, and which promises to be a success. It is a rubber gasket which is used to make the connection at the base of a toilet with the sewer pipe, instead of using the putty connection used heretofore. The gasket is being manufactured by the Phoenix Rubber Co.

* * *

THE Pacific Coast Rubber Co., in furtherance of their plan to carry everything in the rubber line, have made a new departure and are now carrying a complete line of druggists' sundries, manufactured by the same well-known firm which makes their shoe line, the Goodyear's India Rubber Glove Manufacturing Co. "We have received our first shipments," said Mr. Winslow, the manager, "and we are sending out three lines on the road this week. We expect this department to work in nicely with our other lines, and we will have everything in rubber before we get through."

The report from the Gutta Percha and Rubber Manufacturing Co. is that business has been picking up right along, and now can be said to be very good in the country. Trade is undoubt-

edly quiet in San Francisco, but the indications point to a renewal of activity there.

The Boston Belting Co.'s branch, under Mr. A. T. Dunbar, is gradually getting in its new stock and supplying orders. It has been slow work getting the goods, but the firm has plenty of room and a big stock coming so that they expect to soon be actively in the running.

* * *

MR. BOWERS gave the factory and office employes of the Bowers Rubber Works a big picnic this month, this being the third annual picnic given to them. He chartered a boat and took them up the river to Isleton, and there were over 300 in all. This establishment reports that business has been good for this season.

H. C. Norton, manager of the American Rubber Manufacturing Co., has returned from the springs, where he has been recuperating from his recent illness.

* * *

MR. C. E. MATHEWSON, manager of the Pacific Coast branch of The Diamond Rubber Co. (Akron, Ohio), is away on an automobile trip to the northernmost parts of the state, to spend a month deer hunting. He is accompanied by Frank Fageol, the Oakland agent for the "Rambler" automobile. Their destination is a big ranch owned by Mayor Mott, of Oakland.

Mr. William J. Gorham, of the Gorham Rubber Co., and the company's San Francisco manager, William Heckmann, are down at Catalina on a month's hunting trip. Business is reported as satisfactory at the big store. It is said that the Goodrich people recently offered Mr. Gorham \$500,000 for his business, but the offer was refused.

Mr. J. H. Cobb, of the New York Belting and Packing Co., Limited, spent a few days in San Francisco this month and expressed his appreciation of the good work being done by the local branch.

AMERICAN TRADE IN GERMANY.

THE American Association of Commerce and Trade, at Berlin, founded seven years ago by Americans, is run by Americans on American lines for the purpose of promoting American trade with Germany, and German trade with the United States. This is a thoroughly American institution, organized especially for assisting American business firms to start branches in Germany. The organization has the most complete American reading room in the empire, in which are filed 30 daily American papers and 150 trade publications, all United States government reports and statistics, directories of the leading American and German cities, and the principal telegraph codes—all of which are at the disposal of American business men and travelers visiting Berlin. This association appeals to all American business men intending to do business in Germany, whether temporary or permanent. It deserves the support of American business firms, as it can help them as perhaps no other institution or commercial agency can.

THE WORKING QUALITIES OF FOSSIL FLOUR.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Please have the rubber goods manufacturers inform the trade, through your publication, what the difference is in the working qualities of fossil flour, kieselgu or an infusorial earth; also tripolite and diatomaceous earth. My reason for asking is to secure information wherein one or the other of the fillers named are employed to the disadvantage of the other, when in reality they are one and the same character of goods.

A MERCHANT.

New York, July 17, 1910.

INDIANAPOLIS, the *Financial News* (London) hears, has eleven automobile factories which have contracts for the production of 20,000 cars for the 1910 trade.

The Goodrich Company Forty Years Old.

IT is an interesting coincidence that the measures to increase the capitalization of The B. F. Goodrich Co. (Akron, Ohio) to \$20,000,000, marking an unprecedented rate of growth in a rubber manufacturing company, should occur at a time when an article was being prepared in the offices of this paper in commemoration of the fortieth anniversary of the company. The historical details are therefore presented in the present number.

The history of the india-rubber industry in Akron dates back forty years ago, when there came into the hands of a young physician in New York an advertising folder that had been distributed by fifteen business men of the Ohio town, who had constituted themselves into a sort of board of trade. It was really a private organization, supported by its members with a view to the general good of Akron. Colonel George T. Perkins and Mr. George W. Crouse are the two surviving members of the original group.

In glowing terms this little circular described the advantages Akron offered to manufacturers, though at that time there were few if any factories in that town. The young physician mentioned was Benjamin Franklin Goodrich, born in Ripley, New York, a graduate of medicine at Cleveland, Ohio; an army hospital steward during the civil war; and after the war attempting in New York to carve out a business career. With the aid of a friend, Harvey W. Tew, he gained control of a small rubber factory just below Tarrytown-on-Hudson (New York), but this was not any too successful, and when the circular from Akron came to hand it offered a new inspiration to the young doctor.

So, in 1870, Goodrich went to Akron and faced the board of trade. The result was the machinery was moved from Tarrytown and set up in a little brick shop at the corner of South Main (now Rubber) street, toward the end of the year. The ground secured cost \$1,800, only one-half of which sum represented a cash investment. The new concern was known as "Akron Rubber Works—Goodrich, Tew & Co.," the second member of the firm being the Mr. Tew who had been interested with Dr. Goodrich at Tarrytown, and the "Co." being

23 Akron men who had made up between them \$13,000, which they loaned to Dr. Goodrich.

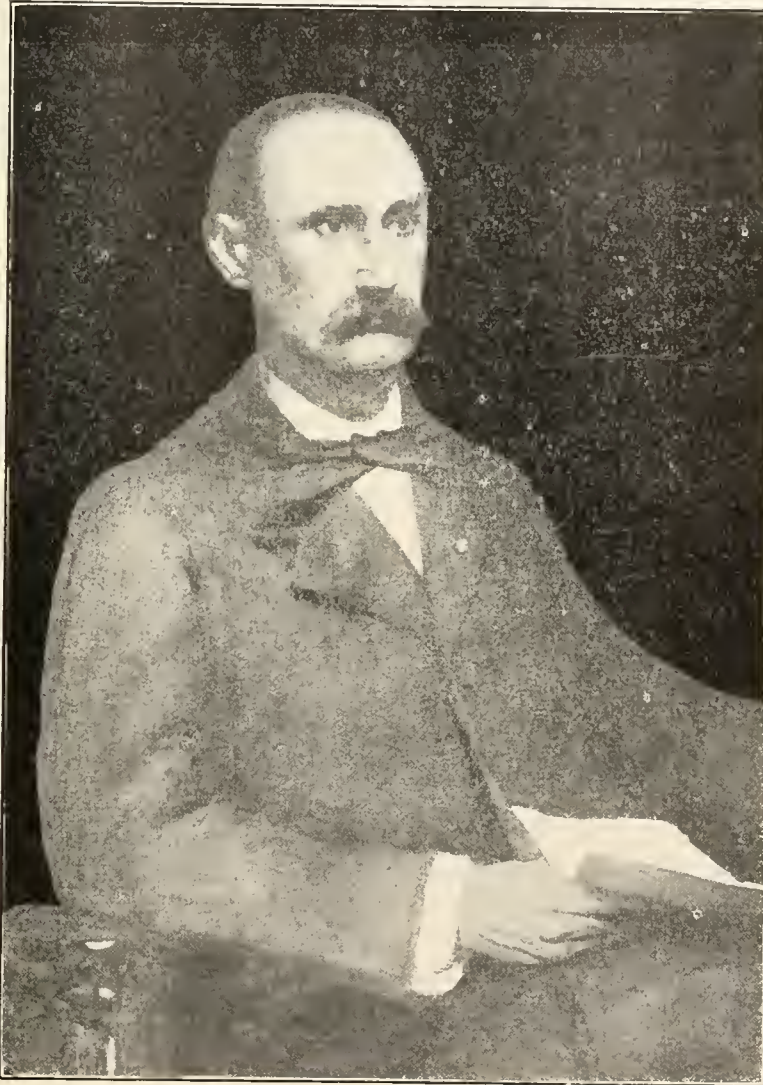
Such was the modest beginning of the first attempt to make rubber goods in the United States, outside of the eastern and industrially established part of the country. Only 25 men were employed during the first year, when the output consisted chiefly of belting and packing. Hose and molded goods were made shortly after. It was a wild scheme, the town thought, and few had faith in Dr. Goodrich or his enterprise. Indeed, the individual who advanced real money upon notes of the company was considered "easy," but the man at the head had a will; he was not one of the kind of men that fail. He believed in the merit of the products of his factory.

Mr. Crouse, who was a friend of Goodrich in the beginning, says: "He had the keenest eyes of any man I ever saw. He thought things out for himself, and when he came to a conclusion of his own, no power on earth could swerve him. He told me of many things that would happen, and they did happen just as he said—some of them long after his death. He was a man who looked far ahead and laid foundations for the development that came years afterward."

In 1880 the business was incorporated under its present title—The B. F. Goodrich Co.—with a capitalization of \$100,000, and Dr. Goodrich then offered to pay back to the twenty-three men who had helped

to finance his enterprise the \$13,000 he owed them, or else give them stock in the company. Twenty-one of them took the money. Colonel George T. Perkins and Mr. George W. Crouse took stock. Both were so well-to-do that the small amount they left in Dr. Goodrich's company mattered little. It was not long before their rubber stock made them wealthy.

One of the most successful ventures of the Akron rubber works at that time was the manufacture of fire hose, a line which still maintains a high position in the trade. The molded goods department was also developed so successfully that this department now fills one of the company's largest buildings, giving employment to some 200 men simply in the machine shop



BENJAMIN FRANKLIN GOODRICH.

[Founder of The B. F. Goodrich Co. Born 1848; died 1888. From a painting by Frank Weiner, from an old daguerreotype.]



BIRD'S EYE VIEW OF THE PLANT OF THE B. F. GOODRICH CO. (AKRON, OHIO).

for making molds. It was not long after the incorporation of this company that the first factory enlargement was made. This was small, but it was followed by others as the business of the company developed, until buildings began to be added every year. Ultimately plans were adopted for the entire rebuilding of the plant, so that all structures put up since 1906 have been of reinforced concrete, and to-day the removal of all the old buildings has been about completed.

Upon the site of the first little brick structure occupied by Dr. Goodrich and his friend, Tew, now stands a complete building, six stories high, 330 x 80 feet, and there are several other buildings of the same size. A single new building now under construction will contain a greater floor area than the entire Goodrich plant did ten years ago. The company is said to have the largest mechanical rubber goods factory in the world. It is the most extensive institution in existence with an output representing every kind of rubber product other than insulated wire and waterproof clothing. The buildings cover twenty-two acres of ground and an army of employes works in well lighted and clean rooms. The thousand men who work at night have the benefit of 10,000 incandescent and 135 arc lights. Naturally the development of a business from such small beginning to one justifying a capitalization of \$20,000,000, has been the result of a finely organized system, represented to-day by combination of twenty-five separate departments, each largely independent, but all combined together under one administration.

The buildings in Akron are not all that are owned by the

company. The structure which they own in New York is a notable addition to the business buildings of the city. In Boston a very extensive building is devoted entirely to the needs of the company. They have branches in twenty other American cities, and likewise in London, in Paris, in Mexico, and in Toronto. Thus wherever a demand exists for their goods there is a center from which their customers can readily be served.

The development which the company has contributed to the entire rubber manufacturing industry is no less striking. Beginning with the primitive effort of Goodrich, Akron is regarded now throughout the world as the rubber factory center of the United States. It is the manufacturing home to-day of fourteen rubber companies.

AKRON RUBBER WORKS.

GOODRICH, TEW & CO.

FROM AN EARLY GOODRICH LETTER HEAD.

Dr. Goodrich did not live to witness the substantial success of his company, having died in time for his obituary to be reported in the initial issue of THE INDIA RUBBER WORLD twenty-one years ago. Many fortunes have been made meanwhile by his associates, who remained in the business, or who grow up in its employ. This does not apply, however, to his earliest business partner, who retired before he felt the profits of the business to be assured.

Sketches of Colonel Perkins, long time president of The B. F. Goodrich Co., of Mr. Bertram G. Work, long the active head and now president; the late Henry C. Corson, and of others who have contributed actively to the success of the company, have appeared in these pages.

The imports into Germany of Mexican rubber during the first six months of 1910 amounted to 1,383,140 pounds, against 950,180 pounds for the same months of last year. The greater part of this must be presumed to be guayule rubber.

In the interest of economy orders have been issued to the employes of the Southern Pacific Railroad Co. to be more careful in the use of rubber bands, and to use twine whenever this will answer the same purpose. The company used \$7,000 worth of rubber bands last year.



THE ORIGINAL GOODRICH RUBBER FACTORY.

The Rubber Planting Interest.

NEW RUBBER PLANTATION REQUISITES.

THE development of rubber plantations and of improved methods of dealing with forest rubber has led to the introduction into commerce of a great number of appliances and commodities which formerly were not dealt with in connection with the rubber interest in any way. This statement is suggested by a reference to a recent copy of a newspaper published at Kuala Lumpur, Selangor, Federated Malay States, the capital of the principal rubber planting territory yet developed. In a single issue of this paper are mentioned rubber tapping knives of many types, patented coagulating machines, presses for blocking rubber, apparatus for turning rubber out into crepe, sheets, and the like, and so on. A single firm mentioned offer four different styles of tapping tools. Vacuum driers are named also. An advertisement relates to sprayers for killing langang grass, and weeds generally, at a less cost than their extermination otherwise would involve. There are other sprayers, charged with special poisons, for killing the white ants, which are among the most troublesome pests on rubber plantations. Cups for latex are mentioned in great variety—white glass, green glass, glazed porcelain, terne plate, glazed earthenware (English and Chinese makes), and other types. Glazed earthenware coagulating dishes are described, together with new rubber coagulants, and special mixtures for manuring rubber plantations. The same paper informs its readers where to buy medicines of interest to white men in the tropics, automobiles, typewriters, cameras, condensed milk, and what not, and also where to lay bets at a profit on turf events. There is no doubt that the cultivation of rubber has opened a market—at least in certain localities—for innumerable articles not known hitherto to commerce; it would appear also that Britishers going to Kuala Lumpur do not lose touch with the details which render life interesting to them in their own country.

PLANTATION RUBBER IN GERMANY.

AN interesting feature in the report of Dr. John C. Willis, director of the royal botanical gardens in Ceylon, on his recent tour of the world, relates to his visit to the works of the Continental Caoutchouc und Gutta-Percha Compagnie, in Germany. Dr. Willis was informed that the great Hanover company consume about one-thirtieth of the world's production of rubber. He mentions 5,000 employes, steam engines of 5,000 HP., and other details of general interest. What concerned Dr. Willis principally, however, was the quantity of plantation rubber consumed. He saw in the works supplies from the Bukit Rajah, Anglo-Malay, Kepitigala, Culloden, and other typical Eastern rubber plantations. Herr Dr. Prinzhorn, who was Dr. Willis's guide through the works, is quoted as objecting to rubber coming in blocks as at present. He thought that these blocks should not be more than 1 inch thick. Dr. Prinzhorn also called attention to the fact that many lots of plantation rubber on being opened were found to be covered with chips of wood, shavings, and sawdust, which come off the roughly-sawn inner sides of the packing boxes. These chips cannot be detached easily by hand, and their removal from the rubber involves considerable labor. The suggestion is made that the insides of packing boxes for rubber be planed smooth, and also that the boxes be lined with paper. It will be remembered that Dr. Prinzhorn about a year ago paid a long visit to the rubber planting regions of Ceylon and the Federated Malay States.

RUBBER AND TIMBER IN CHIAPAS (MEXICO).

THE Soconusco Estates Co., incorporated May 21, 1910, under the laws of California, with \$2,000,000 capital authorized, has for its purpose the development of a hard wood business in the district of Soconusco, Chiapas, Mexico; also the utilization of the

native rubber on the estates, and planting 5,000 acres to rubber. For carrying out the company's plans, an issue of first mortgage 6 per cent. improvement gold bonds, to the amount of \$2,000,000, is offered. The directors are R. B. Teefy, a banker; C. L. Flack and Thomas Hughes, of the lumber trade; H. J. Dike, a rubber expert; and J. H. Strait, mayor of Redlands, California. The offices of the company are in Los Angeles, California.

REORGANIZATION OF THE OBISPO COMPANY.

ANNOUNCEMENT is made of a readjustment of the affairs of The Obispo Rubber Plantation Co., organized in 1901 to establish a rubber plantation in the state of Oaxaca, Mexico. Rubber was planted on a large scale and the progress of the plantation was encouraging, but a year or two ago considerable damage was done by fire, after which the further course of the company was for awhile left in suspense. Shortly after the formation of the company a separate corporation was formed under the style The Republic Development Co., to develop the property and turn it over to the Obispo corporation when the trees reach a productive age. Early in the present year a committee was appointed by the board of directors to visit the company's plantation "San Silverio," in Mexico, consisting of the president, Mr. C. D. Ingell, and the secretary, Mr. Walter E. Holloway, for the purpose of reporting upon the condition of the property, and also a plan for its future conduct. They were met on the estate by Mr. James C. Harvey, supervisor, and his son, Mr. C. M. Harvey, superintendent. The report made by the committee was favorable as to the condition of the property, and the promise of a yield of rubber, and a profit from live stock. A contract has been entered upon whereby the further development work will be taken over by The Obispo Rubber Plantation Co., The Republic Development Co. retiring from further connection with the plantation. The offices of the Obispo company remain at No. 29 Broadway, New York. It is stated that 2,149 persons—stockholders and share contract holders—are in interest with the company.

A RUBBER PLANTATION NOT FOR SALE.

THE sixth annual inspection of the "Florida" plantation of the Wisconsin Rubber Co., in the interest of the shareholders, was made this year by Mr. George I. Talbot, chosen by the shareholders for the purpose. This plantation is known as one of the best in Mexico. The report of Mr. Talbot has been printed in pamphlet form, ending with the following note signed by R. B. Anderson, president:

"As will be remembered we last fall received an offer from a London syndicate of \$1,500,000 for the Wisconsin rubber plantation. This meant a profit of \$300,000. We refused to consider the offer. It will be gratifying to all interested to learn that on the 23d of April, 1910, a representative of a London firm came to Madison and made us an offer of \$2,400,000, or \$600 per share, for the Florida plantation. He was willing to put up \$10,000 as a guaranty. The syndicate demanded an immediate answer, but we were unable to entertain the proposition, as it would have been necessary to get the consent of every contract holder before accepting. Besides we believe the plantation as it stands today is worth much more than \$2,400,000. In a few years it ought to produce 1,000,000 pounds of rubber annually."

A SHAKESPEARE IN RUBBER.

THE public will welcome the appearance of Mr. W. Shakespeare as signatory for 1,000 shares of the Grand Central (Ceylon) Rubber Estates. Mr. Shakespeare's participation would have been all the more apt if his distinguished namesake had made Hamlet say "Ay, there's the rubber"—instead of the "rub."—*The Financial News (London)*.

Forest Rubber Exploitation.

RECENT DEVELOPMENT IN PERU.

MANY reports agree as to the recent development, on a larger scale than previously, of the rubber interests of Peru. Mention is made in recent South American journals of the completion of the mule road undertaken by the Inca Rubber Co.—an American corporation with headquarters at Bradford, Pennsylvania—in return for important franchises from the government. This road has now been declared open to trade generally, so that, in addition to its use by the Inca company, important preparations for increased traffic have been made by E. Braillard Brothers, a French concern established on the river Beni since 1882. They have engaged 1,500 mules, enabling them to carry toward the Beni 140 tons of rubber in a year, and to convey inland a corresponding volume of imported merchandise.

Recently another attempt has been made in London to float The Peruvian Rubber Co., Limited, the first prospectus of which was mentioned in THE INDIA RUBBER WORLD, December 1, 1907 (page 87). The basis of this company is an important concession from the Peruvian government to Miguel Forga & Sons, transferred to La Compania Gomera Villamay, Limitada. As in the case of the Inca Rubber Co., the concession of the last named company provides for the building of roads to connect with streams which converge in the Madeira, this connecting with the Amazon and Pará.

An interesting statement in the prospectus of the Peruvian Rubber Co. is that "the well known Inca Rubber Co., of America, which owns large territory in the vicinity, has imported 500 Japanese, and the results have been quite satisfactory." And the Lima publication, *Peru To-day*, says that splendid progress is being made throughout the Madre de Dios region, adding: "The same may be said of the Tambopata region [where both the Inca and Peruvian companies have interests], where numerous Japanese have established themselves, with definite landed properties, which they devote especially to the cultivation of rice and cattle breeding."

NATIVE RUBBERS OF PORTUGUESE AFRICA.

THE rubber resources of Angola (Portuguese West Africa) are treated at length by the British consul, Mr. Mackie, in his report for 1908. It seems that the colonial government has employed expert botanists for stimulating interest in the collection of rubber and the forming of plantations, and also the introduction of agriculture. Over a half dozen latex yielding plants are recognized in the province, several of which have contributed to the already important production of rubber, including the grade known as "Benguella." Angola rubbers, as well known, are chiefly of the class known as "root rubber," or *caoutchoucs des herbes*.

Two of the more important species, according to this report, are the *Carpodinus gracilis* and the *Landolphia chylorrhiza*. These plants attain "but a meager growth above ground, but the subterranean development is important, producing horizontal trunks or *rhizomes* much branched and several feet in length, a few inches below the surface. It is generally these *rhizomes* that the natives collect for extracting the rubber. Only the biggest *rhizomes* are pulled out of the ground; the smaller ones and the branches remain in the earth. From these new plants spring up, and in from 8 to 10 years furnish *rhizomes* of sufficient thickness for extracting rubber. A native produces an average of 7 ounces of rubber a day without overworking himself."

In evidence of the tenacity of life of these plants it is mentioned that, although Portuguese stores have been in existence near Cassuango for some nine years in a populous center de-

voted to the rubber industry, these shrubs are still abundant all around—a circumstance, in the opinion of the botanist, that would seem to upset the theory that the rubber producing areas are being devastated by the native population. The consul is of the opinion that the employment of machinery might facilitate the production of rubber, but thus far little enterprise has been shown in this direction.

Regarding the "Ecanda" (*Raphionacme utilis*), first reported on by Professor Mello Geraldès [see THE INDIA RUBBER WORLD, July 1, 1907—page 200], the consul in Angola mentions the shipment of several tons of the bulbs of this plant to Great Britain, with the idea of extracting rubber from it there, but very little arrived in a fit condition, owing to the rotting that took place in transit. The consul adds: "It may nevertheless be concluded, from the continued interest manifested by the firm in this product, that the result had proved satisfactory."

LARGER DIVIDENDS OF A DUTCH COMPANY.

AT the last annual meeting of Nicuwe Afrikanische Handels Vennootschap (Rotterdam, July 1), accounts were presented which permit the following comparative figures to be given. The company is the oldest trading on the Congo, having established a branch at Boma before the Belgians became established there. Lately the company have held 340 of the 2010 shares in the Cie. du Kasai (Kasai syndicate). Rubber has figured largely in the operations of the company. The dividends derived from the Kasai holdings, which form only part of the company's profits, have been (for fiscal years ending October 31):

1906	286,882.00 florins	[= \$115,326.56]
1907	121,992.45 florins	[= 49,040.96]
1908	67,446.64 florins	[= 27,113.55]
1909	132,965.18 florins	[= 53,452.00]

The yearly dividends declared by the N. A. H. V. and the rate were as follows:

1906	358,453.50 florins	(17 per cent.)
1907	168,684.00 florins	(8 per cent.)
1908	105,427.50 florins	(5 per cent.)
1909	231,940.50 florins	(11 per cent.)

The N. A. H. V. have become interested in the Cie. Française de l'Ouhamé et de la Nana, in the French Congo, the operations of which are now profitable. The proceeds of the Dutch company from this source during the year were 80,779.39 florins.

GOOD RESULTS OF THE MABIRA FOREST COMPANY.

THE directors of Mabira Forest (Uganda) Rubber Co., Limited, report very favorable results for the year 1909. The output of rubber was 82,424 pounds, against 35,007 pounds in 1908. During the business year the company sold 59,010 pounds, at the average price of 6s. 5¼d. per pound. On October 19 Mabira rubber fetched at the London auction 9s. 4¼d. [= \$2.28] per pound—a higher figure than the current rate for fine hard Pará. The net profit for 1909 amounted to £17,018, and after writing off expenditures incurred during the development stage there remained a balance of £10,107, out of which the directors recommended the distribution of a dividend of 10 per cent. The Mabira Forest company deal with native *Funtumia* trees, of which at the end of the year they had exposed and prepared for tapping 442,207 above 18 inches in girth. The company are gradually clearing out the intermediate forest trees and planting rubber. At the end of the year they had transplanted 289,449 *Funtumia* trees and 14,600 *Hevea*. [See THE INDIA RUBBER WORLD, March 1, 1910—page 202.]

A book for rubber planters—Mr. Pearson's "What I Saw in the Tropics."

News of the American Rubber Trade.

REPUBLIC RUBBER CO.—FACTORY EXTENSION.

THE Republic Rubber Co. (Youngstown, Ohio), continue the expansion of their plant by the erection of important buildings. They have recently awarded to the Forest City Steel and Iron Co. (Cleveland, Ohio,) a contract for a five story building, 80x200 feet, of fireproof construction, with sprinkler system throughout. The entire building will be occupied in the making of the company's "Staggard Tread" tires and fire hose, and will provide for the employment of 200 or 300 men. The demand for "Lanco" balata belting, made by the Republic company, has made necessary the erection of an additional building for this department, 250x90 feet, now under construction.

THE NEW FACTORY AT RACINE.

Good progress has been made in the construction of the factory of the recently organized Kelly-Racine Rubber Co. (Racine, Wisconsin). It was expected that the installation of machinery would be begun by September 1. The plant now under construction has a frontage of 298 feet, with two wings each extending back 251 feet, the building being three stories and basement. A building 150 x 50 feet has been provided for the electric power plant; no steam power will be used. The product is to be bicycle, motorcycle, and automobile tires, with the accessories usual in this branch.

THE NEW G & J TIRE CO.

[See THE INDIA RUBBER WORLD, August 1, 1910, page 388.]

THE change of name of the rubber companies at Indianapolis was effected, not by a new act of incorporation, but by a decree of the Marion county circuit court authorizing the Indianapolis Rubber Co. to take the style G & J Tire Co. of Indiana. The court decree was issued on June 6, and a certificate that such a decree had been filed with the secretary of state of Indiana was issued to the tire company on August 4.

PLEASING BUSINESS PROSPECTS.

GENERAL C. EDWARD MURRAY, who is at the head of two of the largest rubber industries of Trenton, is very optimistic over the business outlook. General Murray's plants make a sufficient variety of goods to give him a line on both the agricultural and building conditions, and he keeps in close personal touch with the different sections of the country.

"I do not take any stock in talk of panics, or business depressions, or hard times," said General Murray to a reporter for this paper. "In our factories, I think we are in a most excellent condition to judge the business outlook. We deal extensively in the manufacture of rubber carriage cloth that is used by the large factories in the West, and the demand for this material indicates that the farmers out there are prosperous, and that carriages are very much in demand.

"A good barometer of the building conditions can be found in our manufacture of insulated wire, where orders are most satisfactory. And as for the manufacture of automobile tires, every factory that makes them in the country is rushed with business. Our mail daily brings orders from all sections, and I cannot see anything ahead of us but good times."

General Murray, by the way, has purchased, for a summer home, what is regarded by many as the most handsome residence in Spring Lake.

CHEWING GUM PROFITS.

THE new chewing gum combination, Sen Sen-Chiclets, capitalized at \$4,000,000, is reported to be paying dividends at the rate of 6 per cent. per year, in addition to 6 per cent. on \$2,700,000 of bonds. The American Chicle Co., organized eleven years ago, is paying 6 per cent. yearly on \$3,000,000 of preferred

stock and 18 per cent. on \$6,000,000 of common stock, thus distributing an annual total of \$1,080,000. The sale of chewing gum is facilitated by the vast number of vending machines to be seen in stores and on the streets, which are used not only for chewing gum but for chocolate and many other commodities. The National Chocolate and Gum Co. has been incorporated under the laws of New Jersey, with \$500,000 capital, to control eleven patents on vending machines and to manufacture and license the use of such machines in the United States and abroad, and also to supply gum and other "fillers" for the machines manufactured for the company under special arrangement. If all the promises of the prospectus of the vending machine company should be realized, their business seems likely to become the most profitable on earth.

MANY GOODRICH COMPANIES.

THE B. F. Goodrich Co. (Akron, Ohio), in keeping with the modern practice of incorporating in different States in order to benefit from the most liberal provision of the laws of each, now have a charter in three States besides Ohio. The list includes The B. F. Goodrich Co. of New York, The B. F. Goodrich Co. of Michigan and The B. F. Goodrich Co. of Texas. Mention may also be made of The B. F. Goodrich Co., Limited, in England.

A report from Paris is that a concern to be known as the Société Française B. F. Goodrich, being a branch of the American house of the same name, is in course of organization.

TRADE NEWS NOTES.

THE Manufacturers' Rubber Co. (Philadelphia) have declared the regular quarterly dividend of 1½ per cent. on the preferred stock, payable September 1.

The board of trade of Cadillac, Michigan, have been considering a proposition for adding a \$100,000 rubber factory to the city's industry.

The moving picture advertising program of the B. F. Goodrich Co., "From Tree To Tree," mentioned in these pages already, continues to meet an interesting reception on the part of the public. The pictures were being shown recently in Michigan towns. Mr. F. M. Tillisch, of the Akron office, continues his lecture course in connection with the pictures.

Mr. Edward H. Broadwell, long connected with the Fisk Rubber Co. (Chicopee Falls, Massachusetts), and for five years vice president of that company, has resigned to take charge of the selling department of the Hudson Motor Car Co. (Detroit), of which he has been elected second vice president, to date from September 1.

Schedules in bankruptcy of Henry F. Mayper, manufacturer of silk rubber raincoats, No. 40 West Twenty-second street, New York, show liabilities of \$22,825; the assets are not stated. A rubber proofing company is mentioned as a creditor for \$3,785.

A representative of the New York Royal Rubber Co. was reported recently to be stopping at Terryville, near Middletown, Connecticut, looking for a location for a rubber factory.

The directors of the Boston Woven Hose and Rubber Co. have declared a quarterly dividend of \$2 per share on the common stock, payable September 15, 1910, to stockholders of record September 6.

"The Commercial Geography of Rubber" is the title of a neat booklet compiled by Mr. Charles B. Whittelsey, superintendent of the Hartford Rubber Works Co., and distributed by this company to their customers as likely to be of interest, particularly to the users of their tires.

NEW INCORPORATIONS.

ARKAY Rubber Co., June 30, 1910, under the laws of New York; capital, \$25,000. Incorporators: George J. Knies, Arthur J. Knies, and Edward F. Rolle, all of New York. This business, founded in 1900, and located at No. 111 Chambers street, New York, is devoted to the sale of mechanical rubber goods, and particularly of elastic bands.

The Loewenthal Co., July 13, 1910, under the laws of New York; capital, \$1,000,000. Incorporators: Herman Muehlstein (No. 481 Washington street), Louis S. Levy and Stephen S. Rosenthal (No. 2 Rector street), all of New York city. Further details appeared in THE INDIA RUBBER WORLD, August 1 (page 401).

A & A Rubber Co., February 7, 1910, under the laws of Massachusetts; authorized capital, \$16,000. Incorporators: Calvert B. Archer, Milford, Mass.; Leon Aronson, No. 572 Warren street, Boston; John S. Slater, No. 18 Tremont street, Boston; and Isidor Fox, Barristers' Hall, Boston. Further details were given in the last INDIA RUBBER WORLD (page 401).

Webster Felt and Rubber Co., June 30, 1910, under the laws of Massachusetts; authorized capital, \$200,000, par value, \$10 each share. Incorporators: Henry C. Richardson, Haverhill, Mass.; Arthur H. Racicot, Joseph N. Roy, and Alexander N. Racicot, Webster, Mass. The Mr. Richardson named here is the inventor of a felt and rubber boot which has attracted attention in the trade at various times, though it has not been manufactured to an important extent. At one time it was proposed to take up its manufacture in Canada, in connection with which THE INDIA RUBBER WORLD treated the invention, in the issue of February 1, 1908 (page 151).

Guarantee Rubber Tire Co., July 16, 1910, under the laws of New Jersey; capital, \$10,000. Incorporators: E. J. Forhan, G. F. Martin, and H. P. Jones, all of No. 154 Nassau street, New York.

Mayflower Rubber Works Co., June 30, 1910, under the laws of Massachusetts; authorized capital, \$10,000. Incorporators: Frank M. Sawtelle, Malden, Mass.; Robert J. Cram, No. 46 Mt. Vernon street, Boston; and Atherton N. Hunt, Braintree, Mass. Location: Braintree, Mass. Mr. Cram is president of the company and Mr. Hunt treasurer.

The Sillcocks-Miller Co., July 1, 1910, under the laws of New Jersey; authorized capital, \$100,000. Incorporators: Warren S. Sillcocks, Horace E. Miller, Henry Sillcocks, all of No. 44 St. Francis street, Newark, N. J. This company has taken over from The Celluloid Co. its "Texoderm" department. The manufacture will be carried on of texoderm, which has become recognized as a high grade of artificial leather, and also of certain specialties in celluloid. The president of the company, Mr. W. S. Sillcocks, is a director of The Celluloid Co., and both he and the vice-president, Mr. H. E. Miller, have been connected with that company from the beginning.

Electrose Manufacturing Co., June 17, 1910, under the laws of New York; capital, \$100,000. Incorporators: Louis Steinberger, No. 335 Madison avenue, Brooklyn; John H. Poggenburg, No. 744 Beck street, New York; and Felix Steinberger, Bradford, Pennsylvania. This succeeds to the business carried on heretofore by the Electrose Manufacturing Co., incorporated under the laws of Illinois. The product Electrose, a substitute for hard rubber used for electrical purposes, was invented by Louis Steinberger. The factory is at No. 127 North 10th street, Brooklyn, New York.

Schwab-Chubb Tire Protector Co., June 13, 1910, under the laws of New York; capital, \$50,000. Incorporators: Abraham Schwab, and Frederick T. Barry, No. 641 Madison avenue; Nathan Schwab, No. 6 East Fourteenth street—all of New York City.

Hercules Suspension Tire Co., June 14, 1910, under the laws of New York; capital, \$50,000. Incorporators: George E. Armstrong, No. 1 West One Hundred and Fourth street; L. G.

Billings, Jr., No. 115 Broadway; and Darius E. Peck, No. 30 West Forty-fourth street—all of New York.

International Automobile League Tire and Rubber Co., July 15, 1910, under the laws of New York; capital, \$1,000,000. Incorporators: Alfred C. Bidwell (No. 234 North Division street); William Preiss (No. 160 Franklin street); and Charles H. Bowe (No. 58 West Genesee street), all of Buffalo, New York.

A letter to THE INDIA RUBBER WORLD states that this company has been formed for the purpose of building a factory for making automobile tires for its shareholders, and for the members of the International Automobile League, which is stated to have 40,000 members. The idea is held out that automobile tires are unduly expensive, and that by reason of the co-operative scheme outlined users of tires may cover their requirements more economically than at present. The letter here quoted is typewritten, on a piece of paper 6 x 9 inches in size, without a printed heading, and signed simply "International Automobile League Tire & Rubber Company," without the name of any individual.

Bartica Co., May 27, 1910, under the laws of Maine; authorized capital, \$2,000,000. Incorporators: T. L. Croteau, Albert F. Jones, B. M. Maxwell, Clarence G. Trott, J. R. Griffin, L. H. Palmer, and C. L. Doane, all of Portland, Maine. To engage in cultivation of rubber and other crops in British Guiana.

CHARLES GOODYEAR ON BROADWAY.

A REPLICA of the bronze bust of Charles Goodyear recently placed in the railway station at Naugatuck, Connecticut, by Colonel Samuel P. Colt [see THE INDIA RUBBER WORLD, August 1, 1910—page 387] now stands in the directors' room of the United States Rubber Co. (New York), of which company Colonel Colt is president.

TRADE NEWS NOTES.

THE Consumers' Automobile Tire and Tube Co. have established a store at No. 1515 Michigan avenue, Chicago, with a view to carrying a full stock of tires and tire accessories of leading makes. The manager is Mr. J. J. Casey.

Mr. F. H. von Boemle, at No. 35 Warren street, New York, is representing the Cleveland Rubber Works of the Mechanical Rubber Co. (Cleveland, Ohio) for a number of their specialties.

The demand for the "Staggard Tread" tires, made by the Republic Rubber Co. (Youngstown, Ohio), is said to have doubled within a year, and the company are preparing for a still larger business in 1911.

Morgan & Wright (Detroit, Michigan), have built for display purposes one of their "Nobby Tread" pneumatic tires, the dimensions of which are 96 x 12 inches. An ordinary sized man can stand upright inside the rim. The only larger tire on record was one 11 feet in diameter which the Boston Woven Hose and Rubber Co. built in 1897. This was a much simpler piece of work, however, being a single tube.

The Progressive Co. (Chicago), have issued a circular to dealers in their "Knickerbocker" spray brushes, asking their co-operation in maintaining prices. They state that the retail price was fixed and restricted by them, as the owners of four United States patents under which the brushes are manufactured.

The Vulcalose Co. (No. 5254 West Madison street, Chicago), report that they are preparing to market a new product, which they term "Vulcalose." This is described as being similar to vulcanized fiber, possessing the advantages of not warping, and being waterproof. It is composed of plastic cellulose and rubber vulcanized together.

Mr. Charles A. Emerson, who has been the purchasing agent of the United States Rubber Co. ever since the company was organized, in 1892, and who for a year or two has also acted as purchasing agent of the Rubber Goods Manufacturing Co., lately has been overcome by the temptation to run a touring car, in which he has become very efficient.

TRADE NEWS NOTES.

ON the twenty-fifth anniversary of the organization of the Apsley Rubber Co. (Hudson, Massachusetts), every employé at the factory was presented with a handsome silver mounted leather pocketbook, containing a small sum of money. The pocketbooks were inscribed "Best Wishes. Apsley Rubber Co. 1885-1910." The presentation was made in person by the president of the company, the Hon. L. D. Apsley, who had just returned from a vacation in Europe.

The Peerless Rubber Manufacturing Company (Goodell Rubber Company, distributors), have recently removed from No. 704 Arch street, Philadelphia, to more commodious quarters at No. 19 North Seventh street, in that city.

A fire in Boston on August 17 destroyed rubber goods in the store rooms of the Standard Tire and Rubber Co., No. 102 Portland street, of the estimated value of about \$10,000.

The St. Louis Rubber Cement Co. report that most of the large jobbers in bicycle, automobile and findings cements are contracting for 1911 goods now. It is very early, but the jobbers appear anxious to contract before another possible advance in manufactured goods.

PERSONAL MENTION.

MR. HERMAN REIMERS, formerly of the crude rubber trade in New York and now a member of Heilbut, Symons & Co., rubber merchants in London, is chairman of the board of The Anglo-French Mercantile and Finance Corporation, Limited, registered recently in London, with an authorized capital of £1,000,000, for the purpose of financing or buying or selling or amalgamating suitable estates, and particularly rubber plantations. The board includes also some of the most prominent British investors in rubber planting.

Dr. David Spence, who for some time past has been connected with the Diamond Rubber Co. (Akron, Ohio), recently enjoyed a brief holiday at his home in England.

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

AT the annual meeting of the shareholders of the Firestone Tire and Rubber Co. (Akron, Ohio), on August 24 the directors were reelected, as follows: H. S. Firestone, Will Christy, R. J. Firestone, A. C. Miller, and L. E. Sisler. The election of officers resulted:

President—H. S. FIRESTONE.
 Vice President—WILL CHRISTY.
 Secretary—S. G. CARKHUFF.
 Treasurer—J. G. ROBERTSON.

It was stated after the meeting that the business of the company during the year had exceeded expectations, especially in the manufacture of their new quick detachable demountable rims. The shareholders were told that the new \$1,000,000 factory, which has been under construction since early this year, is expected to be ready for occupancy by March 1 next. The new plant, located some distance south of their present quarters, consists of a long narrow and main building with four wings on each side, so planned that more room can be had when needed by extending the wings.

THE annual picnic of the employés of the B. F. Goodrich Co. American Hard Rubber Co., and Alkali Rubber Co., held on Saturday, August 6, at Silver Lake Park, near Akron, was attended by 18,000 persons. The companies gave all their employés tickets entitling them to transportation on special trains, and many of the privileges of the park. A baseball team captained by H. K. Raymond, tire department manager in the Goodrich plant, was defeated by a team headed by E. C. Shaw, general manager of works.

THE population of Akron, by the last United States census, is given at 60,067, against 42,723 ten years ago—the increase being about 61 per cent. The increase is credited principally to

the growth of the rubber industry. It is estimated that one-fourth of the population of the city is employed in the various rubber factories. The combined capitalization of the rubber factories of Akron is now calculated to be \$42,000,000.

THE capital of the Miller Rubber Co. has been increased from \$250,000 to \$500,000. Within the past year the plant has been greatly enlarged, and plans are being made for still more extensive facilities, which the officers say will permit of the doubling of the output next year. The company started twelve years ago with a working capital, it is reported, of only \$300.

THE B. F. Goodrich Co. will shortly finish another reinforced concrete and brick building, three stories high, with a frontage of 185½ feet, and extending back 260 feet, so planned as admit of two floors being added later. The ground floor will accommodate the maintenance department and the garage for tire testing cars, the company's trucks, and the automobiles owned by officials and employés. The second floor will house the machine shop, where the finer grades of molds will be made, and the carpenter shop and painting shop. The third floor will be devoted to rubber manufacturing.

THE annual outings of the Diamond Rubber Co., the Goodyear Tire and Rubber Co., and the Firestone Tire and Rubber Co. were held in June last.

MR. HARVEY S. FIRESTONE, president of the Firestone Tire and Rubber Co., left during the middle of August for an absence of a month in Europe.

MR. H. E. RIKER, of Alliance, Ohio, formerly connected with the rubber trade in Akron, has been appointed auditor for the Firestone Tire and Rubber Co.

At a meeting of shareholders of The B. F. Goodrich Co., held on August 24, the proposals of the directors for increasing the capital from \$10,000,000 to \$20,000,000 [see THE INDIA RUBBER WORLD, August 1, 1910—page 401] were agreed to. On that day the asking price for Goodrich stock was \$285 for shares of \$100.

A MEETING of officers, branch managers, and salesmen of the Buckeye Rubber Co. was held during the week beginning August 22. The officers of the company, it is understood, are considering plans for the enlargement of their plant.

MR. E. C. TIBBITTS, advertising manager for The B. F. Goodrich Co., is so firm a believer in the benefits of such events as the Glidden tour in developing the tire business that he hopes that these tours will not be discontinued.

THE employés of the Goodyear Tire and Rubber Co. who have been with the company for ten years have been granted a 10 per cent. increase in wages, in accordance with the custom of the concern.

THE Swinehart Tire and Rubber Co. have established two new agencies—one each in St. Louis and Kansas City, Missouri.

THE Stein Double Cushion Tire Co. have made tentative plans for a new factory building, for which ground probably will be broken early in the spring.

WILLIAM C. STATE, mechanical engineer of the Goodyear Tire and Rubber Co., narrowly escaped falling 250 feet through a new smokestack the company has just built. The bucket in which he was riding tipped, and the man saved himself by hanging to the cable.

Feeders of the Bordeaux Rubber Market.

THE importation of rubber at Bordeaux during 1909 showed a marked increase over the year preceding, and was considerably more than in 1906, the year with the largest figures in the past. The imports for eleven years have been:

1899.....kilos	175,580	1905.....kilos	1,330,480
1900.....	239,532	1906.....	1,716,004
1901.....	235,380	1907.....	1,516,420
1902.....	678,000	1908.....	1,078,320
1903.....	1,113,000	1909.....	1,987,565
1904.....	1,182,703		

A review of the Bordeaux market, by the brokers Félix Faucher and E. Chaumel, embodies the following comments on the sources of the rubber imported there, and the conditions of its production:

"Importations during the year 1909 amounted to 1,987,565 kilograms, against 1,078,320 kilograms in 1908. The reason for this increase is to be found in two very distinct factors: (1) the advance in prices for rubber in Europe, which made it possible to pay the natives more remunerative wages, which acted as an inducement for them to gather this product in large quantities; and (2) the period of rest allowed the rubber producing *lianes* (vines) during the year 1908, when the gathering of the crop was practically abandoned. This rest appears to have resulted in an increased production of late in 1909.

"This latter fact leads us to the conclusion that the rigid enforcement of the prohibition of rubber gathering during the winter season in all the centers of production in our French West African colonies would undoubtedly have the two fold result of increasing the production, while at the same time improving the quality of the product.

QUALITY.

"There is still room for certain improvements in quality, for we have had occasion to notice that there is considerable unevenness in the quality of arrivals. We give below the particulars we have been able to gather during the season in regard to product shipped from various places of production.

"Soudan.—Although arrivals, taken as a whole, are clean, sound, and generally in good condition, we found, nevertheless, fresh lots containing a soft kind of rubber, from which water oozes out under the pressure of the hand, exactly as it does when squeezing a sponge.

"The lots in question came from the Kankan region, where they must have been gathered toward the end of the rainy season. Traders in that territory complain, moreover, that the natives boil their rubber before bringing it to market, in order to saturate it with an excess of water. This fraud denatures the rubber and makes it liable to increased oxidation.

"We therefore call the attention of the government to this species of fraud, in order that preventive measures may be taken at once and strict watch be kept over the natives, so as to compel them to deliver their rubber dry and in good condition, as long as it appears impossible to comply with the demand to have them prepare it in thin sheets and strips. We furthermore urge the traders to ship their rubber as nearly dry as possible, and to take good care of it before shipment.

"Conakry.—In the beginning of the year the rubber shipped from this territory was of very poor quality, containing a less amount of red rubber, but on the other hand, an enormous proportion of earthy lumps. In consequence of the complaints made by the trade, the lieutenant governor of Guinea took strenuous measures in order to put an end to a state of affairs which was liable seriously to injure the industrial and financial interests of the colony. The result of these measures soon became apparent,

and we very quickly had occasion to observe that there was a noticeable decrease in the amount of earthy rubber.

"Red rubber remains, nevertheless, very scarce. We attribute this scarcity to the rapid advance of the railway in the direction of centers of production, which makes it possible to transport the rubber quickly to the shipping port. The rubber has not, therefore, sufficient time to take on the beautiful red color which it formerly acquired during the long journey of the caravans which carried it to Conakry.

"During July-September exports from Conakry were very large, notwithstanding the announced prohibition of gathering rubber during these three months. The quality of the rubber, in fact, leaves a great deal to be desired, the rubber being whitish, soft and watery. The public interests therefore demand that the gathering of rubber during the rainy season be prohibited strictly in Guinea.

"We would urgently advise the exporters of Conakry rubber to separate carefully the Conakry grade from the 'Soudan niggers' product, a constantly increasing amount of which is coming in at the terminal point of the railway. The mixture of these two grades in the exported lots is the cause of everlasting difficulties and should be carefully avoided.

"Ivory Coast.—The grades imported from this territory are still of the average quality of the crops of previous years, and as numerous and varied as in the past.

"The attempt to replace the 'lumps,' 'cakes,' 'twists,' and 'niggers' by one single method of preparation—viz., in the form of translucent cakes—could not be carried out, in consequence of the obstacles encountered by the government, the chief difficulties being the diversity between the species of rubber producing plants found in the Ivory Coast colony, and the low intelligence of the gatherers.

"According to information sent us by the lieutenant governor, all possible measures have, nevertheless, been taken in order to succeed as quickly and by as practical a method as possible, in improving the grades of rubber produced in that territory.

"Two schools for instructors were opened under the direction of technical agents—viz., one in Assikasso, in the eastern part of the colony, and one in Bouaké for the western district. The natives who were instructed in these schools have become salaried agents and were made subject to the order of the district commanders, so as to have them spread among the inhabitants of the village the knowledge of the methods for the satisfactory preparation of rubber, as recommended by the government agents. The work of these native agents was at the same time combined with that of the district postmasters, who have received special instructions to make the preparation of rubber a subject of their conversations with the natives, on all the trips they make.

"The carrying out of a program so systematically drawn up can not fail to produce excellent results in the near future. It will be much more easy, however, to obtain such results if the traders, on their part, will support these efforts by adopting an equitable method in making their purchases.

PRODUCTION.

"This important factor has been made an object of careful attention. The areas planted with *lianes* and trees are being extended everywhere in a systematic manner. There are, moreover, areas in the forest region of the Ivory Coast which have not as yet been worked, and the production may be still further increased by a supply of *Funtumia* rubber, according to the information furnished by the lieutenant governor.

"From observations made by Mons. A. Chevalier and Captain Schiffer during their journey across the Ivory Coast, it appears

that the *Funtumia* will very easily multiply naturally, and without requiring any care, in consequence of the lightness of the seeds and of the rapid growth of this species.

"By preserving these new groves until they have reached the age of maturity new sources of production will be made available. The Pará (*Hevea*) trees, moreover, which were planted in 1898, have prospered so well that the local government has now undertaken to plant a large area of this species at the Agboville station, on the section of the railway already opened to traffic. This area is being planted for the purpose of encouraging colonization and of providing a sufficiently extensive nursery from which the planters can obtain supplies.

"With the *Hevea* and the *Funtumia*, which can prosper side by side on the Ivory Coast, this territory may become, according to the opinion expressed by the lieutenant governor, in view of its exceptionally favorable location, one of the principal centers for the cultivation of rubber producing species."

The imports at Bordeaux by grades for the past two years have been as follows:

	1908.	1909.
Soudan sorts .....kilos	267,785	722,035
Conakry niggers	408,245	651,200
Gambia or Cassamance	77,065	152,400
Lahou niggers	85,770	116,895
Lahou cakes (Baoulè).....	11,790	32,470
Bassam lumps	78,960	33,500
Bassam niggers	5,590	13,335
Bassam cakes	1,810	3,230
Congo Sangha	7,250	.....
Java and Sumatra.....	175	150
Madagascar	5,660	105,455
Central America	50,895	7,455
New Caledonia	9,150	1,660
Tonkin	5,700	2,000
Rufisque	2,580	985
Maniçoba	54,695	143,435
Pará	4,950	.....
Balata	250	1,360
Total	1,078,320	1,987,565

Madagascar rubber has figured to a specially interesting degree in the Bordeaux market, both as regards the gain in output, and in the advance in price, which has been held more steadily for this grade, perhaps, than for any other. Madagascar Majunga rubber in January, 1909, ranged from 6 to 8 francs per kilo; prices in December were 9 to 10 francs. Similarly, Madagascar Tamatave rubber rose from 8@9.25 francs to 10.85@11.10 francs per kilogram.

THE HAVRE RUBBER MARKET.

ARRIVALS during 1909 at Havre were larger than in 1908, though still below the record of two former years. The arrivals for four years past may be analyzed thus:

FROM—	1906.	1907.	1908.	1909.
French Congo.....Kilos	314,025	892,655	884,733	840,324
Other sources (except Pará)..	339,847	232,321	130,000	371,514
Pará	3,738,055	3,339,147	2,483,444	2,569,338
Total	4,391,927	4,464,123	3,498,177	3,781,176

We quote from the annual review of Jean Roederer, broker at Havre: The efforts of importers have been directed to an improvement in the quality. As for the red varieties, their quality and condition leave nothing to be desired. The black varieties, which used to come often in a humid or sticky condition, have been very much improved, and were very much sought after, which accounts for the great rise in the Ekela and the Haute-Sangha. The former sold 51 per cent. higher at the end than at the beginning of the year, and the latter 92 per cent. higher. The monthly sales have been largely attended and the Congo lots induced lively bidding. At the end of the year the Pará prices were a little weak, leading to a slight decline in the Congo lots. Nevertheless, the demand continues good and everything points to high prices during the next few coming months.

TOTAL IMPORTS OF RUBBER AT HAVRE.

	Kilos.		Kilos.
1896.....	1,648,000	1903.....	1,862,000
1897.....	1,814,000	1904.....	2,188,000
1898.....	2,138,000	1905.....	3,291,000
1899.....	1,856,000	1906.....	4,391,927
1900.....	2,359,000	1907.....	4,404,123
1901.....	2,241,000	1908.....	3,498,177
1902.....	1,948,000	1909.....	3,781,176

THE CONGO RUBBER MOVEMENT.

EXPORTS of rubber from the Congo Free State (now the Belgian Congo), for the two years stated, are officially given as follows:

	1905.	1908.
Total rubber exports .....kilos	6,108,421	5,947,223
Product of the State	4,861,767	4,559,926

VALUES.

	1905.	1908.
Total rubber exports .....francs	54,975,789	49,143,755
Product of the State	43,755,903	30,779,500

Exports include rubber in transit through the Free State, from the French Congo and from neighboring German and Portuguese territory.

RUBBER EXPORTS FROM KAMERUN (WEST AFRICA).

YEARS.	Kilos.	Marks.
1900	547,348	2,058,526
1901	518,638	1,787,062
1902	488,517	1,624,336
1903	701,695	2,247,085
1904	949,546	3,625,328
1905	1,034,204	4,071,016
1906	1,151,009	4,676,629
1907	1,492,811	7,641,124
1908	1,214,320	4,779,740

EXPORTS FROM GOLD COAST COLONY (BRITISH WEST AFRICA).

YEARS.	Pounds.	Value.
1899	5,572,554	£555,731
1900	3,452,440	328,156
1901	1,520,009	104,030
1902	1,599,974	88,602
1903	2,258,981	196,500
1904	4,013,837	360,644
1905	3,633,106	323,774
1906	3,649,668	334,504
1907	3,549,548	333,120
1908	1,773,248	168,143

GUTTA-PERCHA FROM THE PHILIPPINES.

THE bureau of agriculture at Manila publishes a statement of exports of gutta-percha from the province of Jolo, for the first eight months of 1909, the figures aggregating 27,632 kilograms [=607,904 pounds], of the declared value of \$26,088.90.

AMERICAN VIEWS VIA CEYLON.

THE drop in rubber prices in London on May 4 was telegraphed the same day to Ceylon, and in connection with reporting the news *The Times of Ceylon* says:

"Told of the sudden drop in rubber today, the head of a Colombo firm of buyers, with an extensive business connection with American manufacturers, informed a *Times of Ceylon* representative that he was not in the least surprised. 'Everyone knows,' he remarked, 'that prices have been much too high. I think American dealers are merely "holding" off temporarily, with the view of getting the prices down. America has shown no indication that she wants to buy rubber, but I think she will do so later. I know for a fact that a certain American firm of manufacturers sold in London a portion of their hard fine Pará purchase at top figure, finding that they could make more money by selling the raw rubber than by turning it into the manufactured article.'

"The same gentleman said he was not aware that American manufacturers were 'living from hand to mouth' as stated in Reuter's wire."

ADDITIONAL TRADE NEWS.

GOODYEAR TIRE AND RUBBER INCREASE.

THE directors of the Goodyear Tire and Rubber Co. (Akron, Ohio), have filed with the secretary of state of Ohio a certificate of increase of capital from \$2,000,000 to \$6,000,000. It is stated by Mr. Frank A. Seiberling, president of the company, that their business was twice as large in volume during the last business year as in the preceding year. The company recently completed an additional six story building 200 x 60 feet, and another is under way 400 x 50 feet. They expect to have a reclaiming plant in operation in the autumn.

AKRON'S LATEST RUBBER COMPANY.

THE Portage Rubber Co., organized by business men of Akron, Ohio, with an authorized capitalization of \$1,000,000, to manufacture solid and pneumatic tires and a general line of rubber goods, are offering 5,000 shares of cumulative 7 per cent. shares. The capital stock is one-half each in preferred and ordinary shares. The directors of the new company are Will Christy, John W. Miller, James Christy, W. S. Long, Dayton A. Doyle, John Kerch, Arthur S. Mottinger—all of Akron—and Hayward H. Kendall, of Cleveland, Ohio. The new company plan to take over the plant and business of the Union Rubber Co., of Barberton, Ohio, with a view to doubling soon the reclaiming plant of the latter.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for five weeks, ending August 27:

COMMON STOCK, \$25,000,000.

[The treasury of a subsidiary company holds \$1,344,000.]
Last Dividend, April 30, 1900—1%.

Week July 30	Sales 5,695 shares	High 34½	Low 27
Week August 6	Sales 500 shares	High 33¼	Low 32½
Week August 13	Sales 3,850 shares	High 35½	Low 33
Week August 20	Sales 3,400 shares	High 35½	Low 34¾
Week August 27	Sales 1,800 shares	High 34½	Low 33¾

For the year—High, 52½, Jan. 3; Low, 27, July 30.
Last year—High, 57½; Low, 27.

FIRST PREFERRED STOCK, \$39,824,400.

Last Dividend, July 30, 1910—2%.

Week July 30	Sales 2,864 shares	High 105¼	Low 99
Week August 6	Sales 2,110 shares	High 105¾	Low 104
Week August 13	Sales 1,010 shares	High 108	Low 104¾
Week August 20	Sales 1,005 shares	High 109	Low 108½
Week August 27	Sales 300 shares	High 108	Low 107½

For the year—High, 116½, Jan. 10; Low, 99, July 30.
Last year—High, —; Low, —.

SECOND PREFERRED STOCK, \$9,965,000.

Last Dividend, July 30, 1910—1½%.

Week July 30	Sales 1,110 shares	High 69	Low 59½
Week August 6	Sales 400 shares	High 67	Low 65½
Week August 13	Sales 200 shares	High 67½	Low 67
Week August 20	Sales 300 shares	High 70	Low 69
Week August 27	Sales 100 shares	High 68¾	Low 68¾

For the year—High, 84, Jan. 3; Low, 59½, July 30.
Last year—High, 89½; Low, 67½.

SIX PER CENT. TRUST GOLD BONDS, \$19,500,000.

Week July 30	Sales 31 bonds	High 102½	Low 101¼
Week August 6	Sales 19 bonds	High 102½	Low 101¾
Week August 13	Sales 19 bonds	High 102½	Low 102
Week August 20	Sales 34 bonds	High 102½	Low 102¾
Week August 27	Sales 12 bonds	High 102½	Low 102¾

For the year—High, 104½, Jan. 15; Low, 102, July 9.
Last year—High, 106; Low, 102¼.

"CAMP GOODRICH."

THOSE who visit "Camp Goodrich" on their wonderfully fertile tropical island, are indeed fortunate. The area of the enchanted land is not a matter of record, but its products are all that heart could desire. To describe it without the singularly attractive drawing, or was it a photograph, sent out by the owners is difficult. Fruits and flowers, orchids and orchestras are all suggested. It is a land flowing with milk and honey, beer and pretzels,

jujubes and juleps. An aeroplane-boat-automobile, fitted with Goodrich tires takes one there. [See the latest "Goodrich Rubber Man's Vacation."]

A FEW ITEMS.

OFFICIAL notice is given, under date of July 7, of the registration of the commercial firm of B. Antunes & Ca., in succession of the firm of the same name in liquidation. This house long has been important among the *aviadores* at Pará, and has engaged also in exporting rubber.

Commercial circles in Pará and throughout north Brazil are to be congratulated upon the appearance of such a journal as *O Commercio Norte-Brazileiro*, due to the enterprise of Mr. Miguel P. Shelley, who for many years has been active in the life of Pará, for awhile in commercial affairs and later in journalism. He has an extensive acquaintance in the Amazon region, including a wide knowledge of rubber trade conditions, and it is apparent from the initial issue of this journal that no small proportion of its space is to be devoted to statistics of the rubber market and comments on the conditions of the same.

Mr. G. Edward Habich, well known to the rubber trade in New England, who handles the "Cole 30" automobile, shipped five of those excellent cars to Pará last month.

The amount of rubber transported by the lines of the Mogyana Railway and Navigation Co. for the fiscal year 1909 was 115,565 kilograms, against 82,239 in 1908. This road operates in the Brazilian states of Minas Geraes and Sao Paulo.

The crude rubber market of Amsterdam is gradually assuming proportions of importance. There have long been imports there of crude rubber, and to these are being added increasing amounts of plantation rubber. Not a few growing companies have been organized in Holland, and these are expected soon to become important producers.

There are said to be in Hawaii Territory 300 investors in La Zacnalpa Rubber Plantation Co. and the allied enterprises in Mexico, representing an investment of approximately \$1,000,000.

It is stated that through the efforts of Mr. A. W. Smith, formerly of the Roberts, Johnston and Rand Shoe Co., of St. Louis, several gentlemen in that city have obtained title to 88,140 acres of land at Tomellin, Oaxaca, Mexico. On part of this they expect to develop mining interests, while on the rest they expect to work rubber and develop grazing. A party of those interested plan going to Mexico this month to visit the property.

The question of requiring public hackmen to equip their horses with rubber pads was recently under consideration by the city council of San Antonio, Texas. The object was the better protection of the asphalt streets.

AFFAIRS OF KEMPSHALL TYRE.

At the third annual meeting of shareholders of the Kempshall Tyre Co. of Europe, Limited (London: August 3) it was stated that although the production of tires was the largest in the history of the company, the sales having been very encouraging, there was no profit for the year. This was attributed to the high cost of rubber, which prevailed during part of the year, and the expensive advertising campaign which has been kept up as the means of introducing the tires in every country where motor cars are used. The Kempshall tires are manufactured at the plant of the Messrs. Macintosh, in Manchester.

DERMATINE PROFITS.

At the annual meeting of shareholders of Dermatine Co., Limited (London: August 17), the reports for the twelve months ended June 30 showed a net profit of £2,627 12s. 3d. The usual preference dividend was paid of 7 per cent., and a dividend of 7½ per cent. on ordinary shares. The directors consider the result of the year's trading to be quite satisfactory, in view of the abnormal cost of raw materials.

Review of the Crude Rubber Market.

THE principal rubber auctions in Europe during the latter part of August realized uniformly lower prices than in the preceding auctions in the same markets. The effect of these lower prices has been reflected in every center of the rubber trade. By the way, these rubber auctions, at which are represented all the important rubber buying interests in the world, have a very much more important influence in fixing prices of this commodity than is generally appreciated in America, where the system of disposing of raw imports by auction has never had a standing. The European auctions referred to occurred too near the date of the printing of this paper to allow for any extended comment on causes of the decline. As usual in Europe, however, the lower prices are attributed to lessened buying in America. Similarly, when prices go up, it is said to be because America is bidding for all the rubber in right.

Suffice to say, prices are lower at this date than for many months; in fact, there is no \$2 rubber of any grade in the market. When prices advance again, the fact will be recorded in these columns—it may be with or without comment.

The Editor, on another page, has something to say about rubber prices, and there are statistics scattered all over the paper that are worth considering in connection with rubber prices. It is worth while to add here that the Para receipts for July were larger than in the first month of any other crop season.

Following are the quotations at New York for Para grades, one year ago, one month ago, and August 30, the current date:

PARA	Sept. 1, '09.	Aug. 1, '10.	Aug. 30.
Islands, fine, new	...@168	208@210	179@180
Islands, fine, old	...@175	210@212	none here
Upriver, fine, new	...@190	215@...	196@197
Upriver, fine, old	...none here	218@...	198@199
Islands, coarse, new	...@ 64	95@...	94@ 95
Islands, coarse, old	...@ 75	none here	none here
Upriver, coarse, new	...@113	147@...	142@143
Upriver, coarse, old	...none here	none here	none here
Cemetá	...@ 83	110@...	95@ 96
Caucho (Peruvian), ball	...@105	147@...	135@136
Caucho (Peruvian), sheet	...@ 86	none here	none here

PLANTATION PARA.

Fine smoked sheet	...@...	...@209	190@191
Fine pale crepe	...@...	...@202	174@175
Fine sheets and biscuits	...@...	...@196	172@173

CENTRALS.

Esmeralda	...@ 95	130@...	118@119
Guayaquil, strip	...@ 78	110@...	none here
Nicaragua, scrap	...@ 95	128@...	116@117
Panama	...@ 83	90@...	none here
Mexican, scrap	...@ 95	127@...	115@116
Mexican slab	...@ 80	none here	none here
Mangabeira, sheet	...@ 66	none here	none here
Guayule	...@ 45	80@...	72@ 73

AFRICAN.

Lopori, ball, prime	...@120	175@...	162@163
Lopori, strip, prime	...@118	170@...	170@...
Aruwimi	...@106	160@...	160@...
Upper Congo, ball, red	...@120	none here	158@159
Ikelemba	...none here	none here	none here
Sierra Leone, 1st quality	...@123	167@...	155@156
Massai, red	...@123	167@...	155@156
Soudan niggers	...@110	none here	none here
Cameroon ball	...@105	none here	95@ 96
Benguela	...@ 80	none here	none here
Madagascar, pinky	...@102	none here	none here
Accra flake	...@ 24	none here	none here

EAST INDIAN.

Assam	95@ 96	none here	none here
Pontianak	...@134	6½@ 7	6¼@6½
Borneo	...@ 40	none here	none here

Late Para cables quote:

	Per Kilio.	Exchange	Per Kilio.
Islands, fine	...\$700	.....	...17d.
Islands, coarse	...\$700	.....	.....

Latest Manáos advices:

Upriver, fine	...\$300	Exchange	...17½d.
Upriver, coarse	...\$800	.....	.....

NEW YORK PRICES FOR JULY (NEW RUBBER).

	1910.	1909.	1908.
Upriver, fine	2.16@2.40	1.50@1.95	.91@.96
Upriver, coarse	1.48@1.55	1.05@1.20	.64@.67
Islands, fine	2.08@2.25	1.41@1.84	.83@.88
Islands, coarse	.98@1.03	.70@.75	.42@.46
Cametá	1.10@1.23	.80@.92	.52@.55

Statistics of Para Rubber (Excluding Caucho).

NEW YORK.

	Fine and Medium.	Coarse.	Total 1910.	Total 1909.	Total 1908.
Stocks June 30....tons	145	16 =	161	392	347
Arrivals, July	360	282 =	642	623	1350
Aggregating	505	298 =	803	1015	1697
Deliveries, July	309	285 =	594	785	1411
Stocks, July 31	196	13 =	209	230	286

PARA.

	1910.	1909.	1908.	1910.	1909.	1908.
Stocks, June 30....tons	300	245	373	1460	320	1235
Arrivals, July	1500	760	1080	680	550	376
Aggregating	1800	1005	1453	2140	870	1611
Deliveries, July	1315	455	1203	1000	625	1411

ENGLAND.

Stocks, July 31.....	485	550	250	1140	245	200
World's visible supply, July 31....tons				1910.	1909.	1908.
Para receipts, July 1 to July 31.....				2,373	1,300	1,922
Para receipts of caucho, same dates.....				1,500	760	1,080
Afloat from Para to United States, July 31..				890	330	240
Afloat from Para to Europe, July 31.....				219	none	270
				320	275	355

Liverpool.

WILLIAM WRIGHT & Co. report [August 2]:

Fine Para.—In the absence of much demand from the trade the market has been subject to speculative fluctuations; on balance, prices have declined 1d. per pound during the month. America still continues to buy the distant positions at a slight discount on current rates, but so far take little interest in near rubber. We may expect more trade demand next month. Value hard, fine, August-September and September-October, 9s. 2d. [= \$2.23].

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for car-load lots, per pound, show a slight decline on most grades:

	August 1.	September 1.
Old rubber boots and shoes—domestic..	10¾@10½	10¾@10½
Old rubber boots and shoes—foreign..	9¾@ 9½	9¾@10
Pneumatic bicycle tires.....	7 @ 7¼	7 @ 7¼
Automobile tires	9¾@10	9¾@ 9½
Solid rubber wagon and carriage tires..	@10¼	9¾@10
White trimmed rubber.....	11½@12	12½@13
Heavy black rubber.....	6½@ 6¼	6¼@ 6½
Air brake hose.....	5½@ 5¼	5¾@ 5½
Garden hose	2¾@ 2½	2½@ 2¾
Fire and large hose.....	3¼@ 3½	3 @ 3¼
Matting	1½@ 1¼	1¼@ 1½

SITUATION OPEN.

CALENDAR MAN.—First-class operator wanted for mechanical lines. State age and experience and give references. Address Box 607, care of THE INDIA RUBBER WORLD.

In regard to the financial situation, Albert B. Beers (broker in crude rubber and commercial paper, No. 68 William street, New York), advises as follows: "During August there has been almost no demand from New York banks for commercial paper, and only a moderate consumption by out of town banks at full rates, the best rubber names ruling at 5½@6 per cent, and those not so well known 6½@6¾ per cent."

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weight in Pounds.]

AUGUST 3.—By the steamer *Christopher*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
Poel & Arnold	30,900	9,800	97,700	51,100=198,500	
New York Commercial Co.	47,300	9,700	20,300	51,800=129,100	
A. T. Morse & Co.	48,200	2,100	25,600	75,900	
Hagemeyer & Brunn	8,200	2,200	7,900	18,300	
Henderson & Korn			9,900	9,900	
William E. Peck & Co.	1,100	300	5,900	7,300	
G. Amsinck & Co.			2,500	900=3,400	
Total	144,700	24,100	169,800	103,800=442,400	

AUGUST 6.—By the steamer *Minas Geraes*, from Pará:

A. T. Morse & Co.	20,700	300	31,000	52,000
New York Commercial Co.	25,400	1,400	15,900	42,700
Poel & Arnold	7,200	300	25,800	42,500
Total	53,300	2,000	72,700	9,200=137,200

AUGUST 15.—By the steamer *Basil*, from Manáos and Pará:

Poel & Arnold	34,400	5,600	58,000	27,600=125,600
New York Commercial Co.	55,900	6,500	42,700	2,400=107,500
A. T. Morse & Co.	23,600		46,000	21,700=91,300
G. Amsinck & Co.	21,900	11,800	11,900	44,700
William E. Peck & Co.	1,800		2,600	4,400
Total	136,700	23,900	161,200	51,700=373,500

AUGUST 23.—By the steamer *Clement*, from Manáos and Pará:

New York Commercial Co.	211,500	20,400	66,000	38,400=336,300
Poel & Arnold	77,700	16,800	71,600	9,900=176,000
A. T. Morse & Co.	91,100	3,400	73,100	167,600
Crossman & Sielcken	3,900	2,800	5,400	4,700=16,800
Total	384,200	43,400	216,100	53,000=696,700

PARA RUBBER VIA EUROPE.

Imports	Pounds.
JULY 25.—By the <i>Arabic</i>=Liverpool:	
Raw Products Co. (Coarse)	9,000
AUG. 1.—By the <i>Caronia</i>=Liverpool:	
A. T. Morse & Co. (Caucho)	22,500
AUG. 1.—By the <i>Ucayoli</i>=Iquitos:	
G. Amsinck & Co. (Caucho)	24,000
Thomsen & Co (Caucho)	11,000
AUG. 4.—By the <i>Lincoln</i>=Hamburg:	
New York Commercial Co. (Fine)	6,500
AUG. 5.—By the <i>Mauretania</i>=Liverpool:	
W. H. Stiles & Co. (Coarse)	22,500
AUG. 8.—By the <i>Celtic</i>=Liverpool:	
A. T. Morse & Co. (Caucho)	11,500
W. H. Stiles & Co.	11,000
AUG. 12.—By the <i>Lusitania</i>=Liverpool:	
Livesey & Co. (Coarse)	11,500
AUG. 12.—By the <i>Waldsee</i>=Hamburg:	
Rubber Trading Co. (Fine)	8,000
New York Commercial Co.	5,000
AUG. 15.—By the <i>Cedric</i>=Liverpool:	
A. T. Morse & Co. (Caucho)	33,500
AUG. 16.—By the <i>Carmania</i>=Liverpool:	
Geneva Rubber Co. (Caucho)	78,000
A. T. Morse & Co. (Caucho)	22,500
Robinson & Co. (Caucho)	22,500
AUG. 20.—By the <i>Cempania</i>=Liverpool:	
A. T. Morse & Co (Caucho)	8,000

CENTRALS.

[This sign, in connection with imports of Centrals, denotes Guayule rubber.]

Imports	Pounds.
JULY 25.—By the <i>Tennyson</i>=Bahia:	
J. H. Rosback Bros.	88,000
A. Hirsch & Co.	10,000
A. D. Hitch & Co.	3,000
JULY 25.—By the <i>Colon</i>=Colon:	
Brendon & Bros.	9,000
G. Amsinck & Co.	9,000
Hy. Mann & Co.	7,000
J. Lambrada & Co.	5,000
Piza, Nephews Co.	4,000
Herbst Brothers	3,500
New York Commercial Co.	2,500
Demarest Bros.	2,000
Wessels, Kulemkamp Co.	2,000
Pablo Calvet Co.	1,000
L. Johnson & Co.	1,000
JULY 25.—By the <i>Seguraula</i>=Tampico:	
New York Commercial Co.	160,000
Poel & Arnold	100,000
Ed Maurer	100,000
Rosing Bros. & Co.	22,500
JULY 25.—By the <i>Altai</i>=Columbia:	
Mecke & Co.	2,500
A. Helde	1,000
De Lima Cortessa Co.	1,000
Maitland, Coppell Co.	1,000
Cabello & Blanco	1,000
Suzarte & Whitney	1,000
JULY 25.—By the <i>El Sud</i>=Galveston:	
Continental Mexican Rubber Co.	75,000
JULY 27.—By the <i>Prins Willem</i>=Colon:	
G. Amsinck & Co.	10,000
A. Santos & Co.	2,500

Pablo Calvet Co.	2,500
Brandon & Bros.	2,000
De Lima, Cortessa Co.	1,500
A. M. Capen's Sons.	1,000
JULY 29.—By the <i>Creole</i>=New Orleans:	
A. T. Morse & Co.	3,500
A. Rosenthal's Sons.	4,000
G. Amsinck & Co.	2,500
Manhattan Rubber Co.	1,500
JULY 29.—By the <i>Thespis</i>=Bahia:	
Poel & Arnold	7,000
JULY 29.—By the <i>Matanzas</i>=Tampico:	
Ed. Maurer	95,000
New York Commercial Co.	34,000
Poel & Arnold	17,000
F. Ullman & Co.	7,000
JULY 29.—By the <i>Monterey</i>=Frontera:	
Harburger & Stack	4,500
E. W. Tibbals Co.	4,500
E. Steiger & Co.	2,000
H. Marquardt & Co.	1,500
JULY 30.—By the <i>El Dorado</i>=Galveston:	
Continental Mex. Rubber Co.	175,000
E. S. Churchill	11,000
AUG. 1.—By the <i>Advance</i>=Colon:	
G. Amsinck & Co.	6,500
Brandon & Bros.	5,500
Herbst Brothers	3,000
J. Lambrada & Co.	2,500
New York Commercial Co.	2,000
AUG. 1.—By the <i>Prins Ethel</i>=Columbia:	
R. Castillo & Co.	4,500
Cabello & Blanco	4,000
Mecke & Co.	3,500
Anthold Helde	2,000
De Lima Cortessa Co.	1,000
Heilbron & Wolff Co.	1,000
AUG. 2.—By the <i>El Alba</i>=Galveston:	
Continental-Mex. Rubber Co.	165,000
C. T. Wilson & Co.	15,000
AUG. 3.—By the <i>El Morte</i>=New Orleans:	
Manhattan Rubber Co.	2,500
Robinson & Co.	2,000
A. N. Rotholz	1,500
Egger & Heinlein	1,500
AUG. 3.—By the <i>Vasari</i>=Bahia:	
J. H. Rosback Bros.	20,000
A. Hirsch & Co.	11,500
Poel & Arnold	5,000
AUG. 3.—By the <i>Sarmia</i>=Greytown:	
Suzarte & Whitney	2,000
Wessels-Kulemkamp Co.	1,500
A. Latham & Co.	1,500
Brandon & Bros.	1,500
Semblers & Welles	1,000
Clarke & Smyth	1,000
F. Lapeirra	1,000
B. Leiria & Co.	1,000
R. Gallego & Co.	1,000
AUG. 4.—By the <i>Tagus</i>=Columbia:	
J. H. Rosback Bros.	5,000
A. M. Capen's Sons	3,000
Maitland, Coppell & Co.	3,000
Isaacs & Samuels	3,000
W. R. Grace & Co.	2,000
G. Amsinck & Co.	1,000
A. Helde	1,000
Mecke & Co.	1,000
AUG. 4.—By the <i>Proteus</i>=New Orleans:	
Manhattan Rubber Co.	1,500
Eggers & Heinlein	1,000

AUG. 5.—By the <i>Merida</i>=Vera Cruz:	
H. Marquardt Co.	2,500
J. W. Wilson & Co.	1,500
Harburger & Stack	1,500
Graham, Hinkley Co.	1,000
For Havre	3,500
AUG. 5.—By the <i>Panama</i>=Colon:	
Piza Nephews' Co.	7,000
G. Amsinck & Co.	4,000
L. Johnson & Co.	4,000
Pablo, Calvet Co.	1,500
Brandon & Bros.	1,000
AUG. 8.—By the <i>Vigilancia</i>=Tampico:	
Ed. Maurer	125,000
New York Commercial Co.	70,000
Poel & Arnold	15,000
AUG. 8.—By the <i>Minas Geraes</i>=Maceio:	
A. D. Hitch & Co.	10,000
AUG. 9.—By the <i>El Mor</i>=Galveston:	
Continental-Mexican Rubber Co.	100,000
AUG. 9.—By the <i>Joachim</i>=Colon:	
G. Amsinck & Co.	2,000
New York Commercial Co.	2,000
A. Helde	3,000
Pablo, Calvet Co.	1,000
Brandon & Bros.	1,000
AUG. 10.—By the <i>Fruitera</i>=Honduras:	
A. Rosenthal's Sons	3,000
Eggers & Heinlein	1,500
S. Bauenman & Co.	1,000
AUG. 10.—By the <i>El Dia</i>=Galveston:	
Continental-Mexican Rubber Co.	90,000
AUG. 10.—By the <i>Allianco</i>=Colon:	
G. Amsinck & Co.	5,000
J. Lambrada & Co.	3,000
Herbst Brothers	3,000
Brandon & Bros.	3,500
Piza Nephews' Co.	2,000
New York Commercial Company	1,000
Henry Mann & Co.	1,000
AUG. 12.—By the <i>Esperanza</i>=Frontera:	
Harburger & Stack	5,500
E. Steiger & Co.	3,000
H. Marquardt & Co.	2,500
Federal Export Co.	1,000
AUG. 15.—By the <i>Bayamo</i>=Tampico:	
Ed. Maurer	85,000
New York Commercial Co.	65,000
AUG. 15.—By the <i>Cedric</i>=Liverpool:	
Poel & Arnold	9,000
AUG. 15.—By the <i>Sigismund</i>=Columbia:	
R. Castillo & Co.	4,500
G. Amsinck & Co.	2,500
A. Helde	2,000
Heilbron, Wolff Co.	2,000
Cabello & Blanco	1,500
Brandon & Bros.	1,500
Maitland, Coppell & Co.	1,000
AUG. 15.—By the <i>El Sud</i>=Galveston:	
Continental-Mex. Rubber Co.	150,000
E. L. Churchill	11,000
AUG. 15.—By the <i>Eastern Prince</i>=Bahia:	
Poel & Arnold	27,000
AUG. 15.—By the <i>Cincinnati</i>=Hamburg:	
Geo. A. Allen & Co.	9,000

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No. 17. Particularly adapted to softening material for tubing machine. Almost universally used for waterproofing wire.

No. 48. For fluxing pigments in compounding. A valuable adjunct to the manufacture of moulded goods as it DOES NOT BLOW UNDER CURE.

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BEST rubber substitute money will buy irrespective of what the substitute costs. Replace oil substitutes with Maltha Hydro-Carbon, effecting the large saving in difference in the cost of these two articles, and you really increase the quality of your compound, BUT don't add mineral rubber to a compound already loaded to the gunwales with oil substitute; simply replace the substitute with Maltha Hydro-Carbon and note improvement. There's one best M. R. Maltha Hydro-Carbon. Write today, now, for free working sample.

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Osnaburgs

Auto Top Ducks
Specialties in Weaving

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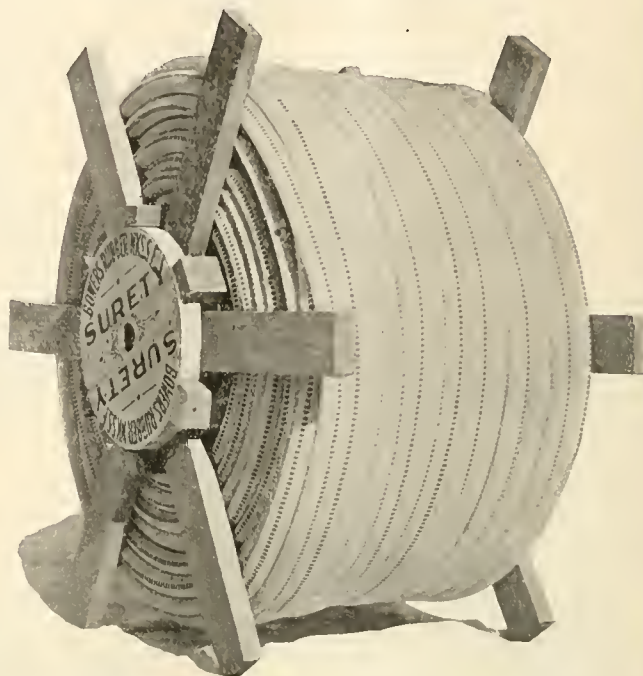
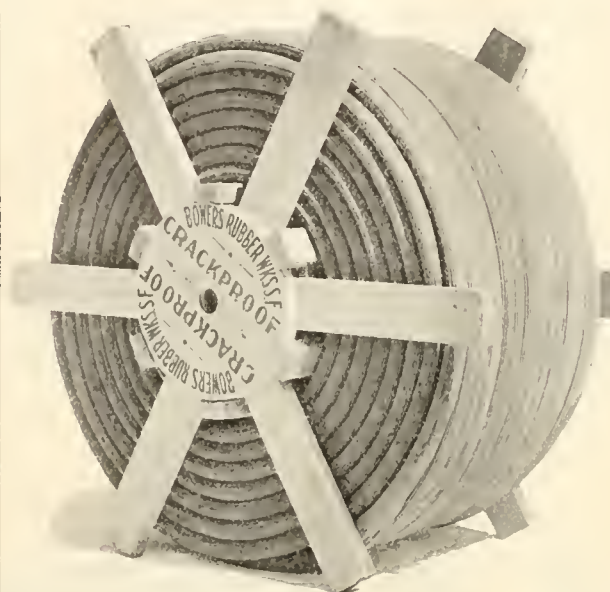
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Two
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Cotton
Hose



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TO BE ISSUED JANUARY 1, 1911

THE RUBBER COUNTRY OF THE AMAZON

By HENRY C. PEARSON

The whole story of Pará and Caucho Rubbers, their sources, methods of collection and shipment, will be told in detail. The basis of the book will be the series of articles now running in THE INDIA RUBBER WORLD entitled, "Pará, Manáos and the Amazon."

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THE INDIA RUBBER PUBLISHING CO.

No. 395 BROADWAY, NEW YORK

Aug. 16.—By the <i>Colon</i> =Colon:	
G. Amsinck & Co.....	6,000
J. Lambrada & Co.....	5,000
Dumarest Bros.....	1,000
Brandon & Bros.....	1,000
A. Latham & Co.....	1,000
14,000	
Aug. 16.—By the <i>Croole</i> =New Orleans:	
A. T. Morse & Co.....	3,500
Manhattan Rubber Co.....	2,500
Robinson & Co.....	1,500
Eggers & Heinlein.....	2,500
10,000	
Aug. 16.—By the <i>Kroonland</i> =Antwerp:	
Poel & Arnold.....	*11,000
Aug. 18.—By the <i>Oruba</i> =Colombia:	
A. M. Capen's Bros.....	2,500
G. Amsinck & Co.....	2,000
Suzarte & Whitney.....	2,000
De Lima, Cortessa Co.....	2,000
8,500	
Aug. 18.—By <i>El Valle</i> =Galveston:	
Continental-Mexican Rubber Co.....	*75,000
C. T. Wilson & Co.....	*9,000
*84,000	
Aug. 10.—By the <i>Mexico</i> =Frontera:	
Harburger & Stack.....	4,500
E. Steiger & Co.....	1,500
E. W. Tibbals & Co.....	1,500
H. Marquardt & Co.....	1,500
8,500	
Aug. 20.—By the <i>Byron</i> =Bahia:	
J. H. Rossback Bros.....	65,000
A. Hirsch & Co.....	25,000
New York Commercial Co.....	22,500
Poel & Arnold.....	9,000
A. D. Hitch & Co.....	3,500
125,000	
Aug. 22.—By <i>El Norte</i> =Galveston:	
Continental-Mexican Rubber Co.....	22,500
E. L. Churchill.....	*9,000
*84,000	
Aug. 22.—By the <i>Seguranca</i> =Tampico:	
Edw. Maurer.....	*45,000
Poel & Arnold.....	*50,000
In Transit.....	*35,000
*150,000	
Aug. 22.—By the <i>Altai</i> =Colombia:	
Maitland, Coppell Co.....	4,500
Scholz & Martinet.....	3,500
J. H. Rossback & Bros.....	2,000
Caello & Blancho.....	2,000
A. Helde.....	1,000
13,000	
Aug. 22.—By the <i>Finland</i> =Antwerp:	
Poel & Arnold.....	*22,500
Aug. 23.—By the <i>Advance</i> =Colon:	
G. Amsinck & Co.....	11,000
Brandon & Bros.....	6,000
Herbst Brothers.....	3,000
Piza Nephews' Co.....	4,000
Pablo, Calvet Co.....	3,000
New York Commercial Co.....	3,500
Roldan & Van Sickle.....	2,000
National Sewing Machine Co.....	2,000
Wessels, Kulekamp & Co.....	1,500
36,000	
AFRICANS.	
POUNDS.	
JULY 23.—By the <i>Stoterdyk</i> =Rotterdam:	
A. T. Morse & Co.....	17,000
JULY 25.—By the <i>Philadelphia</i> =London:	
Robinson & Co.....	9,000
JULY 28.—By the <i>Teutonic</i> =London:	
Poel & Arnold.....	56,000
JULY 29.—By the <i>Mourliso</i> =Lisbon:	
Poel & Arnold.....	22,500
Aug. 1.—By the <i>Baltic</i> =Liverpool:	
Poel & Arnold.....	35,000
George A. Alden & Co.....	4,500
39,500	
Aug. 2.—By the <i>Vaderland</i> =Antwerp:	
W. L. Gough & Co.....	5,500
R. Badenhop.....	10,000
Livesey & Co.....	5,000
20,500	
Aug. 4.—By the <i>President Lincoln</i> =Hamburg:	
George A. Alden & Co.....	135,000
A. T. Morse & Co.....	85,000
Poel & Arnold.....	35,000
W. L. Gough & Co.....	40,000
Rubber Trading Co.....	22,500
Livesey & Co.....	3,500
Raw Products Co.....	7,000
R. Badenhop.....	5,500
333,500	
Aug. 6.—By the <i>Amerika</i> =Hamburg:	
A. T. Morse & Co.....	11,500
George A. Alden & Co.....	4,000
15,500	
Aug. 8.—By the <i>Celtic</i> =Liverpool:	
General Rubber Co.....	155,000
George A. Alden & Co.....	7,000
Rubber Trading Co.....	5,500
Poel & Arnold.....	22,500
Livesey & Co.....	3,500
193,500	
Aug. 8.—By the <i>Lapland</i> =Antwerp:	
A. T. Morse & Co.....	50,000
Livesey & Co.....	22,500

W. L. Gough & Co.....	11,500
R. Badenhop.....	10,800
94,800	
Aug. 12.—By the <i>Lusitania</i> =Liverpool:	
George A. Alden & Co.....	11,000
Aug. 12.—By the <i>Richmond</i> =Lisbon:	
Poel & Arnold.....	11,500
11,500	
Aug. 12.—By the <i>Waldensee</i> =Hamburg:	
A. T. Morse & Co.....	25,000
W. L. Gough & Co.....	5,500
Rubber Trading Co.....	3,500
34,000	
Aug. 15.—By the <i>Cedric</i> =Liverpool:	
Poel & Arnold.....	3,500
Livesey & Co.....	11,500
Raw Products Co.....	4,500
19,500	
Aug. 19.—By the <i>Adriatic</i> =London:	
Rubber Trading Co.....	11,500
George A. Alden & Co.....	4,500
16,000	
Aug. 20.—By the <i>Campania</i> =Liverpool:	
George A. Alden & Co.....	5,000
Aug. 22.—By the <i>Allomania</i> =Hamburg:	
A. T. Morse & Co.....	22,500
Rubber Trading Co.....	11,500
Raw Products Co.....	2,500
36,500	
Aug. 22.—By the <i>Finland</i> =Antwerp:	
R. Badenhop.....	17,000
17,000	
EAST INDIAN.	
[*Denotes plantation rubber.]	
POUNDS.	
JULY 25.—By the <i>Philadelphia</i> =London:	
New York Commercial Co.....	*15,000
Poel & Arnold.....	*13,500
*28,500	
JULY 26.—By the <i>Finland</i> =Antwerp:	
New York Commercial Co.....	*45,000
A. T. Morse & Co.....	*40,000
*85,000	
JULY 28.—By the <i>Teutonic</i> =London:	
New York Commercial Co.....	*37,000
A. T. Morse & Co.....	*9,000
Poel & Arnold.....	*4,500
Poel & Arnold.....	4,500
55,000	
JULY 29.—By the <i>Suazi</i> =Colombo:	
New York Commercial Co.....	*15,000
A. T. Morse & Co.....	*16,000
*21,000	
Aug. 1.—By the <i>St. Louis</i> =London:	
Poel & Arnold.....	*33,500
New York Commercial Co.....	*8,000
Poel & Arnold.....	4,500
46,000	
Aug. 1.—By the <i>Rotterdam</i> =Rotterdam:	
Rubber Trading Co.....	9,000
9,000	
Aug. 2.—By the <i>Minetonga</i> =London:	
A. T. Morse & Co.....	*15,000
Robinson & Co.....	25,000
Manhattan Rubber Mfg. Co.....	20,000
60,000	
Aug. 2.—By the <i>Vaderland</i> =Antwerp:	
R. Badenhop.....	11,000
11,000	
Aug. 3.—By the <i>Oceanic</i> =London:	
New York Commercial Co.....	*11,000
*11,000	
Aug. 8.—By the <i>New York</i> =London:	
A. T. Morse & Co.....	*11,500
W. H. Stiles & Co.....	9,000
New York Commercial Co.....	*7,000
27,500	
Aug. 8.—By the <i>Lapland</i> =Antwerp:	
Rubber Trading Company.....	11,000
11,000	
Aug. 9.—By the <i>Minneapolis</i> =London:	
General Rubber Co.....	*45,000
Ed. Maurer.....	*11,500
56,500	
Aug. 10.—By the <i>Kabinga</i> =Colombo:	
New York Commercial Co.....	*8,000
A. T. Morse & Co.....	*8,000
*16,000	
Aug. 10.—By the <i>Suruga</i> =Singapore:	
O. Isenstein & Co.....	11,000
Robinson & Co.....	9,000
W. L. Gough & Co.....	13,500
New York Commercial Co.....	*3,500
37,000	
Aug. 11.—By the <i>Majestic</i> =London:	
New York Commercial Co.....	*17,000
Poel & Arnold.....	*11,000
*28,000	
Aug. 11.—By the <i>Schuykill</i> =Singapore:	
Poel & Arnold.....	33,500
Heabler & Co.....	33,500
O. Isenstein & Co.....	30,000
W. L. Gough & Co.....	28,000
George A. Alden & Co.....	25,000
Malaysian Rubber Co.....	7,000
New York Commercial Co.....	*5,500
162,500	
Aug. 12.—By the <i>Waldensee</i> =Hamburg:	
George A. Alden & Co.....	35,000

Aug. 15.—By the <i>St. Paul</i> =London:		
Poel & Arnold.....	*22,500	
New York Commercial Co.....	*6,000	
*28,500		
Aug. 15.—By the <i>Planet Mars</i> =Colombo:		
New York Commercial Co.....	*22,500	
A. T. Morse & Co.....	*7,000	
*29,500		
Aug. 15.—By the <i>Minetonga</i> =London:		
A. T. Morse & Co.....	*18,000	
General Rubber Co.....	*7,000	
Rubber Import. Co.....	18,000	
43,000		
Aug. 10.—By the <i>Attoll</i> =Singapore:		
W. L. Gough & Co.....	10,000	
10,000		
Aug. 10.—By the <i>Adriatic</i> =London:		
New York Commercial Co.....	*26,000	
Poel & Arnold.....	*13,500	
*39,500		
Aug. 22.—By the <i>Finland</i> =Antwerp:		
A. T. Morse & Co.....	*27,000	
*27,000		
Aug. 24.—By the <i>Mesaba</i> London:		
A. T. Morse & Co.....	*22,500	
Ed. Maurer.....	*3,500	
Robinson & Co.....	9,000	
Manhattan Rubber Mfg. Co.....	2,500	
37,500		
GUTTA-JELUTONG.		
Aug. 10.—By the <i>Suruga</i> -Singapore:		
L. Littlejohn & Co.....	550,000	
Heabler & Co.....	225,000	
W. L. Gough & Co.....	155,000	
Poel & Arnold.....	100,000	
George A. Alden & Co.....	90,000	
1,120,000		
Aug. 11.—By the <i>Schuykill</i> =Singapore:		
George A. Alden & Co.....	275,000	
W. L. Gough & Co.....	225,000	
Heabler & Co.....	250,000	
L. Littlejohn & Co.....	400,000	
1,150,000		
Aug. 10.—By the <i>Athole</i> =Singapore:		
L. Littlejohn & Co.....	225,000	
Poel & Arnold.....	150,000	
Heabler & Co.....	55,000	
W. L. Gough Co.....	150,000	
580,000		
GUTTA-PERCHA.		
POUNDS.		
Aug. 6.—By the <i>Amerika</i> =Hamburg:		
Robt. Sottan Co.....	15,000	
15,000		
Aug. 10.—By the <i>Suruga</i> =Singapore:		
Herbler & Co.....	2,500	
Meister & Smillie.....	22,500	
45,000		
Aug. 11.—By the <i>Schuykill</i> =Singapore:		
Heabler & Co.....	33,500	
33,500		
Aug. 10.—By the <i>Athole</i> =Singapore:		
Heabler & Co.....	11,500	
11,500		
BALATA.		
JULY 26.—By the <i>Coppename</i> =Demerara:		
Ed. Maurer.....	1,500	
J. A. Pauli & Co.....	2,000	
Traine & Co.....	1,500	
5,000		
Aug. 3.—By the <i>Saramaba</i> =Demerara:		
Ed. Maurer.....	2,500	
2,500		
Aug. 8.—By the <i>Parima</i> =Demerara:		
Suzarte & Whitney.....	3,500	
Ed. Maurer.....	2,000	
5,500		
Aug. 16.—By the <i>Marwayne</i> =Demerara:		
Ed. Maurer.....	20,000	
G. Amsinck & Co.....	11,000	
Iglesias, Lobo & Co.....	2,500	
33,500		
Aug. 23.—By the <i>Tuinana</i> =Demerara:		
Ed. Maurer.....	3,500	
G. Amsinck & Co.....	2,500	
George A. Alden & Co.....	1,500	
C. Tennanto Sons.....	1,500	
9,000		
CUSTOM HOUSE STATISTICS.		
PORT OF NEW YORK—JULY.		
Imports.		
India-rubber.....	5,469,137	\$7,325,306
Balata.....	54,535	49,390
Gutta-percha.....	48,287	7,226
Gutta-jelutong (Pontianak).....	2,996,526	203,667
Total.....	8,568,485	\$7,576,589
Exports.		
India-rubber.....	53,376	89,610
Balata.....	15,780	15,644
Gutta-percha.....	6,644
Reclaimed rubber.....	123,656	16,842
Rubber scrap, imported.....	3,349,326	\$278,896
Rubber scrap, exported.....	420,420	30,020
BOSTON ARRIVALS.		
JULY 14.—By the <i>Saxonia</i> =Liverpool:		
Poel & Arnold (Africans).....	44,500	
Geo. A. Alden & Co (Africans).....	3,500	
48,000		



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United States Imports of Crude Rubber.

OFFICIAL STATEMENT—FISCAL YEARS ENDING JUNE 30.

	1907-08	1908-09.	1909-10.
United Kingdom.....pounds	6,809,622	12,825,192	15,556,981
Germany.....	2,821,194	4,503,286	6,528,147
Other Europe.....	6,883,473	7,598,809	9,598,411
Central America.....	992,198	861,636	1,424,449
Mexico.....	9,269,443	15,460,365	23,486,384
Brazil.....	32,645,173	43,993,670	39,510,920
Other South America.....	1,537,887	1,964,114	2,593,683
East Indies.....	1,237,487	1,127,686	2,419,956
Other countries.....	36,683	25,137	15,750

Total.....pounds	62,233,160	88,359,895	101,044,681
Import value.....	\$36,613,185	\$61,709,723	\$101,078,825
Average per pound.....	58.8 cents	69.8 cents	\$1.00

Net Imports.

Imports.....pounds	62,233,160	88,359,895	101,044,681
Exports.....	4,110,667	3,791,961	6,492,947

Net imports.....	58,122,493	84,567,934	94,551,734
------------------	------------	------------	------------

OTHER UNITED STATES IMPORTS.

	1907-08.	1908-09.	1909-10.
Balata.....pounds	584,552	1,157,018	399,003
Gutta-percha.....	188,610	255,559	784,501
Waste rubber.....	16,331,935	20,497,695	37,364,671
Gutta-jelutong.....	22,803,303	24,826,296	52,392,444

German Official Statistics.

JANUARY 1 TO JUNE 30.

	INDIA-RUBBER.	
	1909.	1910.
Imports.....pounds	15,616,260	21,466,280
Exports.....	4,060,100	725,720

Net Imports.....	11,556,160	15,740,560
------------------	------------	------------

GUTTA-PERCHA.

Imports.....pounds	4,846,160	7,485,280
Exports.....	212,080	441,540

Net Imports.....	4,634,080	7,043,740
------------------	-----------	-----------

BALATA.

Imports.....pounds	700,700	901,120
Exports.....	127,160	255,200

Net Imports.....	573,540	645,920
------------------	---------	---------

Total Net Imports.....	16,763,780	23,430,220
------------------------	------------	------------

Plantation Rubber from the Far East.

EXPORTS OF CEYLON GROWN RUBBER.

From January 1 to July 11, 1909 and 1910, compiled by the Ceylon Chamber of Commerce:

	1909.	1910.
To Great Britain.....pounds	355,926	589,882
To United States.....	179,494	499,996
To Canada.....		
To Belgium.....	19,630	25,472
To Germany.....	14,897	8,946
To Italy.....	608	841
To Australia.....	7,594	1,099
To France.....	1,639	.....

Total.....	579,698	1,128,147
[Same period 1908—338,411 pounds; same 1907—242,370.]		

TOTAL EXPORTS FROM MALAYA.

[From January 1 to the dates named. Reported by BARLOW & Co., Singapore. Ceylon exports not included.]

	1908.	1909.	1910.
From Singapore (to June 30)....	1,015,368	1,240,137	1,533,732
From Penang (to June 16).....	500,610	1,301,352	912,716
Fr'm Pt. Swettenham (to June 10).....	.....	.....	3,413,929
Total.....pounds	1,515,978	2,541,489	4,860,377

A BOOK for rubber planters—Mr. Pearson's "What I Saw in the Tropics."

British Crude Rubber Statistics.

OFFICIAL STATEMENT—JANUARY 1 TO JUNE 30.

WEIGHTS.

	1908.	1909.	1910.
Imports.....pounds	36,280,272	39,866,960	56,279,888
Exports.....	18,645,200	21,635,936	29,237,152
Net imports.....	17,635,072	18,231,024	27,042,736

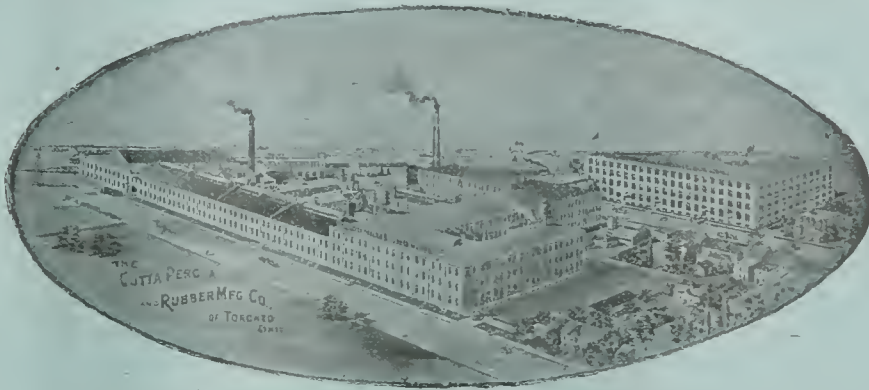
VALUES.

Imports.....	£4,635,476	£6,282,294	£16,280,980
Exports.....	2,154,695	3,804,399	8,448,898
Net imports.....	£2,480,871	£2,477,895	£7,832,082

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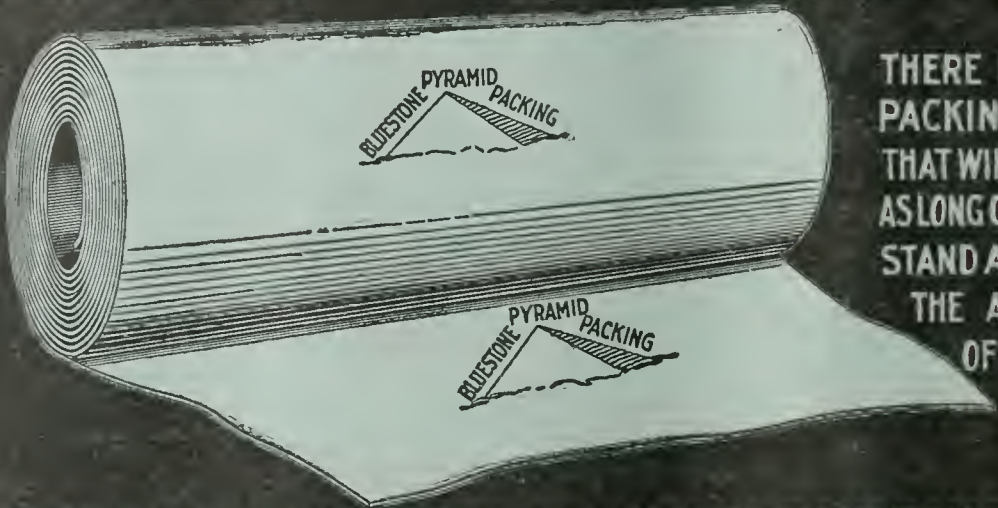
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