THE

PRAIRIE FARMER:

DEVOTED TO

WESTERN AGRICULTURE, MECHANICS, AND EDUCATION.

EDITED BY J. S. WRIGHT AND J. AMBROSE WIGHT.

VOL. VI. 1846.

CHICAGO:

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Vol. VI. CHICAGO, JANUARY, 1846. complete No. 1.

EDITED BY
JOHN S. WRIGHT AND J. AMBROSE WIGHT.
OFFICE, 171 LAKE STREET, CHICAGO, ILL.

A PARAGRAPH FOR EVERY SUBSCRIBER AND POSTMASTER.

Those to whom we send this number, who do not wish to receive the Prairie Farmer, will please return it to this office—writing the name of their post office on the wrapper. When copies are not taken out of the office, postmasters will please do the same. It is to be hoped that no man will be so mean as to receive the paper a good part of the year and then return it without paying what is due, as a few did last year; and that no postmaster will be so negligent as to let copies lie in the office half the year before returning them, as was done last year in a few cases.

IMPROVEMENT OF THE PRAIRIE FARMER

We commence our new volume with a good degree of courage. We are happy to give our readers a better looking paper than we have done for a long time; and though we have not been able to effect all the improvements intended in this number, we have so far succeeded as not to fear to look the best favored of our exchanges in the face. The reader will not fail to notice the quality of the paper on which this is printed, nor the better style of press work. The new type could not all be made available the present month, but will do its office in due time.

In the matter of cuts and embellishments the best will be done that our patronage will admit of: in this we shall keep pace with the increase in the income of the paper.

Our facilities for giving interest to our columns and making them instructive are now better than they have ever before been. The number of correspondents has considerably increased during the past year, and it is presumed that their favors, with those of new contributors, will continue to give interest to our columns. The views and experience of a great number of men engaged in cultivating the soil—men differing in education and derivation can hardly be otherwise than *instructive*; and we are proud to say, that the correspondence of our journal, for variety, common sense, and practical information, will not fail in comparison with that of any similar publication in the Union.

Of our efforts in conducting the Prairie Farmer it does not become us to remark, further than to say that experience gives us no abatement of zeal. We have received of late a goodly accession to our agricultural library, of which it is intended that our readers shall receive some profit. We hope and expect to give a better looking, and as far as possible a better filled paper than we have yet done.

We commence the volume with a pretty *good list of subscribers* already paid in, which is augmenting by daily additions, and we confidently look for such support as shall place the paper on a permanently remunerating basis.

It is hoped that those who intend subscribing will do it promptly; and those who act as agents will move early, so as to give us precise data on which to found our calculations as to the size of the edition which will be needed. Subscriptions are much more easily obtained in the winter than at any other time—farmers have more leisure, and of course more readily turn their attention to agricultural reading, and become more easily interested in it.

We might add much more—but "short speeches," &c.

STEALING FRUIT.

One of the worst of the obstructions in the way of fruit cultivation is the thieving propensity of grown and half grown boys, who are sure to infest every neighborhood where it is attempted. What is more productive of wear and tear of temper than to find the products of our care and skill filched from the tree or garden *just as it becomes* fit for use?

It is the sentiment of many fruit growers, that the inventor of a patent for preventing stealing fruit, would be entitled to a statue of gold. We do not intend to put in any claim to the statue; but we know of a remedy which where it can be made to go into operation, is found to nullify the evil, so far that it is not worth naming. It is this: Let every man cultivate fruit. When this is done, the chief motive to pilfer is taken away, and a stronger one antagonist to it introduced. The man, boy, or man's boys who steal fruit, are not those who have choice fruit of their own, or whose fathers have it. These feel an interest at once in protecting it, lest their own should *slip* away unawares. No, it is your idle, unmannerly, vagabond rascals who have nothing of their own to take care of, who are ready for an anabasis to any orchard, peach garden, or melon patch which promises plunder. Now if by any sort of coaxing you can induce these fellows or their parents to grow fruit of their own, you do more to disarm them of their thieving propensities than can be done with all the spring guns, man traps, and pea and salt shooting that were ever invented since melon stealing was in fashion. If therefore you have any neighbor who has a string of boys such as is described, instead of quarreling with them about getting your fruit, induce them to grow it themselves if possible. If you *have to give* them a few trees, and talk the whole matter of their culture over with them, it will be money well laid out. Or if you can induce them to take an agricultural paper which treats much upon fruit raising, and thus create in them a desire to grow fruit, you do more to build a ten feet wall around your orchard than you could by ten times the labor with boards, hammer, and nails. Think of this, fruit growers—it is worth a trial.

A LAME SPOT IN CHEMISTRY.

The operations of the Chemist are of two kinds, Analytic, and Synthetic. By one of these he takes a material to pieces, and examines all its parts. With fire and acids he tortures a substance till it yields up the names, properties and quantities of each elementary constituent. This is analysis. The other process is that of construction. Taking certain elements, he combines them together in certain known proportions, till he produces the material wished for. This is synthesis. In the first case he takes a quantity of atmospheric air, and by an easy and sure process, reduces it to the separate elements of which it is composed, and thereby discovers its components to be 21 parts of oxygen, and 79 parts nitrogen. Beginning now where he left off, by the second process he takes 79 parts nitrogen, and mixes it with 21 parts oxygen and produces atmospheric air.

Now it would naturally be supposed that this would hold true as a rule—that whenever the constituents of which a body is composed were discovered in their precise proportions, that by combining these constituents, in these same proportions, the said body would be produced. This is far from being the fact. The chemist presumes that repeated and carefully skillful trials have revealed to him the components of which guano is made, and therefore he whips out his vials of acid, salts, etc., and with the nicest and most delicate weighing proceeds to make guano. He makes a guano, but it is not the guano of the birds—else ships would stop going for the latter—for the guano of the chemist is far the cheapest. This is only a sample of his failures when he thinks to construct substances with an analysis for his guide; and what is calculated to deepen his despair is the fact that often, when analyzing two substances of entirely different exterior qualities, he finds them composed of precisely the same constituents of each other, combined in precisely the same proportions!—showing that nature will take A parts carbon, B parts oxygen, and C parts hydrogen, and put them together and produce D: then she will take in the second operation the identical A parts carbon, B parts oxygen, and C parts hydrogen, and put them together and produce E! The poor chemist has no resource but to look aghast and reply that though the elements are the same in both cases, the collocation of the particles among themselves is different: very likely. But how is he to obtain the art of this collocation?

Again, for an instance, he finds hay to consist of 458 carbon, 50 hydrogen, 387 oxygen, 15 nitrogen, and 90 ashes; yet every body knows that the combination of ashes, nitrogen, oxygen, hydrogen, and carbon, in these proportions, will not of itself create hay.

We see by such examples, that the idea which many unacquainted with these facts—and some who are acquainted with them—entertain, viz: that if a correct analysis of a substance can be had, the same substance can be reconstructed, will by no means hold. We can see also that though the doctrine which we hear reiterated every where now-a-days that it is only necessary to analyze a soil and find what is lacking in it to supply that lack, and thus construct a good soil, is to a certain extent true; yet that beyond a certain point, together with numerous of its inferences, it will fail.

It is one of the desiderata in chemical science, upon which light is yearly pouring, to ascertain not only what chemistry can do, but what it cannot do. Ten times the effort is yearly wasted upon the impossible that is rightly applied.

POTATO DISEASE IN SCOTLAND.

A copy of the Dumfries and Galloway Courier, (Scotland,) together with a supplement, has been left with us by a friend, containing the proceedings of the Highland Agricultural Society. Professor Johnston was present, and some conversation was had upon the subject of the potato rot, of which the following is the substance:

"Professor Johnston having been called for, addressed the meeting on the subject of the disease in the potatoe crop. He admitted that little or nothing was as yet known on the subject, save the fact of the disease, and that there was a fungus on these diseased potatoes. He said a scientific enquiry into this subject would require immense labor, minute and refined analysis, and considerable funds, beyond the power of the Chemistry Association to devote to it. The Highland Sobiety had offered a prize for an essay on the subject; but he did not consider this sufficient. An enquiry ought to be instituted, commensurate with the importance of the subject; and well qualified persons appointed to conduct it. To raise the necessary funds a voluntary subscription from the various agricultural societies throughout the country might be commenced; or a slight duty levied by government on the potatoes now exported in large quatities to Belgium. Mr. Smith of Deanston said the disease was much worse on wet than on dry land; and was disposed to consider the report of its extent exaggerated. He agreed with Professor Johnston as to the necessity of inquiry, but thought the first thing to be done was to collect the observations of practical men on the subject.—Mr. Beamish, from the South of Ireland, suggested the propriety of commencing a subscription to investigate this disease, which was a subject of paramount importance in his country. He would head it with five pounds. Upon this hint subscription papers were prepared and handed round the room, and nearly one hundred pounds were underwritten by the gentlemen present.—Professor Johnston stated that the inquiry would not be merely scientific, but would include the collection of information from every county in Scotland.—A question was put as to whether the disease had been known on soils with a good natural drainage? which the Professor answered in the affirmative, instancing the chalk soils of Sussex, where it existed to a great extent. It was confined, he said, to no description of land. Several gentlemen confirmed this statement, and expressed their opinion that the disease was as widely spread as had been stated. It was also suggested that something should be done immediately for the purpose of preserving, as far as possible, the crop now in the ground, and to secure good seed for next year. It was stated by Mr. Scott, that the Directors of the Highland Society would take up the subject immediately.—The general impression of the meeting

seemed to be that the disease was a mystery; this renders enquiry highly desirable, although, unfortunately, there is no certainty of a remedy being discovered."

SCOTTISH CHEMISTRY ASSOCIATION.

It is a matter of such certainty as to require no comment, that the whole business of the farmer is based on the condition of the soil he cultivates. In countries long cultivated, the business of understanding and putting the soil in proper condition forms the chief subject of labor and anxiety. Hence in Europe and the eastern States of this Union, manures are the first and chief matter of study and experiments among farmers. We in the West are generally for a time freed from this necessity; yet the time is coming, and in some places is already come, when it is a matter of interest here. And even now, though the understanding of the natures of manures is unnecessary for the purpose of repairing worn out lands, the knowledge of the nature of soils is necessary to prevent their wearing out.

In Scotland, in the year 1843, the farmers and landed gentry formed an association for the purpose of applying chemistry to agriculture. Their course was to procure a chemist of first rate eminence, whose business it should be to study and explore the subject. An outline of his duties was something of this sort:

"The farmers are to submit limestones, bone-dust, guano, and manures of all kinds, marls, decaying rocks, and such like substances to the chemist, and he is to pronounce on their value, and to point out their utility in reference to different soils, and for raising different crops. He will say, for example, whether the guano has been robbed of its ammonia, or the bone-dust of its gelatine, or whether the limestone be colored with bituminous matter which will disappear with burning, or with iron which will *not*; and then he will be able to say what price the article ought to bear, and with what crops, on what soils, and at what periods it ought to be used. On the part of the person who sends the substance for analysis, it is plain that no knowledge of chemistry is required; and even the chemist will not find his duty an arduous one. A few chemical tests, and an accurate balance, will be nearly all that he will require; and he will have no occasion to approach those nice and subtile operations of nature, over which there certainly hangs a delicate and almost impenetrable veil.

"But the summer duties of the chemist will be even more important than the analyses which are to occupy his winter hours. During that season he will impart information on many of the more recent discoveries and improvements in practical agriculture; and already enough has been done to admit of his giving much valuable and curious information, whether in the form of lectures, or by communicating with individuals. For example, the good effects of bone-dust, and of the phosphates generally, on peaty soils—of saline compounds for crops of hay on loams in trap districts—and of lime on granitic soils—may be mentioned, and they admit of explanation. They are noticed here as a proof of the advancement already made in this kind of knowledge. But much yet remains to be done; and besides giving information, it will be his duty no less to suggest experiments. He will give instructions to farmers to make trial of substances, *the composition of which is known and determinate*, on different soils, and with a variety of crops, accurately noting the weight of the produce, both in its dry and moist state."

FARM BUILDINGS.

From an address delivered before the Oneida co. Agricultural Society, N. Y., by Elon Comstock, Esq., the following extract is made. Attention can hardly be too fully drawn to this matter among us, when the whole country is engaged in building and arranging the buildings on the homestead.

"There is perhaps nothing in which farmers as a class have been more deficient, than in the absence of all taste in the arrangement of their farm buildings, not excepting the dwelling, which although it is not generally sufficiently expensive, has been too often constructed without any regard to just proportions, and especially without due regard to the arrangement of the grounds by which it is surrounded.

"There is great need of improvement in every thing pertaining to the arrangement of all our buildings and grounds, including the general plan of the farm, for strange as it may sound to some, there is just as much propriety in laying out a farm in just proportions, and in fields of suitable shape and size, and with direct reference to the convenience of approaching the buildings, &c., as there is in bestowing upon the streets and public grounds of the village or city like attention. It costs no more and not unfrequently much less expenditure, to do these properly, and so as to give the whole farm an attractive and pleasing appearance, than to lay it out in such a manner as to render it repulsive to the man of taste and refinement.

"The same remarks will apply with equal force to the erection of dwellings, and the laying out of the garden and grounds in their vicinity. In the country, where land is cheap, the farmer can well afford an acre of ground to devote to the convenience and pleasure of the family, and especially when this same acre may be made to produce grass equal to any other part of the farm, besides affording room for the trees and shrubbery which should be planted in the vicinity of every farm house. An acre of ground is none too much to devote to these purposes, and in making arrangements for building, the farmer should in my judgment appropriate at least that amount, exclusive of that needed for the garden and other useful purposes. An acre of ground on most farms will not exceed in value fifty dollars, and to ornament it with trees and shrubbery may perhaps cost nearly as much more, but when we take into account the produce which may be obtained from it if properly managed, there is really very little loss to the farmer in a pecuniary view. And who is there, I ask, who had not rather have a house costing $1000, located in the centre of a beautiful and pleasant park, where the luxury of the cooling shade, and the fragrance of the surrounding verdure may be enjoyed, rather than a dwelling costing $1200 or even $1500, situated as are most of the farm houses in this country."

OBJECTS OF THE PRAIRIE FARMER.

From a letter not written for publication, from Rev. G. A. Patterson, of Piatt co. we take the liberty of making an extract, as expressing clearly our aim in publishing the Prairie Farmer. Would that we had more such noble examples of *professional* teachers, who make instruction their pursuit for life, and properly appreciate the dignity of their high calling! We shall hope the columns of the Prairie Farmer will be made an efficient means of kindling zeal for improvement in the noble science of teaching.

"I am pleased with the Prairie Farmer, 1st, because it lays off its course of conduct and sticks to it; 2d, because it is not a sectional or partizan paper; 3d, because it is calculated to benefit the farming interests of the State; and 4th and last of all, it is a strong and constant common school advocate. This last reason would of itself commend it to my good wishes, without any other. I commenced school teaching in 1805, and am now teaching, and have been most of the time employed in that profession, and I know how to appreciate every effort to raise it to its proper dignity, and therefore wish you success proportionate to your services. Something is needed to rouse the public from their slumbers, and to stimulate teachers to prepare themselves for the task, especially to encourage them to industry in their schools. Perhaps there is nothing so pernicious to education as an indolent or lazy teacher, one who, be his pay more or less, occupies his time in school hours in studying, reading *law*, *divinity* or *politics*, or allows his scholars to act as they please, or cares not whether they read, write or cipher *correctly* or *not*, so he but pass off the time and get the pay; who cares not for the culture of the mind; who takes no pains to inculcate rules and morals as *principles*, rather than as something blundered upon."

CHEROKEE ROSE.

BY A. McDONALD.

Messrs. Editors: I have received the September and October numbers of the Prairie Farmer, and find them, as well as the August number, full of most useful and interesting matter to the cultivator of the soil. Indeed no man, whatever may be his peculiar avocation, can possibly lay out one dollar better than for your valuable agricultural work. And in the great valley of the Mississippi, which is marching forward with such gigantic strides, if the cultivators of the soil would but study their interest and reduce the size of their farms, read the Farmer, study agriculture as a science, the day is not distant when happiness and pleasure, as well as comfort, would abound to an extent heretofore unknown. Indeed I was most forcibly impressed the past summer, in the State of Illinois, where I spent the month of July most pleasantly, of the vast importance of improvements in the cultivation of the soil. Now this must be brought about by the introduction of agricultural works, the formation of agricultural societies. The principle of association is the lever of Archimedes, from the building up of a rail road and the digging of a canal to the conversion of the world.

I received, a short time since, a letter from Professor J. B, Turner, of Illinois College, calling upon me for some cuttings of the Cherokee rose. As I expect some of my Illinois connections to visit us, this winter, I presumed I could send the cuttings more readily by them. On reception of this letter, write me, or you can let me know through the columns of the Farmer who will take charge of the bundle of cuttings in New Orleans, and what direction to place on the bundle so that it may reach Chicago, and it will afford me much pleasure to send you some of them as well as Professor Turner. I am confident, should it stand the winters of Illinois, which I have no doubt of myself, it will be of more importance to the country than any thing whatever in the way of enclosing the thousands of acres of the richest lands.

Eufaula, Alabama, November, 1845.

We should be extremely gratified for the cuttings as mentioned by Col. McDonald. They can be sent to the care of J. H. Mulford Esq,, of the firm of Mulford, Edgell & Co. New Orleans, who will forward them to us.

SMUT.

BY A. CHURCHILL.

Messrs. Editors: Where is "Incog?" Is he in the land of the living? or has he passed to the shades of "used to was?" It is time that he was at his post, for I perceive by your October number that certain bugs, unbidden and unannounced by the learned of the age, have crawled from certain grains of *smut wheat* into this enlightened world. They must be very ungentlemanly bugs, truly, thus to break the chain of scientific investigation which has been forged link by link for ages, and worse than all, to lay claim to the throne of king Fungus. Incog must give the usurper a quietus.

How easy it is to build a theory. A toad-stool is found growing on a dung heap, and theory says that the toad-stool is destroying the dung heap. Wondrous wise!

In 1825 I discovered eggs in smut wheat, in the kernel—published the *fact* a few years since, and was demolished by Incog. In 1845 Gen. Harmon. near Rochester, N. Y., hatches the egg, and now, ye fungi peepers, go at him, or your fungus theory goes to the shades.

Some unlucky fellow not long since published that he had found certain insects about the foot of potato stalks,—all hushed up.—This is not the fashionable way to destroy potatoes, be it known to bug peepers.

Now let us have a few facts about fungi, and then for *my* theory.

Fact the first—Fungi, when found, are always found on decaying animal or vegetable matter.

Fact the second—They are never found growing on or in sound healthy animal or vegetable matter.

Inference the first—That decomposition must commence before fungi can exist, except as seed.

Inference the second—that the office of this species of plants, the fungi, is to occupy the space between live healthy matter and perfectly decomposed healthy matter.

"Well," you say, "how do bugs make wheat smutty." That I do not know. Only this I know, that I found eggs in the kernels of smut. How

they got there I know no more of than the fellows did who found the flies in amber. True there were certain suspicious looking holes through the upper sheath of the straw; and I guess some bug made the holes to get its egg into the head of wheat—that's all.

Avon, Kane co., December.

PRAIRIE FARMER AT THE EAST—ROOT GRAFTING.

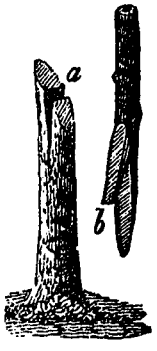
BY A. P. RALPH.

Messrs. Editors: I have perused very attentively, and I believe profitably, all the back numbers of the Prairie Farmer which I took with me at the time I subscribed for the same, and the one which I have received since. This work is certainly calculated to do a great deal of good. I have found it far more interesting and instructive than I anticipated. I have for a considerable time taken the ——— ———, but if I was going to dispense with either, I would spare the ——— in preference to the Prairie Farmer. I very much like the idea of getting communications from practical farmers, those who know from actual experience the truth of the facts communicated. By this means a large amount of practical knowledge is collected together, and one farmer is enabled to profit by the experience of another. But this is not all that I admire in the Prairie Farmer. I perceive that some of your contributors, as well as yourselves, are not only trying to disseminate a better knowledge of agricultural pursuits, but trying to raise the standard of the employment itself. This I consider of vast importance. Only do something to set forth the respectability of the business itself, so that a sufficient number of men of the highest standing, learning and ability may be drawn into it, and they will soon find out the best and most profitable modes of cultivation. Too little has been said and written in praise of the first, the most noble and honorable of employments. Volumes might be profitably written and read, in my humble judgment, upon this subject, and then the subject be not half exhausted. But I have shown my regard for it, and testified my belief and full conviction in its respectability in a more substantial manner. Although educated and raised to a profession, I have abandoned that profession, and gone into the field and gone to work, where I daily follow the plow, use the hoe or any other farming utensil that occasion may require, and I enjoy myself far better than I did when I was all day pent up in an office, or harrassed with the perplexity of legal proceedings, and I feel quite as respectable.

Hempstead, Long Island, N. Y., December.

P. S. I should like your last January number, which I failed to get, because it contains an article upon root grafting, the *modus operandi* of which I do not exactly understand. What I want to get at is, whether or not I can graft pieces of roots, and if so, the best mode of grafting them—whether I can graft them through the winter, (as I have heard said,) and lay them away in the cellar in dirt, and then set them out in the spring. If I can do this, I want to bring a few hundreds already grafted to Illinois in the spring, to put out on my land there. This makes me anxious to get that number, and to get it as soon as possible. This mode of grafting, (if such a one exists) is purely western, for I can find no one that knows any thing about it here. Downing, in his treatise upon fruit raising, hints at it, but gives no positive directions. A. P. R.

Our correspondent will not find the information wished for in the number of the Prairie Farmer alluded to—the grafting there spoken of being of a different sort. "Grafting in the root," as it is called, is no western invention, as he supposes. We practiced it years ago in Massachusetts, and it is, or *was* there, the most common mode of propagation. The roots of small trees are taken up in the fall and stand in the cellar until wanted, when they are cut into pieces of five or six inches in length. The stock and scion may be joined in any of the usual modes; but the most common is by that known as whip or tongue grafting. In using this mode the scion and stock are nearly of a size. They are both sloped off an inch or more, and joined together, when they are tied with bass matting, husks, or yarn.



It is more common, however, to make a slit in the bare part of the stock downward, and a similar one in the scion upward, as shown in the cut, when the tongue thus made in the scion is inserted into the slit of the stock, where they are both secured as before. The more fibrous roots the stock has when grafted the better. They are then laid away in the cellar, lightly covered with dryish sand until the time for setting out arrives. In setting, the junction is placed below the surface of the earth, so as to be covered by it. Grafting may be done on this plan from November till April.

SUNDRY QUESTIONS.

BY J. K. CROCKER.

Messrs. Editors: I have been reading your paper for some time past, and it sets me to thinking, and thinking sets me to asking questions. Which is the best breed of hogs we have in the country? and where can they be got? and what do they cost? And here let me remark that it is astonishing that men possessing fine stock do not advertise it in your paper; they would find it much to their advantage. Which is the best variety of hens, and where are they, and what do they cost? I have seen a hen of the Poland breed that laid 175 eggs in one year; I am anxious to get some of that breed. What is the best feed for hens—wheat, oats, corn, or sun-flower seeds? Would you or your contributors be so kind as to give a plan of a hen house, attended with a drawing?

Exeter, Nov. 1845.

Our correspondent is a late subscriber, and in consequence asks some questions which have been pretty thoroughly talked over in our columns.

It would be a hard matter for us to decide which is the best breed of hogs, while pork breeders and others differ so widely. It is much easier to decide which are not the best. For instance, all

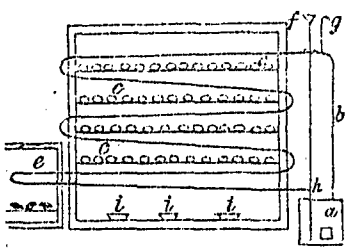
those swine known as the "Land Shark," "Sand Hill," "Alligator," "Pike," "Plow share," and Starved breeds are to be shunned. Out of any other breed than these we believe any man may select hogs which if kept within reasonable propinquity of the corn crib will yield a good return on the cash, feed, and labor expended upon them. We have great faith in a breed much more common these few years back than for a long time before which we have heard designated as the "corn-crib" breed, but which we believe are not generally known by that name. They form sections or families of various breeds—many of them being found among the Berkshires, Woburns, Graziers, Sussex, and Leicesters—and some among plain plebeian hogs. We would however not wish to be understood as exprersing any want of faith in the popular breeds.

In answer to the unpublished part of Mr. C.'s note, we will state that we *furnish six volumes* of the Prairie Farmer, past, present, or to come, for $5. We have no connexion with any book-binder, except that we occasionally hire one to do work for us.

HATCHING CHICKENS BY STEAM. The hatching of chickens by artificial means has been more or less practiced in all ages; and although it never proved formerly more than partially successful, has received a considerable impulse during the last two years in this country. No account has as yet however met our eye which afforded any clue to the real results of the business in these latter attempts—the letters of visiters relating only to success in hatching a few eggs, without any reference to the great numbers operated upon.

That a proportion of the eggs may be hatched is not to be doubted; but as to what that proportion is, we are left in the dark. We are not informed, either, of the strength and comparative healthiness of the chickens, but are left to conclude that they are feebler than those produced by the natural mode of incubation.

As a matter of curiosity the mode is represented below.



"The above figure will give a general idea of the apparatus. It consists of a square box of any required size. A small furnace is seen at *a*, furnished with a boiler. From this arises a tube, *b*, which traverses backward and forward through the box, and through another one, which is partly shown at *e*, where the chickens are kept after being hatched, and returns into the boiler, *a*. The eggs rest on the shelves, *c*.

Supposing the water heated in the boiler, it rises by its specific levity through the tube *b*, and more r essively through all the tubes to *h*, when it passes down to the bottom of the boiler. This circulating movement, once established, continues as long as the water is heated, because the temperature is never equal through all parts of the apparatus; and it is easy to conceive that a perfect equality of temperature can never exist, on account of the continual loss of heat which escapes from the outsides of all the tubes. It does not, however, become greatly diminished, even after having expended a large portion of its caloric on the outside of the box, in maintaining a gentle heat in the chicken box, *e*, adjoining. The bent parts of the tubes outside of the box are covered with woolen cloth. By means of a regulator, a regular and constant temperature is obtained.

In practice, but one twentieth part of the eggs which the apparatus is capable of holding is put in at first, and the remainder in similar parts every successive day. In this way the eggs first placed in will on the twenty first day be for the most part hatched, so that we may obtain every day nearly the same number of chickens."

RYE-AND-INDIAN BREAD.

MESSRS. EDITORS: In the October number of your paper I notice a communication from "C." on rye bread, which suited my taste first rate, only the bread would have suited me better had it been made of rye and Indian and baked in a good old-fashioned brick oven. Rye-and-Indian bread may not indeed suit "genteel" people; but it is just the thing for us Suckers. But alas! how have the times changed since the days of our grandfathers. Look at that young man, pale and complaining of dyspepsia; ah! he knows not the luxury of good brown bread: and that delicate young lady, who daily drinks her tea and coffee strong enough to bear up an iron wedge, with hot cakes at each meal—see how she turns up that dear little nose at brown bread; she never made a loaf of it in her life. Alas! alas! times are not as they used to was. I am, like C., reminded of the days of my youth, when I had to get the "oven-wood," and was some times gently "cuffed" when I was a little tardy, because the bread was *riz*, and would soon sour if not baked.

But seriously—why is it that there is so little rye raised? and why do those especially who have been reared in New England *so soon forget* good old-fashioned rye-and-Indian bread? Now, Messrs. Editors, though I was born a Yankee, and often got the oven-wood, yet I dont know how the stuff is made; and my wife at my elbow, having read the Farmer (as every good wife does) and of course your article on good cooking, is anxious to know *how to make good* rye-and-Indian bread. You see she never saw Yankee land—I found her in Suckerdom. But she is desirous of being *something* more than a help-eat, and is not afraid to put her hands in the dough or milk a cow because it may tend to make her hands large. Will you publish a recipe? And here I will close by urging you to give your views upon the subject; it is an important one.

B.

Woodburn, Nov. 1845.

ADDRESS

Before the Peoria County Cattle Show. By E. Harkness. Published by request of the Society.

GENTLEMEN: The annual return of our agricultural fair should certainly be a day of rejoicing, of festivity, of the outpouring of grateful hearts for the many blessings we enjoy. On the present occasion we have many and peculiar reasons for the most lively gratitude. The recent season has been one of remarkable fruitfulness—an abundant harvest has been the reward of the labors of the husbandman, in every part of our country—general health has prevailed. The gloomy cloud which hung over our financial affairs has, to some extent, been dispelled, and we begin to see, through its mists and its darkness, the dawn of a brighter day. Surely these are causes of rejoicing to every good citizen, every patriot, every christian. We also have good reason to congratulate ourselves that we live at a period of the world's history, when the human mind has been awaked from the lethargy of ages, and is moving forward with startling rapidity, in every description of improvement. The spirit of war, so prevalent for a long lapse of centuries, has given place to the spirit of peace, and men now look for fame and fortune, not to exploits in the battle field and the plunder of conquered provinces, but to discoveries in science, to improvements in the arts, to the gains of commerce—in short, to whatever shall be useful to their fellow men. The arts of peace are daily bringing nations more and more in contact and acquainted with each other. Conflicting opinions are becoming more harmonized, and consequently the danger of hostile collision is becoming less and less. The navigation of the widest oceans by steam has made those near neighbors who are separated by half the rotundity of the globe; and by the electro-magnetic telegraph, persons can converse freely with each other, who are a thousand miles apart. These are, perhaps, the most startling instances of modern improvement, but they do not stand alone. Whoever is able, from memory or other sources of information, to institute a comparison between the state of things at the present time, and thirty years ago, will be astonished at the vast difference between these two periods, so near each other. Within thirty years, an immense number of labor-saving machines have been invented, as well as improvements made upon those previously known. To enumerate these would fill a volume, and it is not our purpose to dwell upon this subject. And perhaps some even now are ready to ask, what have these things to do with agriculture, with the cultivation of the soil? If there are such present, permit me to say, that all the honest pursuits of civilized men are mutually connected and dependent upon each other. No honest calling can be prosperous while all others are depressed. Agriculture, manufactures and commerce must all flourish or decline together. It is often said that the farmer is independent, and if he chose to do so, could live without the aid of the merchant or manufacturer. This is clearly an error. There is not a farmer present who can live comfortably a single day, without being under obligations to the sailor, the man of commerce, the manufacturer, and the mechanic. When he eats his breakfast, if it be the simplest food of his own raising, it will hardly taste well without salt,—for this salt he is indebted to commerce. The manufacturer of the salt is compelled to use various implements of wood and iron, in order to carry on his business—and for these he has been indebted to a variety of mechanics, who in turn have been supplied by others for the materials and tools which they use. And thus it is easy to show that the whole circle of employments followed among civilized men have been brought into requisition, and have contributed directly or indirectly to the production of the small quantity of salt with which we season a dish of potatoes. Again we cannot make a pen and sit down to write a letter to a friend without being under obligation to almost all the branches of industry followed among men. When we take up the knife to make our pen, it may be asked, who made the knife? who furnished the manufacturer of the knife with his materials? and who furnished him with food and clothing while he followed his trade? who brought the knife from Sheffield, and who furnished the ship to bring it? Again, who made the ship—who furnished materials, and who fed and clothed those who built the ship? When the pen is made and the sheet of paper spread out, we are again reminded that agriculture, commerce and manufactures are all called upon in furnishing the plain sheet upon which we sketch our thoughts. The mill which produced the paper is in itself a beautiful combination, in which all the arts have contributed a share, and even the rags of which it is composed are the production of the whole circle of human employments. These illustrations are given, not for the purpose of showing what every body admits, that we are social beings, and dependent upon each other for most of our enjoyments, but to remove, in some degree, a prejudice which I fear is too common among farmers, against men of other pursuits—a prejudice too often fostered by those who know better, for sinister and selfish objects.

The great improvements which have taken place in manufactures, and the means of prosecuting commerce, naturally suggests the inquiry whether a corresponding advance has been made in agriculture. It is clear that this great, this all-pervading branch of industry, is not keeping pace with the others in their onward progress.

And why is this so? Is it not because the other branches furnish a higher stimulant to the minds of men—and hence, more knowledge, more mind, more power, has taken this direction. But let us rejoice that the genius of agriculture is rousing up—rubbing her eyes—shaking off the Van Winkle sleep; and, we trust, will soon be able to overtake her companions in their brilliant and glorious career. Or, to speak without a figure, it is obvious that a great amount of mind is now being directed to agricultural improvement. Men of the highest attainments in science, both in Europe and in this country, are directing their best energies to this object. Agricultural books are becoming universally disseminated. The old and barbarous prejudice against book farming is losing ground. It is clearly seen by all, that scientific knowledge is an important acquisition to the manufacturer of agricultural implements, at least if not to the cultivator of the soil. The most sturdy anti-book farmer is ready to admit that he can plough his fields better with one of Toby & Anderson's bautiful steel plows, than he could with a forked log, tied with raw hide thongs to the horns of a pair of oxen, as they do the business in Africa and some parts of Asia, where book farming is unknown.

It will readily be admitted that more has been done by the aid of science and the mechanic arts in improving agricultural tools, implements and machinery, than in any other way. By these, an immense amount of labor has been saved in the cultivation of the soil—while the amount of production has not been materially increased. But the researches of science are now being directed to this object, and we have reason to expect highly beneficial results. The peculiar food adapted to all the different cultivated plants is becoming better understood. A glimpse has also been obtained of the action of a hitherto unknown agent in vegetable production. It is now known that electricity performs an important office in the vegetable kingdom, and a mode of controling that subtle fiuid, so as to act beneficially upon vegetable life has also been discovered. Although but little has as yet fleen gleaned from this new discovery, enough is now known in the infancy of this branch of science to lead us to anticipate a very great increase of vegetable production upon any given amount of land.

Permit me here to mention a few facts in connection with this subject, which are within the knowledge of most of you.

1st. It will be remembered that the year 1844 was remarkable for hard storms of rain, accompanied by more frequent descent of the electric fluid to the ground than had been known "within the memery of the oldest inhabitants."

2d. The same year was also remarkuble for the growth of the stalks of vegetables—when at the same time the seeds were all more or less imperfect: so much so, that we had in this fruitful region, something like a failure of the main crops of the country.

3d. The beating storms of rain in 1844 kept the surface of the ground in a clammy, compact state nearly the whole season.

4th. The year 1845 has been in many respects the reverse of the preceding—the amount of rain has been extremely small—the seeds of vegetables have been very perfect—the surface of the ground from the frost in March to the present time has been loose and porous, and there have been very few storms, which discharged electricity to the ground.

I am disposed to draw the following inferences from the above facts:

1st. The barrenness of 1844 was caused by want of electricity in the soil. And the fruitfulness of the present year is to be attributed to the fact that the earth has retained its full share of electricity, for the entire season.

2d. That the surface of the ground, when in a loose, friable state, does not part with its electricity, but retains it.

3d. That the keeping the soil well cultivated, the electric fluid necessary for the production of perfect plants is retained in the soil even when rain is to a great extent wanting.

The experiments being tried with the electro-galvanic battery this season, will probably enable us soon to know more than we now do about the influence of this subtle and all-pervading fluid in the growth and preservation of vegetable life; and these remarks are made not so much for the purpose of enlightening you, as to give you notice that a faint glimmer of light is seen in the distance, which I hope and believe will soon enable us all to see clearly into this mystery.

There are a great number of ways in which scientific research is likely to lead to an increase in Agricultural production; but perhaps still more is to be expected from the experience of intelligent, close observing practical farmers, who communicate the result of their experience to the public. Great facilities for doing this now exist throughout our whole country. A successful experiment may be known by every farmer in the United States and in Europe in a very short time after it is first published, or at least by every farmer who takes an agricultural paper. Still the great element of success in farming may be said to be a steady, faithful and vigorous application of all we do know, to the cultivation and improvement of the soil. It is surely our duty to learn all we can; but if we do not act upon the knowledge we possess it will be of little value to us. We subscribe to the great truth that "knowledge is power"—but this must be practical knowledge—a knowledge of the proper mode of doing

things—not a mere vague notion of how they should be done.

The highly finished specimens of domestic manufacture this day exhibited, shows a goodly advance in all the varied arts of civilized life. They prove that we are not behind the older portions of our country, in the production of whatever is useful and beautiful. The delicate hands of the gentler sex have exhibited numerous specimens of their handiwork, which cannot be exceeded any where. These things are peculiarly gratifying, as they can alone emanate from highly gifted and refined minds. The elements of beauty and utility are alone to be found in the mind itself. When formed there, they seek development in material forms of a kindred character. Or in other words, the idea of what is useful and beautiful must be distinctly formed upon the tablet of the mind before it can be fashioned by the hand and presented to the eye. There seems to be an honorable and praiseworthy emulation among our fair countrywomen, which promises the most beneficial results.

In the different specimens of the products of the field, the orchard and the garden, there is much to encourage us. They are all remarkably perfect of the kind, and show that we possess a soil of unequalled fertility. The exhibition of fruits, though small in number, on account of the severe frosts in the early part of the season, are very satisfactory so far as they go. Enough has been already shown to convince the most skeptical that we possess one of the finest fruit districts in the United States.

The exhibition of domestic animals has been highly encouraging. Many of the specimens have been very fine, and show that a portion of our citizens at least duly appreciate the importance of this subject. But I will not trench upon the peculiar province of the different committees whose duty it is to make out for publication reports on the various subjects committed to their charge.

The first settlers of a country have a great responsibility resting upon them, inasmuch as they give the impress of their own character upon the generations which follow. The peculiar characteristics of the first band of adventurers who landed at Plymouth are as visible now as then—but instead of being confined to a few families, belong to the people of numerous States—and the same may be said of the first colony at Jamestown. We should therefore keep it constantly in mind that we are laying the foundations of a great commonwealth; and if the foundations be firm, the superstructure will be durable. Or, in other words, if the people of a newly settled country are peaceable, orderly, moral, temperate and industrious, it is reasonable to expect that the generations which succeed will follow in their footsteps; but if destitute of these virtues, how gloomy is the prospect for the future as well as the present.

One of the reasons which induce me to expect great improvements in agriculture, is to be found in the fact that in this country, capital and labor are united, whereas in most other countries it is said to be separate. It is, I believe, the case nearly all over Europe that the owner of the soil does not till it with his own hands, but lives upon the profits of the labor of others. The tendency of such a state of things is to make the tenant a drudge, a machine, while the landlord, if he takes the trouble to think at all, becomes a vague and idle theorist. But here the lords of the soil cultivate it with their own hands. Every inducement is held out for improving both the physical and intellectual man. By the exercise of industry combined with intelligence, the practical farmer becomes a man of wealth, and is much more likely to benefit his fellow citizens by useful discoveries and the lessons of experience, than the purse-proud landlord, or half-enslaved and overtasked laborer. The absurd and contemptible notion that labor is dishonorable, or rather that it is honorable to live without labor, has been nearly banished from among our people. Indeed it has become so far an outlawed idea, that it can only find a refuge in a few empty craniums where brains ought to be.

The highest aim of worldly ambition among our young men is and should be, to become the owners of beautiful fields, orchards and gardens, cultivated and kept in order by their own hands, and the residents of neat and tasteful dwellings, reared by the efforts of their own industry. Add to these the possession of a well cultivated mind, and the society of intelligent, moral neighbors, and what more can any reasonable man ask of the blessings of this world. Let me say then to my young friends: keep these objects of laudable ambition steadily in view—be temperate, frugal, industrious, moral—cultivate your minds as well as your farms—noxious weeds will spring up in both unless you exercise due care and diligence. Seek not the honors of office—if the State needs your services you will be called upon in the proper manner, and then you must not decline. Envy not the learned professions—you know not their secrets. If you did you might perhaps find them the most miserable of drudges, toiling and sighing in secret for that very independence you now possess. If there be any class of society more free from corroding cares and debasing temptations. I will venture to say that intelligent, industrious farmers form that class. Besides, yours is a learned profession, and you are therefore on an equal footing. You should know enough of the law to keep clear of its toils—enough about the medical profession to take care of your own

health, and enough about theology to read, understand and practice the commandments of the decalogue. You must, if practicable, add to these a knowledge of chemistry, so as to be able to analyze the soil of your own farm, and thereby know to what purpose it is best adapted. There are a great many ways in which a knowledge of chemistry can be valuable to the farmer; and it has often been a matter of surprise with me, that it has not been more generally introduced as a study in our primary schools.

A little knowledge of entomology might often save to the farmer the labors bestowed upon an entire field, which is lost by not knowing the character and habits of some tribe of insects which rob him of the harvest he had expected. Botany may also be studied with advantage by the farmer, if for nothing else, to enable him to destroy such noxious plants as make their appearence upon his premises, before they get such a footing in the soil as to become troublesome. In a word, it is difficult to name any useful science, a knowledge of which is more or less advantageous to the farmer. But take care, my young friends, that your knowledge be minute and practical as far as it goes—let it not be of that loose, indefinite, theorizing, dreamy character, which is good for nothing. Your labors will not hinder you from becoming learned men. The body and mind were both formed for alternate or co-operative labor. If the body be exclusively employed, the mind becomes inert, indolent, stupid. On the contrary, if the mind alone be called into action, the body becomes weak, diseased, and often falls into premature decay. The biography of nearly all the truly great men of our country, shows that they have won their way to fame by the steady exercise of all their faculties, mental and physical. Rejoice then that your lot has not been cast among those who look upon labor as an evil—but among the honest sons of toil, who are, by their well-directed efforts, making the "wilderness and the solitary place" to become "glad, and the desert to bud and blossom as the rose." It has been the will of Divine Providence that our lot should be cast in a land possessing great beauty of scenery, richness of soil, and salubrity of climate. It will be our own fault if we do not render it in a short time one of the most delightful spots to be found any where. Industry, combined with intelligence and good taste, will soon accomplish this. And who among us will not engage in this noble undertaking, this bloodless, this moral conquest—this rescuing of the desert waste from its loneliness and solitude, and rearing upon it the standard of civilization, with all its train of blessings.

The largest oak in the world is one in Dorsetshire, England, which measures 63 feet in circumference.

ORCHARD AND GARDEN.

FLOWERS FOR FARMERS' WIVES AND DAUGHTERS TO CULTIVATE.

There is a taste all but universal among the families of farmers for flowers, and were all difficulties out of the way the farm house would generally be attended by its flower garden. The obstacle which we care to notice at present is the imperfect acquaintance with such flowering plants as can be obtained, which from necessity exists among those interested. Hence the attention of all but the more enterprising is confined to a few common flowers which have always been cultivated in the family garden, and which frequently, from poor attention, have badly deteriorated. Recurrence to books and other sources of information in regard to such as are worthy of culture is commonly out of the question, or if it be had, such descriptions are generally written by professed gardeners, who either treat upon plants of which nothing at all is known, or enter so far into the niceties and science of the business that three fourths of common people give up the matter in despair.

We propose to give a short list of such flowers as are worthy of cultivation by farmers' families generally, with such modes of treatment as are simple and adapted to the means of all; and though we may overlook many which are esteemed as good as those of which we speak, we will give enough, so that a selection may be made ample enough to keep every farmer's garden in blossom from April to December. We will not, however, pass any by because it may be esteemed by some unfashionable; but will endeavor to name such as people *generally can get*, and such *as can be cultivated without a terrible deal of fuss and trouble*; for it is the fact, and always will be, that a plant requiring as much care as an infant, will never be grown by any who have infants to care for, nor by any others but amateurs. What people want are plants which with ordinary culture will go on and do their blooming and return a good interest in the show they make for the labor bestowed upon them.

Of the culture of bulbs we will say but little, inasmuch as it has lately been treated of by a correspondent, and we would refer those interested to his communications in the September and November numbers of 1845.

Of bulbs as a class it may be remarked, that there are but a very few reasons for cultivating them at all. These are, first, that they are of the earliest in blossom—which is the chief one: second, that they are very beautiful—which is true of numberless others,—and third, that they help out a variety. On the other hand their blossoms are fleeting; and of some this is so far true, that they are hardly worth cultivating at all. Their cultivation is also more difficult, and requires more skill than most others. Of those which best pay for their culture are, the Tulip, Hyacinth, Narcissus, Gladiolus, Daffodil, and the tiger and orange Lilies; and if the odor of the crown imperial be not an objection, that may also be included. The better way of growing bulbs is in beds, where they may support each other, and where the effect will be greatly heightened, by the blending of their delicate colors. The gladiolus, and in some instances the others,

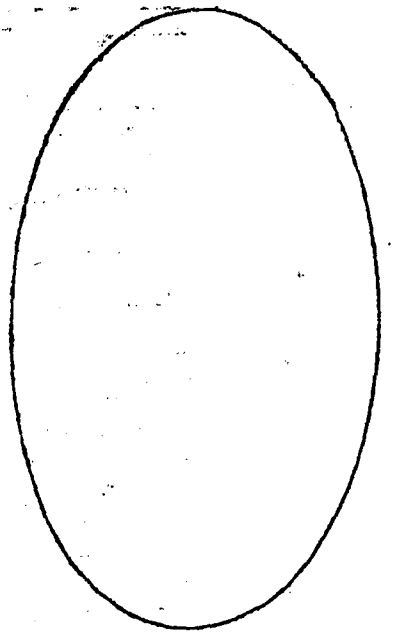
will require support, the stock being tall and extremely slender. The tulip, hyacinth, daffodil and narcissus are the earliest in bloom—the gladiolus following much later. The crown imperial shows well singly, and if put far enough from the house, is a great addition to the flower garden. This flower belongs to the genus Frittillaria, and is a Persian blossom.

Of tuberous roots, there are about a dozen varieties of Pæonies, the Iris, and the Dahlia. The greater numbers of Pæonies are pretty much unknown to the most of farmers' gardens. The common double scarlet is that which best meets our taste, both from its profusion of large staring blossoms, and the early associations connected with it. No garden should be without this magnificent flower. It is so truly beautiful that its commonness can never deteriorate its value; and it requires no more care than a currant bush. Of the other kinds, several are beautiful, and one (perhaps more) is quite fragrant. They are most of them cultivated with great ease, and hold their blossoms for a considerable time.

The Dahlia has perhaps held its sway as a fashionable blossom longer and more universally than any other, and is now every where known and cultivated. It is not too much to say that it is worthy of its popularity. The continual succession of flowers it affords from June to December, their size, and the richness of multitudes of them, together with the endless variety of colors of which it is capable, justly render it a favorite. The only difficulty attending its culture is in keeping the bulbs safely over winter. With a good cellar, however, there is little more trouble attending this than belongs to the keeping of as many potatoes.

Annual, Biennial, and Hardy Herbaceous Plants. Of this the multitude and variety are so great that no individual cares to do more than make a selection of a few which are grown with little trouble, which afford a suitable variety, and which keep longest in bloom. We shall merely name such kinds as occur to us, without any particular order. And first, as one of the first in bloom, we will name the

Violet. That most commonly cultivated is the *viola tricolor*, or garden violet, in some places called pansy or heart's ease. This every garden may have—it only requires to be once introduced, and so far as supply is concerned, it will take care of itself. And what is more beautiful than its modest blossom, following close on the heels of winter, and often peeping out of the snow even? The violet is beautiful on a border in clumps or in a bed; but a prettier way of cultivating is upon mounds. This shows them to better advantage—giving them the appearance, at a little distance, of solid semi-globes of flowers. The mounds should not be too high in proportion to their size, as the violet requires moisture, and the tops of the mounds are liable to get too dry—and it may be necessary under any circumstances to give them water occasionally. The following is a very pretty form of a figure which may be drawn as a bed for this or any other desired plant, and which, for the violet, may be raised more or less, according to fancy. It is made by driving down two stakes, at nearly the distance required by the size of the ellipse, and connecting them by a



string tied to each and left very slack. Then take a stake, and putting it inside the string, mark as large a figure as it will allow.

Of the different kinds of the violet there are a great number. There are thirty five species in this country, and several more varieties, of which a dozen or more may be found in almost any neighborhood. Many of them found wild may be cultivated for the garden violet, and will repay cultivation. Of these are the *viola cucullata*, or common blue violet, the *viola palmata*, which may be known by the resemblance of the leaf to the shape of the human hand, and which grows every where—the *viola striata*, or striped violet, and the *viola pubescens*, or yellow violet.

Stone Crop. This plant, *sedum anacampseros*, is cultivated not so much for its blossom as the perennial greenness of the leaf and branch. We believe it quite uncommon in this section of country, but where it is grown it passes under different names, some calling it mountain moss. Its rich green is displayed with the opening of spring, but it does not blossom till June. The flowers are a whitish purple, and quite small, numerous, and very delicate. This, like the violet, is shown beautifully on mounds, or it may be put into square boxes without bottoms, and suffered to grow over the sides. It is too much inclined to spread, for borders. More hereafter.

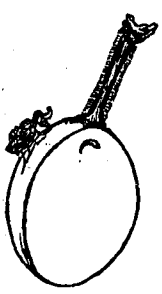
Canker Worms. Some discussion is going on in relation to a scourge of the orchard, which has made its appearance of late about Cincinnati and in the southern part of Indiana, and which we presume to be the same now at work in the south of this State. Some have doubted the identity of this worm with the one known in New England as the canker worm. But so far as we can learn it appears to be the same insect, or so nearly resembling it that the difference is scarcely worthy of notice. This insect, called by Dr. Harris the *aniospteryx pometaria*, is thus described: The male is a moth

with pale, ash colored wings, with a black dot a little more than an inch across. The female is wingless, oval, dark ash colored above, and gray beneath. As far as we are informed, this is about the description of our canker or span worm. It is to be hoped that full trial will be made of the *wool*, as recommended in the September Prairie Farmer.

THE PLUM AND ITS ENEMIES.

The Plum is one of the most delicious, and, if successfully cultivated, most profitable of our numerous fruits. The tree is extremely prolific and hardy; and but for one or two enemies, would be perhaps more universally cultivated than any other choice fruit. These enemies are, however, so indefatigable and successful, that many fruit growers have given up the plum in despair, and turned their attention to others whose precariousness depends upon a different order of enemies. The curculio or plum wevil, *rynchænus nenuphar*, is a little dark brown insect, of the beetle tribe, spotted with white, yellow and black, of about one fifth of an inch in length. It has two humps like a dromedary, and a snout somewhat like an elephant; though unlike both of these animals, it is furnished with wings, but of how much service they are is a disputed point.

As soon as the young fruit is fairly under way, this little pirate begins its work. It marches up to a young plum, and selecting a place near the stem, gives it a semicircular dig, as shown in the cut, and deposits its egg in the wound thus made. This egg soon hatches a white worm, which begins knawing about him as soon as possible, and in about a month from the time the egg was laid, has made his way to the stone of the fruit, when it (the plum) falls at once to the earth. The insect does the greater part of its work in May, and the month of July witnesses the destruction of the fruit. When the plum has fallen, the insect makes its way into the earth, where it remains till the ensuing spring, when it comes forth a beetle like its parent, ready for the same sort of work.



Where this insect has obtained possession, he is very plenty; and as he seldom punctures a single plum more than once, it is a wonder if any fruit escapes him.

A great deal of ingenuity has been expended in devising ways to be rid of the curculio, and with various success. It is an exceedingly timid and shy insect; and if a smart blow be given the tree, when he is at work, he folds himself up and drops to the earth as if dead, where he lies till the alarm has subsided. Taking advantage of this, some have spread sheets under the tree, and with a mallet administered a few blows to the trunk, to bring them down, when they are gathered and killed at once. This operation, repeated a sufficient number of times, has been found to lessen their numbers materially.

Others have watched the time when the fruit falls, and gathered it for the hogs or the flames before the larva has made its escape. Others let loose fowls and swine to pick up the fallen fruit as it comes to the earth. Others rely upon common salt for its destruction, and Mr. Downing thinks it may be relied on with certainty. The mode of its application is to spread it over the surface of the ground beneath the tree pretty thickly, when the impregnated plums begin to drop. It thus destroys the larvæ before they are able to reach the earth. Others still have endeavored to prevent the descent of the worm to the earth by paving the surface of the ground with brick or with lime mortar.—This has been found highly successful. A coating of the latter may be spread under a few trees with a small amount of expense and trouble. The same purpose is to a good degree answered if the trees stand in a yard much trodden, especially if the soil be inclined to clay, so that it becomes hard and impervious.

Another drawback upon plum culture is the knots or black gum. Every one who has seen an eastern plum patch knows what this is. It not only gives the tree a most unsightly appearance, but if unchecked, very soon destroys the whole race of plum trees.

The course of the disease is this. The bark swells and bursts, and soon grows into a black, frightful looking wart, dry within, stopping the regular flow of the sap, and spreading itself over the tree, which breaks out in various places in the same manner. It sometimes also makes its appearance on the morella cherry. Some kinds of plums are much more liable to it than others, of which are the horse and damson.

Dr. Harris thinks this to be caused by the same little insect which destroys the fruit, viz: the curculio, the second brood of which being too late for the fruit, stings the bark in place of it. It is generally thought to be the work of an insect, but much doubt hangs about the matter. Mr. Downing thinks that though the curculio may sometimes deposit its eggs in these excrescences while yet soft, that he is not their author, and mentions, in confirmation of his opinion, the fact that when the curculio is plenty, the *knots* often do not appear, and when they are often plenty there are no curculios.

The remedy for this latter disease is the knife. The first shoot that shows it must be cut away and burned. No quarter must be given it for an instant. To exterpate it, however, the remedy must not only be applied by one gardener, but the neighborhood must be treated in the same manner.

SOIL AND CULTURE. The best stones for sowing are those obtained from the blue gage or horse plum. Like other seeds of stone fruit, they should be planted as soon as gathered, or if not planted, at once put in sand and kept moist. When two years old, the trees may be taken out of the seed beds, the top roots cut off, and planted in nursery rows.—They may be budded the same season if set in the spring. This requires to be done earlier with the plum than with the peach or cherry. The proper time is early in July. The trees require very little pruning, and this should be done early in the summer.

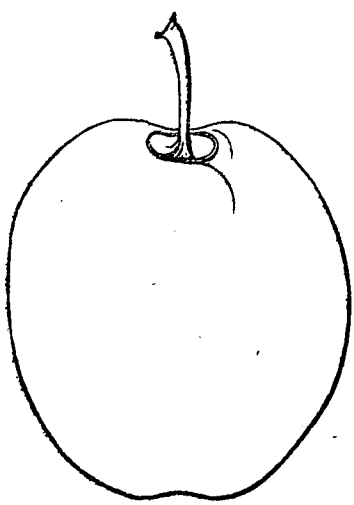
The plum will grow in almost any of our soils, but it prefers a loam or mixture of clay, in which it perfects its fruit most beautifully. In sandy soils the tree is sufficiently stimulated, but the fruit does not correspond, and the curculio finds in them a

warmer and better harbor. Salt is not only a cure for the curculio, but an excellent dressing for the soil, and may be applied in the ratio of half a peck to the earth under each bearing tree annually.

A great error which ignorant fruit growers fall into is suffering too much fruit to ripen on a tree; but while this is a great error in any case, it is peculiarly so in plum culture. The fruit grower sees his trees loaded with fruit, and congratulates himself on a plentiful crop, and though it only half ripens, and is of most miserable quality, he is not half the time aware of his mistake, but continues to commit the same fault as often as his trees muster energy for the same occasion. Mr. Downing lays down the rule that no two plums should touch each other on the tree. The fruit requires the full influence of sun and air to ripen it perfectly, and it should be suffered to hang on the tree till fully ripe.

The varieties of plums, though not as numerous as those of some other fruits, are very respectable. Some of the choicest are *The German Gage*, *Coe's Golden Drop*, *Emerald Drop*, *Green Gage*, *Hudson Gage*, *Keyser's Plum*, *Imperial Gage*, *Orange*, *Washington*, *White Magnum Bonum*, *Columbian Gage*, and many others, of which we will append a catalogue hereafter.

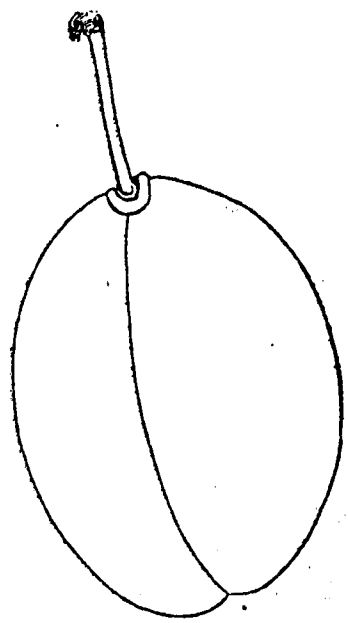
The fruits shown in the cuts are the *Washington* and *White Magnum Bonum*, of which Mr. Downing's descriptions are given.



"The Washington undoubtedly stands higher in general estimation in this country, than any other plum. Although not equal to the Green Gage and two or three others, in high flavor, yet its great size, its beauty, and the vigor and hardiness of the tree, are qualitses which have brought this noble fruit into notice every where. The parent tree grew originally on Delancey's farm, on the east side of the Bowery, New York, but being grafted with another sort, escaped notice, until a *sucker* from it, planted by Mr. Bolmar, a merchant in Chatham street, which he purchased of a market woman, came into bearing about the year 1818, and attracted universal attention by the remarkable beauty and size of the fruit. In 1821, this sort was first sent to the Horticultural Society of London, by the late Dr. Hosack, and it now ranks as first in nearly all the European collections.

"The Washington has remarkably large, broad, crumpled and glossy foliage, is a strong grower, and forms a handsome round head. Like several other varieties of plum, the fruit of this, especially in sandy soils, does not attain its full perfection until the tree has borne for several years. We have measured them very often six inches in circumference, and once from Mr. Bolmar's original tree, seven and a quarter inches.

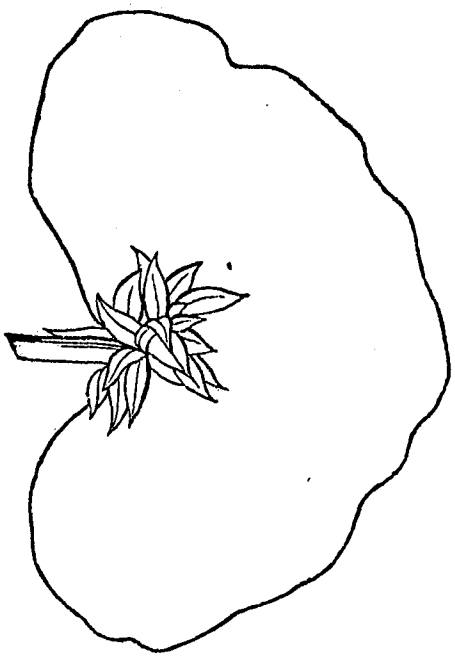
"Wood light brown, downy. Fruit of the largest size, roundish-oval, with an obscure suture, except near the stalk. Skin dull yellow, with faint marblings of green, but when well ripened, deep yellow, with a pale crimson blush or dots. Stalk scarcely three fourths of an inch long, a little downy, set in a shallow, wide hollow. Flesh yellow, firm, very sweet and luscious, separating freely from the stone. Stone pointed at each end. Ripens from about the middle to the last of August."



"The White Magnum Bonum, or *Egg-Plum*, as it is almost universally known here, is a very popular fruit, chiefly on account of its large and splendid appearance, and a slight acidity, which renders it admirably fitted for making showy sweetmeats or preserves. When it is raised in a fine warm situation, and is fully matured, it is pretty well flavored, but ordinarily it is considered coarse, and as belonging to the kitchen, and not to the dessert.

"Branches smooth, long. Fruit of the largest size, measuring six inches in its longest circumference, oval, narrowing a good deal on both ends. Suture well marked. Stalk about an inch long, stout, inserted without cavity, in a folded border. Skin yellow, with numerous white dots, covered with thin white bloom—when fully ripe, of a deep gold color. Flesh yellow, adhering closely to the stone, rather acid until very ripe, when it becomes sweet, though of only second rate flavor. Stem long, and pointed at both ends. A pretty good bearer, though apt, in light soils, to drop from the tree before matured. Middle of August."

A STRAWBERRY. The cut below is, according to J. S. Skinner Esq. editor of the Farmers' Library, the exact outline of a strawberry, grown the past season by Mr.



John Stobbs, gardener at Doddington Hall, near Lincoln, England. It is of a kind called the British Queen. We have been in the habit of supposing that pretty good sized strawberries had been grown in this country from Hovey's Seedling and Ross' Phœnix; but they dwindle to common sized berries by the side of this. The berry weighed a little more than an ounce and a half—or in the ratio of ten to the pound! If it proves as prolific as its namesake, we may look for a plenty of this fruit.

INQUIRIES.

BY F. K. PHŒNIX.

MESSRS. EDITORS: Having lately received a lot of the most splendid scions I ever saw from Mr. E. Harkness, nurseryman, Peoria co. Ill., I am somewhat anxious to learn the method of raising them, or the trees on which they grew, which, as he informs me, were 3 yrs old root grafts, or 2 yrs old buds. Believing that it would interest many of your subscribers, as well as myself, I take this method to enquire of him, hoping he will answer as publicly. Among other things I should be glad to know what his surface soil and subsoil are—the slope of land on which his nursery is located—is it elevated? How is it possible, where trees are *so very thrifty*, to guard against their total destruction, the first or second winters from the graft, by the bark bursting near the ground? The rest I will leave to him, hoping that he will begin at the "*root of the matter*," and tell us all about it.

Delevan, Wisconsin, December, 1845.

The pear leaf has 20,000 pores to the square inch, on the under side. The pink has 38,500. Some plants have as many as 160,000.

MECHANICAL DEPARTMENT.

LATE PROGRESS IN INVENTION.

Of all the shows, fairs, and gettings together, which are truly worth going to see, there is not one in this Union which can claim precedence of the Fair of the American Institute in New York. Whether we regard this institution in respect to its age, giving it a character of solidity and respectability, or its affiliations by which it has become in a sense a national institution, or the great numbers attending its exhibitions, or the character of its members, or the hand it has had in recommending and introducing into notice and use, the many important improvements which have thus become known and used, or its equal connection with agriculture and mechanics, it stands forth in every aspect great and important.

For many years the inventions exhibited at its fairs have been improving in the finish of their workmanship, and the completeness and importance of their design. Its last exhibition—the eighteenth in number—we are told, exceeded all the rest in beauty and richness of display. Those who have returned from a personal attendance assure us that the published accounts convey a very imperfect idea of the variety, beauty and utility of the articles shown. That very few or none of the latest inventions find their way west, we are certain. While we cannot find a horse rake, a straw cutter, or a corn crusher in our market, we need no assurance that we are to a good degree ignorant of what is done at the east in the line of mechanical and manufacturing progress.

Among the articles exhibited we are informed that the variety of India rubber goods was beyond conception. Not the least curious of these were the various accoutrements necessary for army and naval service. One of these was a bridge for rivers, made wholly of India rubber cloth. The construction of its sections is something like that of a common bed tick. These sections are hooked together, blown up with air, and strung across a stream, and afford a secure passage for men, horses, guns, and all the paraphernalia of an army. If any one is so curious as to ask where the breath is to be found to fill such a multitude of bags, a little air pump answers the question. Then there are beds for soldiers, of like construction, of which the soldier has but to blow up one, and toss it upon the water, mud, wet grass, or any where else, and place himself up on it. Then inflate another and pull over him, and he is bedded for the night, secure either under clear stars or rainy skies. For a retreating army, in danger of being pent up on the banks of a river and slaughtered, jackets are provided, which the soldier has but to swell out with his breath, while he walks into the stream, and they bear him, head, shoulders and ammunition above the current, while he paddles over. Gloves of the same material are ready for the hands; a sure defence against water, where gloves are needed most; and in short every thing requiring to be air tight, in the way of dress or fixture, is made of India rubber—light, smooth, and elegant.

Less pliable in its uses, but equally important when needed, is the patent cement pipe, whereby a pipe of tin or iron is lined inside, and then laid down

and covered with an outer coat of the same, of any desired thickness. Thus the pipe is enclosed in a mortar which soon becomes stone, and completely protects the iron from rust, and the water from contact with it.

About a year since we asked the question in the Prairie Farmer why nobody invented a cast iron beam for ploughs. That question is thus answered according to the N. Y. Farmer and Mechanic:

"WARREN'S NEW INVENTED CAST BEAM PLOUGH is so constructed that it may be converted into any kind of plough used by the American farmer; viz: grass plough, stubble plough, double or single mould board corn plough, and sub-soil plough, simply by attaching different mould-boards, (using the same beam and land-side,) and each be as well adapted to accomplish its object as though they were so many entire ploughs. The beam is short and sufficiently strong for breaking up new land. The ploughs can be afforded for $6, including one mould-board. The extra mould-boards at 75 cents, bringing a plough adapted to all uses at $8 75, about the usual price of a common plough. We are promised a drawing and testimonials of this plough. From mere partial investigation we deem this plough an improvement, and in saying this we say a great deal."

Then a great variety of articles follows—a half horse power steam engine, a patent steering wheel, artificial teeth, gums and settings, a horse rake, with iron elastic teeth, India rubber wheel bands, and many hundreds of others of which these are only samples.

We are not disposed to find fault with our western mechanics for want of enterprise. Their attention is turned to the production of machines which are imperiously needed by the wants of the country, and which, as a consequence, bring ready pay. But we think many machines would find sale here which are entirely unknown among us, from the impossibility of procuring them. We may instance the ones already named in this article, viz: straw cutters, horse rakes, &c. When the country is supplied with plows and threshing machines, we shall look to see a wide extension of the circle of useful articles manufactured among us.

A Description and Historical Account of Hydraulic and other Machines for RAISING WATER, *ancient and modern; with observations on the Mechanic Arts, including the progressive development of the* STEAM ENGINE. In five books, illustrated by nearly 300 engravings. By THOMAS EWBANK. D. Appleton & Co., 200 Broadway, New York.

One of the great improvements in modern book making consists in bringing out matters which have long been hidden up with some peculiar art or profession; and adapting them to popular comprehension and use. The progress which the moderns have made, whereby they have outstripped the ancients, is shown in nothing more clearly than in their proficiency in science as applied to the mechanic arts. Our thousand discoveries and inventions, by which the forces of nature are overcome and taught to act in subserviency to the will of man, and by which science is made to perform her wonders, in our kitchens as well as in the factory and machine shop, constitute one of the strongest points in our national glory.

The book now before us is nobly illustrative of these ideas. It is a work of near six hundred pages, in which every thing relating to the uses of water, both in the common and more recondite arts of life, is treated of at length, and in a manner not less useful to the mechanic than interesting to the general reader. The book is such an one as will find its appropriate place in every farmer's library.

We should be glad to treat our readers to extracts from the ancient modes of raising and using water; but must pass by that for this time, as well as a most interesting description of all the sorts of pumps, now, or at any other time, in use. The history of the steam engine we must for a like reason pass by. We will merely give one or two curious extracts from the appendix:

"If biblical critics would pardon our temerity, we would also suggest that the *Lares* or images which Rachel stole from her father's dwelling were, like the small Saxon idol, and those referred to in Isaiah, eolipilic fire blowers. They have exceedingly perplexed commentators, who after suggesting numerous explanations, generally conclude by observing that their nature and uses are unknown; but had these writers called to mind the ancient employment on the domestic hearth of brazen eolipiles of human form, they would have perceived that the name of Laban's images gave an indication of what they were. In all ancient languages proper names were invariably expressive of some prominent feature, attribute, or design of the objects named; so of these images—they were named *"teraphym,"* a word signifying *"blowers,"* from *teraph*, *"to blow."* So also the eolipilic idol *Pusterich* was named from *pusten*, to "blow." Eolipiles, like the *Lares*, were located on the hearth, and as they were avowedly made and named after a god,[Eolus,] and were designed to imitate him in producing blasts of wind, [Varro makes the lares *gods* of the air,] it was natural enough to adopt them as household deities. Rachel was evidently an intelligent and very shrewd woman; and as we have no reason to suppose she was an idolater after having lived twenty years in the same house with Jacob, (if indeed she ever was,) it is not at all likely that she coveted the images as *idols*, but only as domestic utensils of real utility—utensils which she had long been in the habit of using, and such as were highly desirable in setting up housekeeping for herself."

"*Wind Mills.* These were known in England in the 13th century. At the battle of Lewes, A. D. 1264, 'there was many a modre sonne brought to grounde and the Kynge of Almayne was taken in a *wynde mylle*.'"—(Hearne's Glossary to Peter Langtoft's Chronicle.)

"*Intelligence of Animals exemplified in raising Water.* Plutarch in his comparison of land and water animals, says, oxen were employed in raising water for the king of Persia's gardens at Susa, 'by a device of wheels which they turned about in manner of windlass.' Each ox was required to raise one hundred buckets daily, and as soon as that number was completed, no efforts of the attendants could induce him to add another. Attempts were made to deceive the animals, but without effect, so accurately 'did they keep the reckoning.'"

"*Imprisoning Chairs.* Such devices are very ancient. The *first* proof of Vulcan's mechanical ingenuity is said to have been a throne or chair of gold, with secret springs. This he presented to his mother, and no sooner was Juno seated in it, than she felt herself pinioned and unable to move. The gods interfered, and endeavored to release her, but without effect; and it was not till the artist had sufficiently punished her for her want of affection towards him that he consented to let her go.

"Nabis, the tyrant of Lacedemon, had a device for extorting money from the wealthy. It was a statue of a female clothed in rich apparel. When any one refused to part with his wealth, the tyrant introduced him to the image, which by means of springs seized him in its arms, and put him to the most excruciating torments, by forcing numerous bearded points into his body."

A MOWING MACHINE.

Considerable inquiry has been made hereabout of late for a machine that would cut grass. It seems by the following, from the Buffalo Advertiser, that the want is in the way of being answered.

A new and important machine for the cutting of grass has lately been completed by Capt. Wilson, of this place, and is now to be seen by applying at the bar of the American Hotel for the inventor. It is well worthy the attention of all the farmers of the West, where it is destined to become of the greatest importance in performing the harvest duty hitherto so expensive and difficult to accomplish. There is also attached to the cutting wheel or tub, wings, which gather the grass as it is cut, and lay it in a swath regularly and in a most perfect manner for curing; it is most simple in its construction, and by no means liable to be put out of order. Indeed it is one of those labor-saving machines, which has so long been sought and anxiously looked for by our grazing farmers, particularly by those of the great western prairies; we would advise all the least interested to examine it without fail. The inventor has, in two instances, been awarded the gold medal of the American Institute, the highest premium of the Mechanics' Institute, and has the certificates of the most respectable farmers of Long Island, and those of the different counties on the North river, for its complete success in operation.

STEAM ENGINES are now afforded so cheaply that they may be applied to almost every sort of mechanical business requiring the aid of power on any scale. A manufacturer advertises engines in the N. Y. Farmer and Mechanic for $350, of one horse power, and $100 for every additional horse power.

The Canada Thistle, the enemy of all farmers, is a native of Canada, but it has crossed the Atlantic, by means of *wings* with which its seeds are provided.

The Inquisition of Spain cost that country at least 2,060,000 of lives.

HOUSEHOLD AFFAIRS.

"*An Encyclopædia of Domestic Economy*, comprising such subjects as are most immediately connected with House-Keeping. By THOMAS WEBSTER, F. G. S. Assisted by the late Mrs. PARKS: with Notes and Improvements, by D. MERRYDITH REESE, A. M., M. D." Published by Harper & Brothers, No. 82 Cliff street, 1845.

This is a remarkable book—one which will make our house-keepers, who have been accustomed to see the doctrines of Domestic Economy peddled out in shilling doses, under such titles as "House-Keeping Made Easy," "The Frugal Housewife," and "The House-Keeper's Companion"—stare with both eyes.

The work bears its foreign origin on its face, or rather in its body. An American never could have written such a book. He could not have sat still long enough by any possibility.

Here is a work upon the science and practice of house-keeping swelling itself out into 1238 large octavo pages, with all sorts of cuts, illustrating all sorts of subjects. Nor is it a mere stringing together of crude and picked up recipes, some giving the lie to others and some mere mistakes and the others impracticable. It is a patient, scientific and philosophical discussion of whatever relates to house-keeping—including buildings, warming buildings, ventilation, illumination, furniture, food, drinks, cooking, clothing, dress, dairy, renovation of health, and many others, which are spread out into all their details, and treated upon at length with all their rationale.

Extensive, however, as this work is, and completed as it is in its parts, there is one omission in it at which we cannot forbear to marvel. It has nothing in relation to the numerous insects which annoy the house-keeper. Cockroaches, crickets, bed-bugs, lice, ants, flies, and twenty others, busy and mischievous enough to entitle them to consideration, are all passed over without a word. Perhaps the author meant to treat them with *silent contempt*.

To undertake to give our readers any idea of the book by a few selections, would be much like undertaking to give an idea of an enormous edifice by the exhibition of a few of its brick.

We will however give a few samples, taken pretty much at random. For instance, the following on lamps:

"Several improvements have been made in the simple lamp. The size of the wick is a circumstance very important to attend to. We have already shown how essential it is that the air shall have access to every part of the flame, in order to secure complete combustion: if the wick be large, a great deal of carbon vapour remains unburned in the interior of the flame, and breaks out at the top in the form of smoke; and the flame appears yellow, or even brownish. This is the case with torches, which always give a great deal of smoke. The smaller the wick, the clearer and whiter will be the flame; because, from what has just been said, it is obvious that there will be less unconsumed carbon in the interior of the flame: but a very small wick cannot give much light, as it diminishes with the superficies of the flame. The inconvenience of

thick wicks has been long observed, and many attempts have been made to remove it.

It was first noticed by Dr. Franklin that two small wicks, placed close together, gave more light than one equal in quantity to both; the air being admitted between them, there is more surface of flame than in one only. Three wicks, for the same reason, give still more light, but consume oil in proportion; but it is rather difficult to keep several wicks always at the same height, and there is a good deal of trouble in adjusting and trimming them.

A flat wick is found to obviate this inconvenience, and to give a much better and clearer light, with less smoke, than a round one that consumes the same quantity of oil. These are, consequently, now much used."

Or the following upon polishing tables:

"*Wax Polish.* This is the most ordinary kind of polish, where it is desirable not to darken the color of the wood; but it is not good for table tops, or many other parts of furniture, as it is apt to leave a degree of clamminess that causes every touch of the hand to leave a mark; and water spilled upon it tarnishes the lustre, which it requires hard rubbing to restore. Nevertheless, it answers sufficiently for many general purposes. It is applied in the following manner:

To four ounces of bees' wax, scraped fine, add one ounce of black rosin pounded very fine, and on these pour oil of turpentine sufficient to dissolve them, so that the solution shall be of the consistence of cream. Suffer this to remain for twenty-four hours, till the whole is completely dissolved. Apply this solution with a clean linen rag, to the cabinet work, until the whole wood is covered. After the liquid is absorbed by the wood, rub the latter hard with a roll made of baize, and afterward with soft woollen cloths, taking care that no part shall be left clammy, and also taking great care that no dust or dirt attach to the work to occasion scratches. Repeat this in a few days, or a week; if any more of the solution be necessary, add some, but the less of the solution that is used to get the work to shine, and the more rubbing is employed, the better.

Oil Polish. This is the best polish for the tops of dining tables. It is prepared and executed as follows: Before application of the polish, clean the table top by washing it with oil of turpentine, so as completely to eradicate any stains of grease that may be on it: then clean this well off by linen cloths. Dip a brush similar to the medium sized painter's brushes, or a piece of linen cloth, into some of the best cold-drawn linseed oil, and apply it to every part of the table top, or other article of furniture. Let the oil remain on for six or twelve hours, or more, taking care to guard it from dust. Then rub it with a clean woollen cloth for an hour or more. As soon as it appears perfectly clean and dry, apply linen rubbers, to remove any moisture that may be left on the surface. In three or four days repeat the application of oil, as before; and when this operation has been performed about four times, before the oil is again applied, take a sponge with water blood warm, and wash the table-top all over: wipe it quickly, and dry it with linen cloths, to extract all dirt. The oil will have saturated the wood sufficiently to have prevented the water from penetrating. The lustre may not come out so soon as may be expected; but, by perseverance for a month, or perhaps two or three, the labor will be amply compensated by the result. The polish will be brilliant and lasting; it will bid defiance to stains from hot dishes, fruits, boiling water, and other liquids, and may be kept to its maximum of lustre with a very slight proportion of regular labor. Some persons have recommended the use of alkanet root and rose pink with the oil: this gives a rich reddish hue when the wood is too light; but the effect of these ingredients is to darken and to destroy the beautifully-variegated shades in good mahogany. Even with the oil alone, the wood will become darker than with wax, as in the last receipt: but after it has come to the proper polish it will change very little. The polish must not be used for rosewood, as it would render it too dark."

Or the following, which may remind some housekeeper not to leave tubs, kettles, or cisterns, filled with water, these cold nights:

"Water, in freezing, and increasing in bulk, expands with great force; and hence it very frequently bursts very strong vessels in which it may be contained: to this cause must be attributed the rupture of pipes in frosty weather. The expansive force of ice in freezing is well shown in an experiment made by Major Williams. A bomb-shell, thirteen inches in diameter, and more than two inches thick, was filled with water, and the fuse-hole plugged up with an iron bolt; thus charged, it was exposed to the cold of a severe frost, and the consequence was that the bomb burst by the congelation of the water. This expansive power of water in freezing is of infinite importance in the preparation of soils by the disintegration of rocks, and the pulverization of the ground after it has been turned up."

We will close with one more extract:

"As an illustration of the power of cookery, it may be observed that the alteration produced in the qualities of substances by the application of heat is remarkable. The cassava root, when raw, is a fatal poison to man and beast; but, prepared by fire, it is not only innocent, but forms the common food of the West Indians. The strong odor of the onion is destroyed by boiling. The root of the wake-robin has a juice that will blister the skin; but when boiled it is as mild as the potato. Mushrooms have little taste when raw, but become very savory when cooked. The raw potato is ill-flavored, extremely indigestible, and could not be eaten as human food unless it was cooked; but by roasting or boiling it becomes farinaceous, sweet and agreeable to the taste, wholesome, digestible, and highly nutritious. Coffee is disagreeably bitter in its raw state, and the fine aroma for which it is distinguished is entirely the result of the process of roasting. When, in the preparation of bread, considerable heat is applied to the dough, a complete change is produced in its chemical properties; the raw substance differs entirely from the flour; it no longer makes a tenacious paste with water, nor can starch and gluten be any longer extracted from it.

The application of considerable heat to raw animal food by any of these processes produces in it several chemical changes. Much water is evaporated, the muscular fibre is rendered opaque by the coagula-

tion of the albumen, and it becomes likewise more tender; the gelatin, which is never liquid in the raw state, is rendered soluble; the fat is partly liquefied, without being melted out of the cellular substance.

By applying heat to vegetables, the more volatile and watery parts are, in some cases, dissipated. The different principles, according to their peculiar properties, are extracted, softened, dissolved, or coagulated; but most commonly they are changed into new combinations, so as to be no longer distinguishable by the forms and chemical properties which they originally possessed. Raw vegetables contain much free acid, a great part of which counteracts the digestive functions; the heat of the cooking processes destroys this acid, partly by extraction, and partly altering nature: boiled vegetables, therefore, contain little or no acid. By heat, sugar is often formed, as in the case of apples, and new and agreeable flavors are developed; the alimentary properties have been improved, the farinaceous matter is rendered soluble, and the vegetable fibre is softened. Numberless other instances might be mentioned of the influence of heat upon the nutritive properties of substances employed as food.

The whole subject of food and its preparation by cookery, are, as we have before more than once stated, so dependent upon the chemical history of the various substances employed, that it is impossible to study them advantageously without reference to that science; and it is for that reason we have endeavored to prepare the reader in our present section for some preceding ones. Cookery, indeed, may be considered, in some respects, as a branch of practical chemistry. On a general view, we may divide the various processes of the cook, as generally practiced in England, into roasting, baking, broiling, frying, boiling and stewing."

We are heartily glad to see such a book as this offered to our American readers; and we invite all those who wish to see how the common details of life can be made interesting by showing the connection between them and the teachings of science—or who wish to avail themselves of its teachings—to buy this book. To all newly married beginners in house-keeping, we commend it particularly. It will not only be found of use in the kitchen in compounding cakes, pastry, or in cooking steaks, joints, hams, etc., but will afford many a page of pleasant reading to beguile the long winter evenings.

FALL BUTTER.

BY MRS. S. H. TALLMADGE.

MESSRS. EDITORS: I have been perusing your Prairie Farmer to find a better way of making fall butter than mine; but do not succeed. My plan is as follows: As soon as the frost kills the grass, I strain the milk into pans, and put them on the stove and let the milk get scalding hot—then set it into the milk-room, and in twenty four hours I take the cream off, which is very thick and yellow. I then put it in a stone churn, and churn every other day, and the butter has as rich a flavor as I make in June; and I get a good price for it, while butter is selling very low.

BREAD MAKING.

THE RISING. Boil a quantity of hops, strain them, stir flour into the liquor when boiling hot; let it cool sufficiently, put in a small quantity of brewer's yeast; let it stand until perfectly light, then knead it hard with meal, cut it into thin cakes and dry it in the sun.

FOR MAKING BREAD. Soak a small quantity of the cake in warm water an hour or two, put it to sponging in your flour until it rises; knead it and let it stand until it rises again; knead is again and put it in pans for the oven; let it stand until it rises. then bake the usual time.

M. D. ROCKWELL.

TO MAKE MILK YEAST. Take half pint new milk, one pint hot water, half teaspoon full salt, half tea spoonfull saleratus, stir in flour to the thickness of common batter, keep warm five or six hours.

TO MAKE BREAD. When light, take two quarts warm milk, one teaspoon full saleratus, stir in flour and yeast to the thickness of common batter; keep warm; when light, make small loaves, bake thirty minutes.

TO MAKE CRACKERS. Take 5 ounces butter, 4 eggs, 1 pint milk, beat the eggs and stir in as much as you can; then beat with a flat iron 10 minutes without adding flour; then break off a piece large enough for a cracker; knead and roll out thin, and bake in a hot oven.

The above are from Sugar Grove, and we are sure must be good.—ED.

WINTER TREATMENT OF HOUSE PLANTS. Plants kept in the house, in pots, are subject to several liabilities which those growing out of doors are freed from. Among these are sudden variations of temperature, and improper watering. This is peculiarly the case in winter; and yet upon these two points depend, in a great degree, their health and beauty.

The great and principal object of growing house plants is to have something green and fragrant, or which will produce blossoms during the winter months, when every thing else is frozen and lifeless. In the summer, plants far more fragrant and beautiful, and more permanently blooming than most of those grown in pots, can be had in abundance. It seems to us a work of great folly to grow potted plants, carefully tending and watering them all the summer, merely to send them off to a green house out of sight for the whole winter.

But to grow plants to any purpose during the cold months requires a tight house, capable of being kept at a tolerably even temperature in all sorts of weather. We say an *even temperature*, because this is the important point; far more so than that the degree of heat be great. A temperature of about 40 degrees is high enough; and even if it falls below that, most plants will flourish in it, provided it be kept even. Many, however, finding their rooms cold in the morning and their plants nearly frozen, conclude that they need thawing at once, and so set them down by a hot stove. This is the very way to kill them. Plants hate the heat of a stove worse than a little cold, by far. When two rooms are heated by one stove, the plants will thrive best in the room where the stove is not.

Watering is one of the most difficult operations to practice successfully. In winter, it should be known, they require much less water than in summer; and the higher the temperature in which they are kept, the more water they will need; but they will be the more tender and liable to be killed by the frost. No rule for watering can be laid

down, except to do it as often as they need it, and no oftener. The daily drizzling of plants, as the manner of some is, does not accord with our notions or experience at all. We have found, in cold weather, about two waterings in a week to answer the best—regulating the quantity by the state of the case. The best guide, however, is experience—in this as in all matters.

IN WHAT DOES AGRICULTURAL IMPROVEMENT CONSIST.

It is customary when men have been long sleepy and inattentive to their duty or interests, on being partially awaked, to make considerable noise and splutter; and their efforts are often ill-directed; because, like newly awaked people, they do not clearly see what is to be done; and some of them are often in such a hurry that they cannot take time to do it.

Similar to this was the case a few years since, when a part of the American public first began to discover that their Agriculture was not precisely what it should be, and such is, to some degree, the case since, wherever this idea makes progress.

Hence, in the earlier part of the movement, many mistakes, as was all natural enough, were made. One of them, which was rather more practical than theoretical—was that improvement was to be made by riding some particular hobby. Under this idea a good many seemed to suppose that Berkshire Hogs were the improvement sought in agriculture, and that the growing of them would be all that was necessary to be accomplished. Others placed it in Short Horn Cattle—others looked only at Multicaulis—others at Rohan Potatoes, and various others at various other things; and supposed that while men were talking of improvement, they were only talking of Berkshires or Short Horns, or Rohans, or some such matter.

As a natural result of this notion, when Rohans proved false, and Multicaulis was found not to be silk, and men saw that neither Berkshires nor Short Horns make them rich in a moment, they lost all faith in the whole thing. In a similar way, when some, having supposed that Agricultural Societies were Agricultural Improvement, saw some particular society go to pieces, they imagined the whole thing dead and done for. The stereotyped answer of all these men to any further talk or question on the subject is, an allusion to some one of these exploded, real or fancied, hobbies.

Now the great mistake of these persons is, that they fancy Agricultural Improvement to be something which it is not. And it would be well for them to take notice, that it is neither identified with any breed of swine, or of cattle—or any particular sort of sheep; or with Agricultural Societies, or with any new sorts of seeds, or with agricultural papers. These may wholly or partially explode, and the main thing remains untouched. Some of these things are branches in which improvement may be prosecuted; and others are among the means by which it is carried on; but there is a wide difference between a means and an end, though mankind are always confounding the two, and mistaking the one for the other; and, as a great truth always lies next to some great lie, it requires care and discrimination to avoid mistaking the latter for the former.

The evils connected with the mistakes alluded to, are, that men supposing Agricultural Improvement to be identified with some of those things spoken of, take hold of them at first perhaps with great zeal, but as they see them afterwards explode, their faith in the cause is shaken, if they do not come to regard the whole matter with disgust.

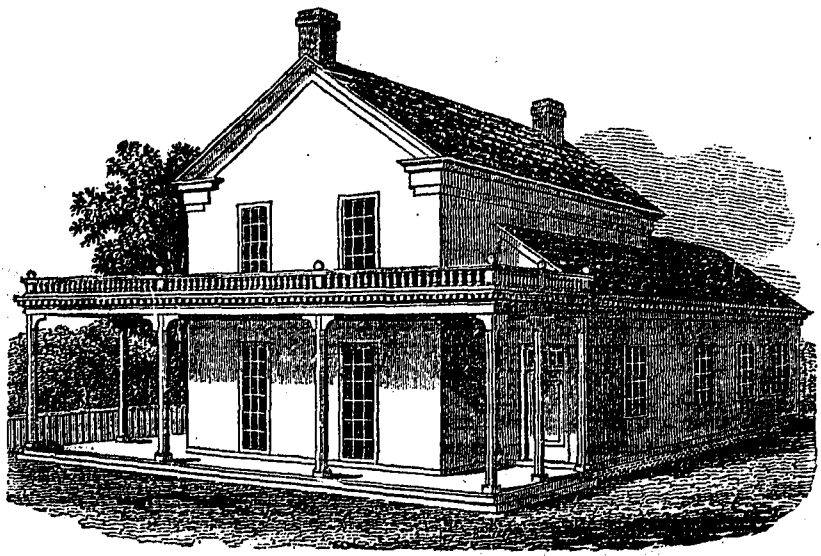
Let it be kept clearly in mind, then, that our cause does not consist, nor is it identified with, any one or two things, or dozen things; but that it contemplates better modes of cultivating the earth—including all those branches which belong to it; and the cultivation of the farmer's mind, when that mind is brought to bear upon agriculture. Of course the nature and means of improving soils—of selecting and adopting crops to the climate and soil—of economy in raising stock, in providing buildings, and in household management, together with an intelligent understanding of all these things are included in it, with others which cannot well be enumerated. Any body can see by a moment's attention that this is a great and important work, and will stand out just as important and ennobling, though there should be fifty thousand Multicaulis and Rohan potato earthquakes, all ending in sulphurous, inodorous smoke.

We beg therefore, all new beginners, especially, to beware of the mistake pointed out; and not to be too sanguine of any new seed, or new breeds of animals, or any other new thing, which they imperfectly understand or are not in circumstances to meddle with, but to try cautiously all such things without being too sanguine of success, or supposing if they do fail in the trial, that they have made fools of themselves.

Those also who have seen many new things fail, or have had their fingers bitten in the operation, need not lose heart. Amid the thousand mistakes which men make, there sprout forth vigorous successes; about the roots of which the mistakes decay; and for which they form the aliment, as manures do for the fresh and strong growing grain.

Horse Shoeing. The old shoe must first be taken off. We have something to observe even here. The shoe was retained on the foot by the ends of the nails being twisted off, turned down, and clenched. These clenches should be first raised, which the smith seldom takes the trouble thoroughly to do; but after looking carelessly round the crust and loosening one or two of the clenches, he takes hold first of one heel of the shoe, and then of the other, and by a violent wrench separates them from the foot; then, by means of a third wrench, applied to the middle of the shoe, he tears it off. By these means he must enlarge every nail-hole, and weaken the future and steady hold of the shoe, and sometimes tear off portions of the crust, and otherwise injure the foot. The horse generally shows by his flinching that he suffers from the violence with which this preliminary operation too often is performed. The clenches should always be raised or filed off; and, where the foot is tender, or the horse is to be examined for lameness, each nail should be partly punched out. By the common system of procedure, many a stub is left in the crust, the source of future annoyance.

The shoe having been removed, the smith proceeds to rasp the edges of the crust. Let not the stander-by object to the apparent violence which he uses, or fear that the foot will suffer it is the only means that he has to detect whether any stubs remain in the nail-holes; it is the most convenient method of removing that portion of the crust into which dirt and gravel have insinuated themselves.—*Youatt.*



THE SMALL FARMER'S HOUSE.

It is often made a subject of complaint that our agricultural publications and agricultural societies prepare their articles and offer their awards on the supposition that their readers and contributors are all rich men, and able to carry out any scheme proposed, however expensive—overlooking the fact that the great majority are men of small means or none at all. To a certain extent this is not true—to a further extent it is true, from the necessity of the case; and to a further extent still, it is true needlessly, and not from any necessity. There are many branches of pioneer improvement in agriculture as in other things, which a poor man cannot dabble with; he would starve while doing it. Hence such branches are laid out for those who have more means and leisure. There are other improvements, which contemplate only a saving of means, and only require to be made known to commend them as matters of economy; these belong to the poor man as well as the rich, and often more particularly to him. There are other branches of improvement which though they require some expenditure, belong equally to the man of large and the man of small means, as matters of thrift and economy.

An agricultural paper ought never to lose sight of these varied interests, but to afford something for each condition.

The Prairie Farmer a few numbers since contained a plan and cut of a very tasteful cottage—a plan which it is needless to observe, can only be followed by a man of some means. We now offer a plan which is adapted to the means of any man who is able to leave his log cabin, and whose means improve so as to enable him to extend his house by small degress afterward. This is the mode which nine tenths at least of our farmers follow in their building. Scarcely one tenth in fact are able to put up at once the establishment which they will in time need. Most of our settlers in fact need only small houses at first; they are young men, just married, with perhaps one or two little ones and a brother or sister, or hired man, constituting the whole family. A large house would not only be a useless expenditure, but a useless incumbrance. Matters change gradually, however, in the course of a few years. Grown-up sons and daughters, hired help, and all the et ceteras of extension in the family line, require more elbow room. How shall the thing be managed? A few will be able to tear down the old house, or to move it off and turn it into a granary, a tool house, or stable, or something else, and build entirely new. Not so the great number. They wish to add a little this year, and two years hence a little more, and five or ten years afterwards considerable more, when they wish to consider the house finished. Besides the questions of ability and interest in the matter, there are pleasant associations connected with living always in the same house. There sprug up attachments to the old rooms and walls, especially on the part of the female members of the family; and it is more pleasant to have the old house grown, than to tear it away and begin new.

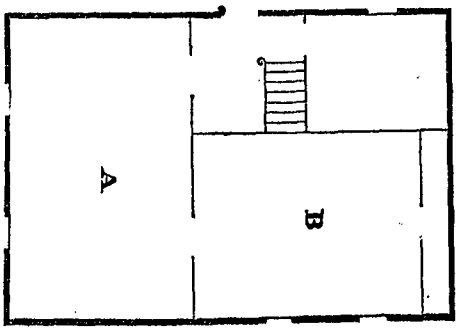
Taste and economy need not be sacrificed in this proceeding. There are many modes of managing the business so as to secure due respect to both. But to do this, regard should be had in the outset to some plan. Otherwise the whole proceeding is a mere succession of patch work, and the result inconvenient, expensive, uncouth, and wholly unsatisfactory. Let then some plan, as perfect in detail as possible, be laid down in the beginning, and steadily adhered to, where it cannot be improved, in the successive additions and alterations.

We will suppose the farmer has not more than two or three hundred dollars to expend in the first building he erects, which is to be his dwelling. He can build with this sum a house perhaps 16 by 26 feet, with posts 14 feet; and finish it in a neat and substantial manner.* This is about the style of house of which hundreds will now be found scattered all over the West, when the settler has just emerged from his log cabin; or where his notions of living would not permit him to build one in the first place. This is, in fact, the second grade up-

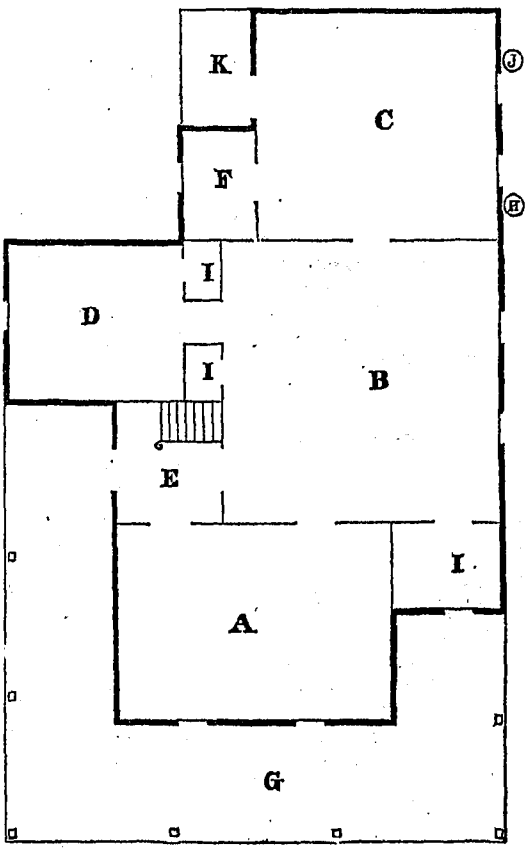
*Houses of the size given, well finished, can be bought in this city for the sum named.

ward, in house building—the log cabin being the first step.

In this case the house can be divided as in the



small plan, and will give him the principal room A, the large bedroom B, with a hall and pantry. This is about as much room on the ground floor as such a building can afford. He will soon, however, be able to add on a kitchen to the rear, as shown



by C in the larger plan. This may be one story in height, and be jutted out properly, so as to stand where wanted when the whole is finished.

At a subsequent time, as his purse allows, and his needs require, an addition of one story may be made to the room B, and the pantry D be swelled out into a respectable bed room. The piazza G may then be extended around the front, a pantry, F, erected, and its outer wall be produced in the back piazza K. The dwelling will now give three rooms. A 12 by 16 feet, B 16 by 14, and C 13 feet square, a bedroom D, pantry F, hall E, and the closets I I I. The cistern and well are shown at H. and L, and the sink can be placed against the wall adjoining them, furnished with two small cast iron or copper pumps costing $5, and drawing the water through lead pipes.

The whole cost of such a house, as labor and materials are at present in this city, would not amount to more than from $500 to $600; and it would be as large as three fourths of families would ever need. Of course the size of rooms, finish, etc., might be varied to suit circumstances and tastes.

The objections which might lie to cutting away the studs to extend the rooms B and D would be obviated by any skillful carpenter.

But in building this or any other house of wood do not fail to apply the paint. This should be done as fast as any part is finished. Money cannot possibly be laid out on a building more economically than in paint; and as for ornament, nothing comes within five thousand per cent. of it. One would suppose, in going about the country, and noticing the wo-begone appearance of villages and farm residences, that white lead, or any other pigment, had not yet been invented. The residents seem to think that because the dull and weatherbeaten appearance of the buildings has become familiar to them, it must look well enough. This is a great mistake. It is better to pay the painter something, even though the carpenter gets less.

CRANBERRIES.

We extract the following from the conversation at the meeting of the Club on the 4th inst., as reported in the N. Y. Farmer and Mechanic:

Gen. Chandler—I present to the Club cranberry plants, some with their great crop of fruit on, at the request of Mr. Sullivan Bates, of Bellingham, Mass. A few years ago, he first exhibited this fruit, produced by his new method—transplanting from low grounds to high. His success has been complete; he has gathered from one acre about 400 bushels of cranberries in a season! He plants them, in drills, 20 inches apart; in hills, 7 inches. The soil must be such an one as does not bake.

Chairman.—I took from swamps on Gen. Johnson's place, some cranberry plants, and planted them on ground 80 or 100 feet above the swamp; they thrived, and their fruit was so close together that one could hardly put a finger in without touching the cranberries. It is a highly profitable crop. I am of opinion that five hundred dollars might be obtained for a full crop of one acre.

Dr. Underhill.—The cranberry probably improves in *all* respects by the transfer from marsh to upland. Wild grapes love alluvial wet positions, but their flavor is not to be compared with those growing in dry soils. The wild grape has a thick skin, hard pulp, large seeds. By culture in dry situations, the skin and seeds become one half less thick and large, and the pulp almost disappears.

[*From Morrell's American Shepherd.*

WINTER MANAGEMENT OF SHEEP.

"In animals having a propensity to fatten, we find the chest of a circular form; the ribs spring from the spine more horizontally than in others, almost at right angles; this is observed in the ox, compared with the horse, and still more so in the sheep. The effect of this conformation is certainly in one respect to increase the width of the chest, but another important effect is to increase very considerably the size of the abdomen; for in order to obtain the greatest possible nutriment from the food, it is essential that the organs of digestion should be capacious, which cannot be the case unless the cavity in which they are situated is large. The abdominal muscles and membrane which support the bowels are attached to the cartilages of the ribs, and the short ribs in some measure cover the abdomen. It must, therefore, be evident that in proportion to the width between the posterior ribs must, in a great measure, be the size of the abdomen; and this width must be in proportion to the horizontal direction in which the ribs are given off. The loins must correspond with the ribs; the transverse processes are long and horizontal in proportion to the horizontal manner in which the ribs spring from the spine; for, in fact, they are but a continuation of the same roof, and must possess the same relative proportions. We must illustrate this point by comparing it with an umbrella, which, when thoroughly open, the whalebone ribs, so to speak, coming off at right angles, may be compared with the broad circular animal, and, when half extended, to the narrow-chested, flat-sided beast. In its former state the umbrella forms the roof of a much larger space of ground than it does in its latter state: and, in the same manner, the long transverse lumbar processes must form the roof of a larger abdominal cavity than the short transverse processes found with narrow loins. The same form that extends the roof of the abdomen, also gives a larger surface for the muscles of the back and loins to rest on; and thus we find in sheep of this description a very considerable developement of the flesh or muscles of the loins—the primest part of the carcase. It is a common observation with judges of sheep, that one of the best points is a channel between the shoulders and along the back. This is, indeed, a desirable form, for it is connected with those necessary qualifications for producing flesh and fat. The channel along the back is owing partly to the large developement of the muscles of the loins and back arising from the form we have commended, and partly to the shortness of the upright or spinous processes of the vertebræ of the back. Now the use of these processes is to afford leverage to the muscles, and their length, therefore, enhances the activity of the animal. Sheep, however, do not possess nor require these active powers, and they would, in fact, be very detrimental to the principal object of the animal's existence; it is a quiet state and a quiet disposition that disposes an animal to increase in flesh and fat. The shortness of these processes is illustrated in the sheep as compared with the goat, and in the improved breeds of the former as compared with those of the mountain and the forest."

With a view rather to confirm principles already stated, the following remarks by Mr. Spooner, and the examples in illustration, are quoted. It will be proper to add, that in no other country is the system of fattening better understood than in England, established by numerous experiments of her many enlightened and sagacious breeders.

"*Quietude* and *warmth* greatly contribute to the fattening process. This is a fact which has not only been developed by science, but proved by actual practice. The manner in which these agents operate is simple and easily explained:—motion increases respiration, and the excess of oxygen thus taken requires an increased quantity of carbon, which would otherwise be expended in producing fat. So, likewise, *cold robs the system of animal heat*, to supply which more oxygen and more carbon must be employed in producing extra combustion, to restore the diminution of temperature. Nature enforces this restoration of warmth by causing cold to produce both hunger and the disposition for motion, supplying carbon by the gratification of the former, and oxygen by the indulgence of the latter. The above facts are illustrated by Lord Ducie:—

"One hundred sheep were placed in a shed, and ate 20 lbs. of Swede turnips each per day, whilst another hundred, in the open air, ate 25 lbs., and at the end of a certain period the former animals weighed each 3 lbs. more than the latter, plainly showing, that, to a certain extent, *warmth is a substitute for food.* This was also proved by the same nobleman in other experiments, which also illustrated the effect of exercise:—No. 1. Five sheep were fed in the open air, between the 21st of November and the 1st of December; they consumed 90 lbs. of food per day, the temperature being about 40°; at the end of this time they weighed 2 lbs. less than when first exposed. No. 2. Five sheep were placed under shelter, and allowed to run at a temperature of 49°; they consumed at first 82 lbs., then 70 lbs. per day, and increased in weight 23 lbs. No. 3. Five sheep were placed in the same shed, but not allowed any exercise; they ate at first 64 lbs., then 58 lbs., and increased in weight 30 lbs. No. 4. Five sheep were kept in the dark, quiet and covered; they ate 35 lbs. per day, and increased in weight 9 lbs.

"A similar experiment was tried by Mr. Childers, M. P., and is thus related by that gentleman in the Journal of the Royal Agricultural Society of England for that year. He says, 'I last winter enclosed a small yard with posts and rails, and erected a low thatched shed, just large enough to allow a score of sheep to lie down at once. The floor of this shed was boarded with rough slabs, and was raised eighteen inches above the surface of the ground, the boards being placed three-eighths of an inch apart, in order to allow the free passage of water and keep the boards dry, as my great fear was that the sheep might get the foot-rot.

"'I then proceeded, on the 1st of January, to draw forty wethers out of my flock of Leicesters, and divided them into two lots, as equal in quality as I could get them. On weighing each sheep separately, I found the weight of one score to be 2565 lbs., and that of the other 2580 lbs. I put the first lot into the yard, and placed the other lot on turnips. The field was a dry sandy soil, well sheltered, and

peculiarly favorable and healthy for sheep. Each lot had exactly the same quantity of food given them, which was as follows:—

"'1st. As many cut turnips as they could eat, which was about 378 lbs. per day for each lot.

"'2d. Ten pounds of linseed cake, at the rate of half a pound per sheep per day.

"'3d. Half a pint of barley per sheep per day.

"'A little hay, and a constant supply of salt.

"'For the first three weeks both lots consumed equal portions of food; but in the fourth week there was a falling off in the consumption of the wethers in the shed of 52 lbs. of turnips per day; and in the ninth week there was also a falling off of 28 lbs. more; of linseed cake there was also a falling off of 3 lbs. per day. The wethers in the field consumed the same quantity of food from first to last. The result of the experiment was as follows:

	20 Shed Weth.	Inc'e.	20 Field Weth.	Inc'e.
January 1,	2565 lbs.		2580 lbs.	
February 1,	2870 "	305 lbs.	2794 "	214 lbs.
March 1,	3020 "	150 "	2914 "	120 "
April 1,	3355 "	335 "	3092 "	178 "
Total increase,		790 lbs.		512 lbs.

"'Consequently the sheep in the shed, though they consumed nearly one fifth less food, made above one third greater progress. The circumstances of the experiment were, if anything, unfavorable to the sheep in the shed. The turnips, by being stored in a house for their use, became drier than those consumed by the sheep in the field; and also in February the shed wethers were salved or rubbed with mercurial ointment, which is generally supposed to give a check to feeding sheep. The floor of the shed was kept clean by fresh straw litter after every rain."

Mr. Spooner adds the following:—"The result of these important and valuable experiments is precisely what we should expect from theoretical reasoning on the principles of the subject. It shows the pecuniary advantage of attending to the comforts of sheep and other animals, the expediency of providing proper sheds, and affording shelter when the weather is severe, and lessening, as much as possible, their exercise."

Quietness, as has been observed, is indispensable to rapid fattening of sheep, or cattle, and to contribute as much as possible to this object, regularity is requisite not only in the quantity of the food, but the time when it is given. It is not a little surprising how quick animals, especially when fattening, will learn the stated hours when their food is to be supplied; and if it is transgressed, they become restless, which greatly retards the process. The observance of this, with full measure of feed, are of paramount importance.

DOMESTIC MATTERS 400 YEARS AGO. Mr. Meigs in his Address before the American Institute thus contrasts the present with the past:

"What was England for fifteen hundred years? Her history will show you, that her population never exceeded six millions during all that time. In 1509 gardening began to be of some importance in England. Before that time vegetables were imported from the Netherlands. Then began the culture in England of cabbages, gooseberries, muskmelons, apricots, garden roots, &c. The damask rose was introduced by Dr. Linacre, physician of Henry VIII. In 1526, roses were first consecrated as presents from the Pope! Hops from France! Pippin apples, by Leonard Mascal, in 1525. Corinthian grapes, now called currants, from Zante, in 1555. Musk roses, and several plums from Italy, by Lord Cromwell. July flowers, and carnations, in 1567. Tulips from Vienna, in 1579. Asparagus, oranges, lemons, artichokes, cauliflowers, beans, peans, lettuce, in 1660. Then began the population of England to grow. Then began the *creation of the farmer*. Then arose the *delightful dwellings of the yeomanry* of England, on the domains which, for more than a thousand years, had been occupied by feudal vassals, styled in the old law books *villeins*, over whom, in their subject condition; the *eleven hundred military castles of England had for so many ages frowned in aristocratic power!* Now behold the magic changes wrought by the power of farm and garden. You see now the annual jubilee of those noble interests, attended by all the gentlemen, lords and ladies of the British empire. Victoria (to her credit I proclaim it) personally shows to her subjects the example of *love and regard even for a poultry yard!*"

OBTAINING PATENTS.

The question has been frequently asked us—what is the mode of proceeding, when an inventor wishes to obtain a patent for his invention.

The steps to be taken are laid down in the N. York Farmer & Mechanic, which we give for the benefit of those whom it concerns.

Dear Sir—Please let us know through the medium of your paper what the law is with regard to obtaining letters patent from the patent office at Washington. What the expense, &c. is. Is the fee fixed by law? What is to be done to secure a patent for a time before taking out letters, in order to give the inventor a chance of first taking his invention. I learn that some have paid $40 and others $60 to obtain a patent. Is not part of this sum charged by agents for their good will or influence in obtaining the patent? Please give the particulars and oblige A SUBSCRIBER.

REMARKS. The public fee, fixed by law, is $30. For this the Patent office examines the application, and decides on granting it, if new, or rejecting it if old. Before the application can be examined, a memorial, praying a patent, on both of originating, and priority, of invention; a descriptive specification, setting forth the intents, construction and uses of the invention, closing with a claim of the parts that are new, conjointly with duplicate representative drawings and a model [if it can be shown by a model] of the invention, must be all lodged in the patent office. If the invention is not mechanical, enough of chemical or other materials must be sent to make an experiment with.

If the application is rejected for good cause, $20 of the public fee is then returned, and the office keeps the papers and model. A caveat, praying protection for one year, while perfecting an invention, may be lodged on paying $20, which ensures the applicant a knowledge of any interfering application for that time, and if the patent in the subject

of the caveat is perfected, the $20 for the caveat becomes part of the public fee of $30.

No knowledge exists of any agent who can exercise any influence independent of the legal claims of the applicant. But the agents referred to are probably those who prepare the needful papers and drawings constituting the application for the inventor, which are charged for according to extent and trouble, at rates varying from ten dollars to two hundred, which sum a friend of ours once received for a specification of thirty-two foolscap pages with three wheels and about twenty figures of drawings.

SUGAR GROVE FARMING.

We have been favored with several Reports upon crops given in to the Sugar Grove institute, which we lay before our readers.

FIVE ACRES OF OATS—IN 1845. By S. S. Ingham.

In the first place it was corn ground.

2d. Ploughed it very deep about the last days of March.

3d. Sowed the ground the 7th of April. Sowed five bushels per acre.

4th, Dragged it twice over the 7th and 8th.

5th. The 3d or 4th day after gave it a good bushing. The whole time spent in plowing, sowing, and bushing, was five days.

6th. Raised 76½ bushels per acre.

FIVE ACRES OF CORN—1845. By S. S. Ingham.

1st. Ploughed the ground last fall. Ploughed it very deep. Spring wheat stubble.

2d. Manured it in the spring, about 25 loads to the acre.

3d. Spread the manure.

4th. Gave it a thorough dragging.

5th. Ridged it—ridges four feet apart.

6th. Furrowed it across the ridges, 4 feet apart.

7th. Planted it, four kernels in a hill.

The time spent in harrowing, plowing, and hoeing 7 acres was 15 days. Amount harvested per acre, 73 bushels 6 quarts.

WHEAT FIELD ENTERED FOR A PREMIUM. By W. B. Gillett.

Broke the ground by odd spells between the 1st of May and the 15th June. Cross ploughed, or rather ploughed very fine and shallow the same way that it was broken—say one inch deeper. Ploughed the last of August. Sowed the first week in September—11½ bushels to eight acres, China wheat.

The above crop produced 22½ bushels per acre—not an extraordinary yield; but would recommend the above plan in cultivating sod land for winter wheat.

W. B. Gillett,

Account of Farm Expenses.

	Dr.
1st. Winter wheat. Sowing and plowing in amongst corn, 12 acres, occupying 4 days at 6s,	$3 00
20 bushels seed, 4s,	10 00
Harvesting 12 days, 10s,	15 00
Stacking, 37s,	4 50
Thrashing, 270 bushels, 7c,	18 90
	$51 40
Cr. By 270 bushels wheat, 58c,	136 60
Nett gain,	85 20
Leased 12 acres which produced 282 bushels, for which I receive ⅓, 94 bushels at 58c,	$54 52
Which shows an advantage in favor of cultivating your own land of 12 a. to be	30 78

Spring wheat,	Dr.	
Ploughing 3 acres, 1½ days,	$1 50	
Sowing and harrowing, ¾	75	
5 bushels seed, 5s,	3 13	
Harvesting, 3 days, 10s,	3 75	
Stacking, 10s,	1 25	
Threshing 75 bushels, 7c,	5 25	15 58
Cr. 75 bushels at 5s		37 50
Gain,		$21 92

Oats,	Dr.	
Ploughing 4½ acres, 2½ days 8s,	$2 50	
Sowing and harrowing, 1 day, 8s,	1 00	
14 bushels seed, 2s,	3 50	
Harvesting, 4 days, 19s	5 00	
Stacking, 12s	1 50	
Threshing 270 bushels, 5c	13 50	27 00
Cr. by 270 bushels oats at 1s6d,		50 62
Gain,		$23 62

Corn,	Dr.	
Ploughing 18 acres, 9 days at 8s,	$9 00	
Marking and planting, 12 days 4s,	6 00	
Ploughing out corn, 16 days, 6s,	12 00	
Cost of Husking 900 bushels at 4s	12 50	
Hoeing, 8 days, 4s,	4 00	$42 50
Cr. 1000 bushels corn at 2s,		250 00
Gain,		$205 00

Potatoes,	Dr.	
Ploughing ½ acre for potatoes, 2s,	$0 25	
5 bushels seed 1s 6d,	0 94	
Ploughing out and marking, 6s	0 75	
Hoeing, 6s	0 75	
Digging, 3 days' work, 4s,	1 50	
Cr. by 100 bushels potatoes, 1s6d,		$18 75
Gain,		$14 56

The winter wheat was got in between the 27th of August and the 5th day of September—put in with a double shovel plough—went twice in a row—no ploughing.

The winter wheat I entered for the premium was on sod, put in about the 4th day of September—sowed 11½ bushels on 8 acres, and it produced 22½ bushels per acre.

I hired 18 acres of wheat amongs corn this fall, at an expense of $5 exclusive of sowing.

From the returns of this farm it appears there have been raised 552 bushels winter wheat, 75 bushels spring wheat, 270 bushels oats, 1000 bushels corn, and 250 bushels potatoes.

Likewise it appears from the above returns that the cost per bushel on the 12 acres cultivated by himself was 19¼ cents. 12 acres leased gave $4 54½ for the use of land.

75 bushels of spring wheat cost 20 4-5 cents per bushel.

270 bushels oats cost 10 cents per bushel.

1000 bushels corn cost 4½ cents per bushel.

100 bushels potatoes cost 4 1-5 cents per bushel.

¾ acre land leased for potatoes gave $8 for the same.

Improvements have been introduced the present season by the successful operation of a machine adapted in every respect to the wants of the prairie wheat grower, for harvesting and thrashing, by which this part of the labor can be accomplished at about half the present cost. When to this is added the increased facilities for transportation, either by railroad or a feeder from Fox River for the Illinois and Michigan canal, which will reduce the cost of hauling from 12½ to 3 cents per bushel—it will then be placed in the power of the owners of wheat farms 50 miles west of Chicago to deliver wheat in Buffalo for—say 6 cents for making the crop, 7 for harvesting and threshing, 3 cents by steam to Chicago, 4 from Chicago to Buffalo—20 cents pr bushel, and 5 cents for contingencies, and you have your wheat in Buffalo at 25 cents per bushel. The first white male child born on Fox River will not be entitled to his freedom suit until all these things shall be accomplished.

PREMIUMS AWARDED AT THE SUGAR GROVE INSTITUTE.

To Wm. B. Gillett, for the best cultivated farm, with reference to the greatest income with a given amount of outlay.
To Wm. B. Gillett, for best five acres Winter Wheat.
To S. S. Ingham, for best five acres Corn.
Do do do do Oats.
To Silas Reynolds, for best kitchen garden, including peach, pear, cherry, plum and quince trees and grape vines.
To Clark Fitch, for best horse team.
To Thomas Judd for best bull.
To E. D. Terry, for best boar.
Do do do piece flannel.
To M. D. Rockwell, of Aurora, for best loaf bread, hop rising.
To Miss Mix, of Aurora, for best crackers and loaf bread, milk rising.
To S. Reynolds, for best dairy of cows, not less than four.
To A. H. Hinds, for best cow.
To A. C. Fitch, for best steer calves.
To S. S. Reynolds, best heifer calf.
To C. Franklin Paull, best stud horse.
To Mrs. John Morris, best specimen crackers.

Agricultural Fairs. As our cattle shows have usually been conducted, the application of the title *Fair* has been wholly a misnomer. A Fair, as the term is used in England where it was invented, means a gathering of stock and products for sale; while a Show is the bringing of stock and products together for the purpose which the name imports.

The late Show at Utica however was turned to account in a way which goes far to justify the more common title. Numerous sales of choice sheep, cattle, and horses—to say nothing of hens—were effected in a manner highly satisfactory to all. It is gratifying to see this feature introduced, as it appeals more strongly to the interests of exhibitors and visitors than any other, and promises well for the perpetuity of these exhibitions. It affords those who put themselves to the expense and trouble of bringing out animals for show, some remuneration for that expense and trouble. And when business and recreation can be made to go harmoniously together, there is pretty good security that both will be attended to.

Height of Trotting Horses. The annexed list gives the height of many celebrated horses *estimated* only, but by two most experienced men, one of whom had groomed or ridden almost every one named, and the other is an old amateur, who has the quickest eye for a horse, and who rode *after* most of those named, and has seen them all repeatedly. Of the thirty in the list, they differed only about eight, and of these only by one inch, save in a single case. In the eight cases we have given the estimate of the jockey who had ridden or driven them, and have great faith in its accuracy.

Names.	*hands*	*inchs.*
Dutchman,	15	3½
Lady Suffolk,	15	2
Columbus,	16	1
Aaron Burr,	15	1
Rattler, (the latest)	15	2
Screwdriver, (old)	16	—
Do (latest)	15	—
D. D. Tompkins,	15	—
Lady Warrington,	15	1
Lady Victory,	15	2
Topgallant,	15	3
Sir Peter,	15	2
Whalebone,	15	3
Shakspeare,	15	2
Betsy Baker,	15	3
Cato,	16	—
Edwin Forrest,	15	—
Burster,	15	—
Norman Leslie,	15	3
Confidence, (latest)	15	2
Locomotive,	16	—
Sally Miller,	15	3
Charlotte Temple,	15	—
Washington,	16	—
Modesty,	14	2
Greenwich Maid,	15	—
Awful,	15	3
Henry,	15	1
Paul Pry,	16	—

Multicole Rye. It will be recollected that much noise was made about this grain some two years since, and that considerable quantities of it were obtained from France and scattered over the country. Very few particular accounts of the results of its cultivation have met our eye. Those published, as far as we have seen them, only regard its culture for the grain. So far it is a decided failure. The berry is pronounced very small, and inferior in quality. If any body has been disappointed in this, they have been disappointed very needlessly. One who had ever seen a bushel of good rye, needed but a glance at a handful of this seed to perceive its inferiority. Besides, rye or any other grain which grows as tall and with as much foliage as this was described to do, is not apt to produce a berry of the plumpest sort.

Of the multicole rye as a feed, we have seen no report. It was with a view to feeding only that we ever proposed its trial.

EDUCATIONAL DEPARTMENT.

Several well written but long articles are on hand, intended for the Educational Department, which we shall be obliged to pass by. It is impossible for us to insert any but short practical articles in this department, and we often select an inferior in preference to a better one, on account of the length alone.

LETTER WRITING.

It is hoped that those who have or expect to have letters to write, will pay attention to hints contained in the following letter. We are continually misled or left in doubt, or put to great inconvenience, by the blind or imperfect manner in which letters are directed. Old people are excusable for such things, but the education of all the boys and girls in relation to this thing ought to receive attention.

MESSRS. EDITORS: Allow me to call your attention, and the attention of your subscribers, to an evil which has existed since mails, mail coaches, and post offices were invented, or since letter writing has been the vehicle of communicating our thoughts and wishes to those at a distance from us, and which might be in a great measure obviated if those who are entrusted with the instruction of youth in the public schools throughout our country would give the subject a careful examination. I allude to the careless and unintelligible manner in which very many letters sent through the post office are directed, and the clumsy and awkward manner of folding them up. I have seen many people ashamed to receive from the post office such dirty apologies for letters as are sometimes, and not unfrequently, seen there; and it is certainly time that some steps were taken towards instructing the youth who attend our public schools, in the art of writing a letter, directing it properly and intelligibly, and folding it so as to look decently. There is probably no branch of education more neglected than this, and for the reason that it is not considered of sufficient importance to engage the attention of teachers.

Children are taught to write in books made for the purpose, after a copy set by the teacher, and seldom allowed to write, or taught to express their ideas, in letter form.

Now would it not be better to instruct the youth in the most approved form of writing, the form adopted by the well educated, and by business men generally? Let them be told where to place the date, and how much margin to leave—how to commence, and how to express their ideas simply and intelligibly—then to fold and direct it so that it will reach its destination without traveling like Noah's dove for weeks and months, unable to find a resting place. A uniform method of folding letters is also certainly desirable. It is a fact that by far the greater part of the miscarriage of letters is owing to their being badly directed, frequently the names of places spelt so as to defy the combined efforts of the clerks of the post office to decipher, (and you must admit, Mr. Editor, that in this office they have the benefit of experience,) frequently the local name of a place which is not the name of the post office will be written, for it is not perhaps generally known that there are towns of considerable importance which have post offices of a different name from the town. If the place is known to the post master or clerk, the letter will go safe enough, but if not, it is as likely to take a north course when it should go south, or east when it should go west. After trying all points of the compass, if it is not worn out in the mean time, it may chance at last to be found by some one who will give it the right *chute*. As an example of misspelt names I will give you a few specimens which were actually taken from letters passing through the office in this city. We have seen Chicago spelt in 23 different ways, e. g. Tschigo, Shekague, Korgaga, etc, Mounmoris for Mount Morris, Oroura for Aurora, Pheoray and Peaurey for Peoria, Augh-ti-way for Ottawa, Lakehom, Machel co. for Lacon, Marshall co, Highway for Iowa, West Constent for Wisconsin, Seater co. for Cedar co., Granatur for Grand Detour, and Elen Oys for Illinois, "in care of Thomas Johnson for young John Johnson's wife."

With respect to folding letters, various modes are often adopted. Sometimes they are done up so as to look as diminutive as possible, as though the saving of paper was a great object, and scarcely room left to direct in the smallest hand. Sometimes they come nearer to old fashioned tile in size, paper stiff as pasteboard, and the direction across instead of lengthwise, and look as though a stick had supplied the place of pen. Frequently the paper is twisted into diamond or three cornered shapes, which is undoubtedly intended to be exquisitely nice; and these are generally supposed to be love missiles. Now who is there that does not dislike to receive letters in any of these awkward or fantastic shapes? How much better that a uniform system should be adopted and taught to the rising generation, and that this matter should be treated by instructors with the attention which its importance deserves. Suppose you try and bring it about, Messrs. Editors, and confer great obligations upon POST OFFICE CLERKS.

Chicago, December, 1845.

CRANBERRIES IN ENGLAND. The Farmers' Journal (Eng.) contains an article under the head of "Extraordinary Produce of Cranberries," in which it is stated that the astonishing quantity of six bushels had been taken from 11 acres, and that four bushels remained to be gathered. If the farmers on the other side of the big waters would take lessons from the American cranberry growers, who often get at the rate of one or two thousand bushels from 11 acres, they will find in very deed that the system is none the worse for being pursued in America. It has been stated that a boy in Lincoln gathered over one hundred bushels of cranberries in one day. Have you any such lads in Old England?—*Boston Cultivator.*

Some person who had nothing else to do has ascertained that there are 550,900 grains in a bushel of wheat, 520,000 in barley, 1,260,000 in oats, 37,000 in horse beans.

It is supposed by many naturalists that the Elm tree produces 530,000 seeds per year.

CATALOGUE OF PLANTS

*Growing spontaneously in the State of Illinois, the principal part near Augusta, Hancock county.**

BY S. B. MEAD.

CLASS I. EXOGENÆ.

Clementis Virginiana L (T) Virgin's bower, traveler's joy.
" viorna L (Bks 0) leather flower
Anemone nemorosa L (T) low, or wood anemone
" virginiana L (P) wild flower, thimble weed
" pennsylvanica L (W P & Bts)
" hepatica L (T H M) heart, or kidney liverleaf, tonic, deobstruent diuretic
Ranunculus aquatilis L (Pds) water crowfoot
" abortivus L (B)
" purshii Rich (Pds)
" repens L (P & T 1)
" hispidus Mx ? (W P)
" recurvatus Poix (B)
Myosurus minimus L (P 1) acrid, poisonous
Caltha palustris L (W P 2) American cowslip, or marsh marygold
Isopyrum biternatum T & G (Bts) emetic, sudorific, poisonous
Aquilegia Canadensis (T O) wild columbine
§ Delphinum consolidum L Larkspur
" tricorne Mx (T 0)
" azureum Mx (B 3 0)
Actœa alba. Bigel (T H) necklace weed, white beads, acrid, caustic, poisonious
Trauvetteria palmata, Fisch & Meyer (W P 4)
Thalictrum cornuti L (T) acrid, poisonous
" anemenoides Mx (J) rue anemona, poisonous
Hydrastis canadensis L (T M) orange root, tumeric root, poisonous.
Uvaria tuloba T & G (Bts fr)
Menispermum canadense L (T M) moonseed, tonic diuretic, good for dyspepsia
Leontice thalictroides L (T M) poppoose root, tonic
Podophyllum peltatum L (T M) mandrake, May apple, cathartic
Brasenia peltata L (Pds 4) acrid, caustic, poisonous
Coratophyllum espinatum Gr (Pds) tonic
Nelumbium luteum Will'd (Pds) sacred bean
Nymphea odorata Ait (Pds 3) white pond lily, narcotic, astringent
Nuphar advena Ait (Pds) yellow water lily, narcotic, astringent
Sanguinaria canadensis L (T M) blood root, acrid, narcotic, cathartic
Dielytra cucularia D C (T O) colic weed
§ Fumaria officinalis L (cult F) fumitory aperient
Cheiranthus hesperidoides T & G (Bts)
Nasturtium palustre D C (P & Bts) stimulant, diaphoretic
Nasturtium natans v Americanum D C (Pds) stimulant, diaphoretic
Arabis hirsuta Scop (P & T H) antiscorbutic nutritious
" dentata T & G (Bts) " "
" canadensis L (T) sickle pod " "
Cardemine rotundifolia Mx W P) antiseptic, diuretic
" hirsuta L (W P) " "
" Ludoviciana Hook [Bks 3] " "
Dentaria luciniata M [T] antiseptic, nutricious
Sysimbrium officinale Scop [R] antiseptic, antiscorscorbutic
" canescens N [Bks 12] " "
Erysimum Arkansanum N [S P & T 5 H O]
§ Sinapis nigra L [M] common mustard
§ Cochlacia armoracia L [M] horse radish
Lepidum Virginicum L [P K] wild pepper grass, antiscorbutic
Capsella bursa—pastoris Mœench, shepherd's purse nutricious
Polanisia graveolens N [Bks] false mustard, poisonous, stimulating vermifuge
Polygala purpurea N [B P] acrid, sudorific
" *incarnata* L] P & B] milk wort " "
" verticillata L [P & B] dwarf snake root, acrid, sudorific
" ambigua ? N [T B] " "
" Senega L [B H M] Seneca snake root, mountain flax, acrid, sudorific
" polygama Walt [W P & B 4 & 5] ground flower, acrid, sudorific
Viola pedata L [P O] pale blue violet, tonic, cathartic
" delphinifolia N [P B]
" palmata L [P T] hand leaved viol. " "
" cuculata Ait [T] com. blue " " "
" *sagittata* Ait [P B] " "
" striata Ait [Bts] striped " " "
" pubescens Ait [T] yellow " " "
" § tricolor L garden " " "
Parnassia Caroliniana Mx [4] flowering plantain, tonic
Helianthemum canadense Mx [P] rock rose, frost plant, stimulant
Lechea major Mx [P] pinweed, tonic
" minor Lam [B] "
Hypericum pyramidatum Ait [T O] cathartic, febrif.
do prolificum L [T O] do do
do corymbosum Mx [B] do do
do spherocarpon Mx [B H] do do
do multilum L [P] do do
do canadense L [H] do do
Paronychia jamesii ? T & G [B H 5] astringent
Anychia dichotoma Mx [T] fork chickweed, astringent, tonic
" capillacea N [B]
Mollugo verticellata L [Bks] carpet weed
Arenaria lateriflora L [T] sand wort, emollient, tonic
Stellaria longifolia M [T Bts] laxative
Cerastrum mutans Raf [T] emollient
Silene stellata Ait [T]
do nivea D C [Bks]
do antyrrhina L [T H] sleepy catch fly
§ Lychnis githago Lam
§ Saponaria officinalis L [M] soapwort, bouncing Bet
" § vaccaria L field soapwort

* It was utterly out of our power to comply with the wishes of the author, to publish this catalogue in a single number. It would occupy about eight pages, which is more than the body of our readers would feel satisfied with at once. We have written out the common names as far as we could ascertain them, which will be found, we hope, a valuable addition to the general reader. We have also added the description of the properties.

Portula oleracea L [P I] purslane or "pursley," nutritive, laxative
Claytonia virginica L [T O] spring beauty, emollient, tonic
Linum rigidum Ph [P]
" § usutissimum L flax
Geranium maculatum L [M T] crow-foot geranium, cranesbill

(To be continued.)

Explanations of characters and abbreviations used in the preceding catalogue.

§ This sign is prefixed to such plants as have been introduced and occasionally seen growing spontaneously about gardens or cabins.
? This mark denotes that the species are not satisfactorily determined, or implies some doubt.
(1) These plants I believe not to have been introduced, but native.
(2) Found growing in Knox co. Ill.
(3) Near Mississippi river.
(4) In Cass co.
(5) Mason co.
(6) Adams co.
(7) Near Spoon river.
(8) Illinois river, or on its banks.
(9) 5 miles below Chester, Ill.
(10) Along the banks of the Missisippi river.
(11) Clark co, Mo.
(12) Warsaw.
(13) Pike co.
(15) Cape Girardeau co. Mo.
(16) Chicago.
(17) This plant does not flower here, probably for want of moisture and thick shade.
(18) Sangamo river.
(19) Supposed to produce salivation in horses.
(20) Used for hedges.
(21) Used by coopers, and for bottoming chairs.
(22) Cut for hay often in newly settled places.
(B) Denoting plants growing in barrens.
(Bks) Along rivers or creeks.
(Bts) Timber bottoms.
(Cltd) Cultivated.
(D) Useful for dyers.
(E) Having esculent roots.
(Fd) Affording food or pasture for cattle.
(fr) Bearing good fruit, or eatable.
(H) Hills.
(hy) Fit for making hay.
(M) Possessing medicinal qualities.
(O) Ornamental, such as are curious, or furnish showy flowers.
(P) Growing in prairies.
(Pn) Poison.
(Pnds) Growing in or about ponds.
(R) Roadsides.
(S) Sand.
(T) In timber.
(Ta) Used for making common tea.
[Wd] A troublesome weed.
[W] Wet.

The district of country in which these plants have been observed, has been but partially examined, and there are probably many more to be found, which I may hereafter notice, as well as all that have been detected within the limits of this State by other botanists.

VETERINARY DEPARTMENT.

SWINEY. Mr. E. Gridley, of Half-Day, communicated to us a short time since, a remedy which he has used with perfect success. Take a quantity of pulverised copperas and mix it with lard and rub it on the part affected: then heating a fire shovel, hold it near the copperas thus applied and "heat it in" as the term is, for a considerable time.

FOR SORE TEATS IN COWS. Take the bark of the root of the shrub commonly called bitter-sweet, wash and simmer it with a small quantity of lard, until it is very yellow, and when cool, apply it to the parts that are swollen, two or three times a day, until the udder and teats are perfectly soft and free from kernels.—*Cultivator.*

CURE FOR THE BLACK TONGUE. A handfull of fine salt rubbed upon the tongue of a horse that has the black tongue, will cure it, in at the most, two applications.—*Ib.*

FOR SORE BACKS, OR GALLS IN HORSES. Rub white lead in sweet oil until a good paint is made, and apply a coating of this to the injured place. Milk will do, where the oil is not to be had. It is one of the most effective applications. Some for the same difficulty use a solution of vitriol in water, for a wash; but in most cases, the white lead is to be preferred.—*Ib.*

CURE FOR WOUNDS—KING OF OILS. *By Silas Gaylord, of Skaneateles, N. York.* Take 1 ounce of green copperas, 2 do. of white vitriol, 2 do. of common salt, 2 do. of linseed oil, 8 do. of West India molasses. Boil over a slow fire 15 minutes, in a pint of urine, when almost cold, add one ounce of oil of vitriol, and four ounces of spirits of turpentine. Apply it to the wound with a quill or feather, and the cure will be speedily effected.—*Ib.*

WORTHLESS SCHOOL LANDS. Messrs. Editors: Will you give me some information in regard to the mode of proceeding to obtain a grant for other lands in lieu of the school, or 16th section, when said section is worthless. As you are interested in school matters, I thought you would give us the desired information, if within your reach.

T. F. PHARES.

Pre-emption, Mercer co., Ind. Dec. 1845.

We have made inquiries but cannot ascertain that there is any other remedy provided than what follows: If the school section, or any part of it, proves to be an inaccessible swamp or a pond, and is meandered and returned as such by the surveyor, the trustees of schools for the township may proceed to the land office and select other unoccupied lands, to the number of acres so returned as swamp or pond; provided the township be a whole one. If it be a fractional township, then the number of acres selected shall correspond to the size of the fractional township. If however the school section be surveyed and returned as *land*, we cannot find that there is any remedy provided, however poor and worthless it may be. We should suppose, however, that a petition to Congress might secure a hearing and a remedy.

TO EXTINGUISH FIRE IN CHIMNEYS.—Put a wet blanket over the whole front of the fire place, which soon stops the current of air, and extinguishes the flame.—*Farm. Monthly Visitor.*

CHICAGO MARKET.

Prairie Farmer Office, Dec. 29, 1845. The receipts of wheat have been rather light of late, considering prices, the state of the roads, and the season of the year. From 84 to 86 cents may be considered the ruling rates for a week past. A little tightness in the money market has been felt during that time, which has probably had some effect on prices. It is not anticipated that this will be more than transitory.

The frequent rise and fall in breadstuffs of late have given rise to much misapprehension among many who have wheat to sell, who do not look very narrowly into the causes which affect prices; and who have been led to suppose that these fluctuations are the result of some conspiracy among buyers, having for its object the defrauding of the wheat seller. Such apprehensions will be calmed by the remark that these fluctuations have had their rise in the expectation of having a market opened to our breadstuffs in Europe; and as this expectation has risen and fallen, the prices of wheat have risen and fallen with it. Consequently the arrival of every steamer of late from Europe has affected prices about ten cents upon the bushel. There is but little danger that buyers will refuse to give as much for every sort of grain as they can afford while cash can be had freely to buy with, and competition runs as high as at present.

PORK has come in freely of late, and in quantities quite unexpected, we think. Prices have receded a little—$4 having been, for some days, the highest; while light pork has been sold as low as $2. The quality of the article is superb—being far superior to that ever before offered in this market.

BEEF is only in demand for city use, and brings about $2 50 per hundred.

BUTTER for the table is in demand, and will bring from 12 to 15 cents per pound.

EGGS are now retailing at 37 cents per dozen.

CORN and OATS are much inquired for; and it is believed that if the winter holds on as it has begun, they will be still more so before spring. Farmers may in fact calculate that this is a season which will use up coarse grains pretty clean.

HAY meets a readier sale and better prices than ever before in this city, and has been brought in of late from quite a distance. It brings from $4 to $6 per ton.

WOOD is plenty at $2 25 to $3 50 per cord.

METEOROLOGICAL RECORD.

41° 45′ *N.; Lon.* 87° 35′ *W.; from Nov.* 27 *to Dec.* 25. *By* GEO. F. WILSON, *Principal of Chicago Academy, for Chicago Mechanics' Institute.*

Day of the month.	Height of Barometer in inches and hundredths				External Thermometer.					Clearness of the sky.				Wind, its force and course from.				Rain—Quantity in inches.	Remarks.
	Sunrise.	9 o'cl A.M.	3 o'cl P.M.	9 o'cl P.M.	Sunrise	9 A. M.	3 P. M.	9 P. M.	daily mean	Sunrise	9 A. M.	3 P. M.	9 P. M.	Sunrise.	9o'cl A M	3o'cl P M	9o'cl P M		
Nov. 27	29.20	29.25	29.22	29.20	12	07	11	10	10.00	9	9	9	9	w3	w3	w3	w3		
28	29.35	29.30	29.30	29.40	10	11	11	13	12.25	10	10	10	10	w2	w2	w2	w2	.23	Snow
29	29.32	29.30	29.25	29.40	03	07	15	04	06.50	10	9	8	10	w2	w2	w2	w2		
30	29.40	29.36	29.30	29.36	04	10	10	04	03.00	10	10	10	10	w2	w2	w2	w2		
Dec. 1	29.18	29.16	29.12	29.18	08	12	14	08	15.50	4	6	9	10	w3	w3	w3	w2		
2	29.20	29.18	29.16	29.15	06	20	20	14	16.50	3	3	3	10	sE3	sE2	sE3	w2	.02	"
3	29.14	39.05	28.90	28.80	16	22	20	21	21.70	8	8	4	0	sw2	sw2	sE2	sE2		
4	28.70	28.84	28.68	28 78	12	22	14	06	13.50	6	5	6	10	s3	s3	w2	w2	.07	"
5	28.80	28.80	29.00	29.20	04	06	15	03	06.75	10	10	10	10	NW3	NW2	NW2	NW3		
6	29.45	29.40	29.20	29.30	02	02	08	14	05.50	10	10	9	10	NW2	NW2	NW2	NW2		
7	29.00	28.80	28.90	29.10	26	28	30	22	26.50	0	0	6	0	E2	E2	sE2	w2	.13	"
8	28.70	28.66	28.60	28.65	20	28	28	28	26.00	0	0	1	2	sE2	sE2	sE2	sE2		
9	28.70	28.60	28.62	28.68	22	26	31	12	22.75	1	5	9	10	w2	w3	w3	NW4		
10	29.20	29.20	29.18	29.10	06	00	15	08	03.50	10	10	10	10	N1	N1	W1	W1		
11	29.10	29.05	29.00	29.05	14	16	18	29	19.00	0	0	1	0	sw2	sw2	sw2	s3	.13	"
12	28.96	28.90	28.87	28.90	22	26	33	28	27.00	2	4	9	10	sE1	s2	sE2	s2		
13	28.78	28.75	28.72	28.68	32	40	39	37	37.00	2	1	1	1	s2	s2	sw2	sw3	.07	Rain
14	28.70	28.65	28.68	28.80	31	33	42	31	34.25	2	1	1	1	sw2	sw2	sw2	sw2		
15	28.60	28.60	28.70	28.80	30	36	40	27	34.25	2	2	6	10	NE2	N2	NW2	N2		
16	28.90	28.60	28.64	28.75	22	28	33	30	28.25	3	4	2	9	sw2	sw3	sw2	sw4		[sleet
17	28.78	28.70	28.50	28.60	31	32	32	27	30.50	0	1	2	9	sE2	sE2	sw2	sw3	.05	Rain and
18	28.50	28.60	28.70	28.75	22	08	04	02	09.00	9	0	0	0	sw2	NW4	w4	w4	.04	Snow
19	28.75	28.80	28.81	28.85	11	04	02	01	04.50	9	9	9	2	w2	w2	w2	w2		
20	28.80	28.75	28.70	28.90	02	02	11	06	05.25	9	9	9	9	w2	w2	w2	w2	.03	"
21	28.86	28.78	28.80	28.82	11	14	18	19	15.50	2	0	0	0	sw2	sw2	sw2	sw2		
22	28.82	28.80	28.80	29.00	22	26	28	14	22.50	1	1	3	4	sw2	sw2	sw2	sw2		
23	28.90	28.92	28.91	29.00	14	20	23	20	19.25	3	3	3	7	sw2	sw2	sw2	sw2		
24	29.12	29.10	29.08	29.00	14	23	24	18	19.50	3	3	4	10	sw2	sw2	w2	w2		
25	29.24	29.22	29.20	29.30	16	18	20	10	16.00	0	0	8	10	w3	w3	w2	NW2	.25	"
Means	28.97	28.93	28.91	28.98					18.33									1.02	

Monthly mean of Barometer, 28.94. Monthly mean of Thermometer, 17.33. N. B. The cistern Barometer is placed 36 feet above the surface of Lake Michigan. The external Thermometer northern exposure, and is out of the reach of the direct rays of the sun. In the column headed "rness of the sky," 0 represents entire cloudiness—10 entire clearness. The figures 1 2 3 4 5 6 e the force of the wind, 2 denoting a gentle breeze, 4 a strong wind, 6 a violent gale, &c.

EDITOR'S TABLE.

Under this head we have been accustomed, during the past year, to string together such items of information as seemed to belong no where else in our journal; and to treat of sundry matters in rather a freer tone than we felt at liberty to do elsewhere. We shall continue to do so; and would remark, that those who think we ought always to look "proper solemn," will find some things here, which they may skip lightly over.

Niconza Nursery. A catalogue of this Nursery, situated at Niconza, Miami Co. Ind., has been received. The Nursery numbers 80,000 grafted and budded trees—and is made up of Apples, Pears, Cherries, Peaches, Grapes, and Miscellaneous Shrubbery. The bill may be seen at our office.

Also that of the Edgar Co. Nursery, *mentioned* by us last month.

☞Our acknowledgements are due to Prof. E. Kellogg, of Williams College, for copies of Dr. Hopkin's sermon before the A. B. C. F. M. at Brooklyn, and of one by Dr. Spring, before the Mills Society of Williams College.

☞About 200 copies of the President's Message have reached us. It is perhaps needless to say that we have not read the half of them.

Hillsdale County, Mich. The Hillsdale Gazette gives the amount of wheat raised, and the number of sheep in that county the present season as 220,114 bushels of the former and 12,220 head of the latter. The numbers are given in a census lately taken there.

Our Present Number. To those into whose hands the Prairie Farmer for the first time falls, it may be well to remark, that the present is not in all respects, a fair sample. It lacks the usual amount and variety of correspondence.

Our correspondents seem nearly all, at once, as if by common understanding, to have deserted us in this number. Perhaps they all forgot it, and perhaps they thought best to stand back and see if we could fill out the number ourselves, without them. We presume they will be satisfied with one trial of us, and will let us hear from them hereafter.

The Penny Magazine, Part 14, is received, from W. W. Barlow & Co., filled like its predecessors with interesting matter. We are glad to see that our notices of this work have attracted notice, and brought the bookseller sales.

The Governmental Instructor. By J. B. Shurtleff. W. W. Barlow & Co., Chicago.

This is a small treatise on the government of the United States and the State governments, designed for the use of schools. It is very certain that at present our youth are either not instructed at all in the theory of their own government, or generally very poorly instructed, and it is equally certain that this ought not so to be. The work before us appears to be well adapted to the purpose intended.

Dog Labor. The Wheeling Times notices a dog belonging to a German blacksmith in South Wheeling which is somewhat remarkable for its sagacity. The blacksmith has one forge that he devotes altogether to making nails for the coarse shoes. At this a boy makes about a thousand day, having the dog to blow the bellows which done by a wheel attached to a crank. The d blows when the iron is in the fire; but as soon it is taken out he stops to rest, and commences once when it is in again.

Woollens at the South. A woollen factory h just been put up in Richmond, Va. The buildi is 420 by 45 feet, and four stories high. It is cap ble of manufacturing 9000 yards of flannel a we and working 210,000 lbs of wool per annum. T machinery was manufactured mostly by Hen Goulding and Phelps & Bickford, of Worceste Mass.

The Boston Cultivator states that a pea orchard in New Jersey yielded fruit in a single ye which sold for sixteen thousand dollars.

Red Water among Cattle. Mr. E. Gridley Half-Day, informs us that he saved, as he thinl the life of a fine heifer by using a recipe given the Prairie Farmer for June, 1845. This was l first year's subscription, and he certainly got p for his dollar.

One way to do it. We notice a good many ar cles now in circulation whose paternity belongs the Prairie Farmer—the articles are credited t work noticed by us some time since entitled T. EMIGRANTS' HAND BOOK. We should not ha spoken of this, but that the fellow who compiled t work obtained five volumes of our paper, fr which he culled pretty liberally—*but forgot to p us for the volumes*, and although we have, in varic ways and at various times, endeavored to "poke u the fountains of his memory, so that this mat might come to the surface—those waters still main stagnant.

We can stand one cheating, but a double one too much fire for our shell. We will send this N of the P. F. to the gentleman, and if he still rema unrelenting, we will chronicle the fact.

☞Where are the Southern Planter, South Cultivator, and Western Cultivator? They ha stepped off our list very silently. They cam have gone together to the land of Nod.

Littell's Living Age, after a little season of s pension, is again on our table. The numbers filled as usual with choice selections from forei and domestic Reviews and Magazines—amo which we notice *Lord Chesterfield's Letters, W lis' Dashes at Life*, Dr. Bethune's Oration, a others.

Blackwood's Edinburg Magazine. Seve numbers of this well known, long establised, a and racy journal are received from Leonard Sc & Co., the re-publishers at New York. Also pies of the Westminster, London Quarterly and E inburgh Review, whose terms will be found on cover. They will be noticed more particula hereafter.

Hunt's Merchants' Magazine. This work l been received by us complete from the commen ment—thirteen volumes in all. We shall hereaf testify our high sense of this work by suitable tices, but for the present refer our readers to terms in the list.

New York Advertisements. Those concerned, which we believe there are many, are referred to eral advertisements on the cover, of firms in N. rk city.

Commmendations of the Prairie Farmer. A great ny of the letters received by us contain warm mmendations of our journal. Heretofore we have blished many of these as a means of letting new ders know what others thought of the work; but believe that the minds of most men are now made that the Prairie Farmer is worthy of support; timonials of which we are daily receiving in the pe of hard and soft dollars—both of which we are y willing to get. We have therefore left out st of them in the present number, and hope there l not be occasion hereafter to make them public, hough we are glad to find that our efforts are satictory.

☞A great number of Books and Magazines are hand for notice, most of which we are unable to ch this month, but hope to get at it in due time. present we refer to our list on this page.

War Again. The Albany Cultivator and Ameri Agriculturist having become tired of these ping times of peace" have commenced throwing shot again. Which has the better so far, we are dly able to tell; as the smoke lies pretty thick the field of battle. Their other war was about od cattle—this is some way connected with the ite Agricultural transactions. But, remembering saying of Solomon, that "he who meddleth in fe, is like one that taketh a dog by the ears," we ll not interfere. If either gets annihilated it will made known.

Money Deposited with Postmasters. As some of friends choose to deposit money with their Poststers in our favor rather than send it to us, we ert below forms which must be substantially folred to enable us to draw the money of the Postster here.

n the first place an order on the Postmaster here st be sent to us of the following form:

——— P. O. (Date.)

Sir—Please pay the publisher of the Prairie rmer ——— dollars, it being the amount this deposited by A. B. as subscription money for l paper.

(Signed,) C. D., Postmaster.

To the Postmaster at Chicago, Ill.

Next, a notice to the Postmaster on whom the er is drawn, thus:

P. O. ——— (Date.)

Sir—Mr. A. B. has this day deposited in this of——— dollars, which you will please pay to publisher of the Prairie Farmer on presentation ny order on you for the amount.

Resp. yours, C. D. Postmaster.

To the Postmaster at Chicago, Ill.

This should be sent under frank to the Postmas- Chicago, before the money can be drawn.

Electric Culture. Some time since quite a sen- on was produced by certain announcements de by one Dr. Foster in Scotland, concerning ie experiments made by him in cultivating barley, wherein the great benefits of lightning brought down by means of wires, were set forth. Certain gentlemen in consequence called upon him to examine his fields and mode of proceeding.

The Doctor was gone from home; but they found a young man on the place to whom they addressed their inquiries, as to whether the crops were better where the poles and wires were placed than elsewhere. His reply was—"Weel, the crop sud be better, considerin' the additional pickle dung it got besides the wires, but he could not say there was any difference in it."

Sounding Names. The Boston Olive Branch tells a good story of a lady who seeing some ornamental trees advertised under a new and strange name, sent and bought them; but after having them nicely planted out, discovered that they were all balm Gileads—a tree, which above all others being her abhorrence—she had just rooted out from her grounds. It is well to look beyond a name.

LIST OF JOURNALS,

Literary, Agricultural, and Scientific, exchanging with the Prairie Farmer.

Name of Journal.	*Price*	*Place of publication.*	*How often published.*
Albion,	$6	New York,	Weekly.
American Quarterly Jour. of Agriculture and Science,	3	Albany, N. Y.	Quarterly.
American Jour. of Science and Art, (Silliman's)	5	New Haven, Conn.	Once in two months.
American Review, (whig)	5	New York,	Monthly.
Blackwood's Magazine,	3	New York,†	Monthly.
Democratic Review,	3	New York,	Monthly.
Eclectic Magazine,	6	New York,	Monthly.
Edinburgh Review,	3	New York,†	Monthly.
European Agriculture,	5	Boston (in 10 parts)	Irregularly.
Farmers' Monthly Library,	5	New York,	Monthly.
Hunt's Merchant's Magaz.	5	New York,	Monthly.
Knickerbocker,	5	New York,	Monthly.
Littell's Living Age,	6	Boston,	Weekly.
London Quarterly Review,	3	New York,†	Weekly.
North American Review,	5	Boston,	Quarterly.
Penny Magazine,	6	New York,‡	Irregularly.
Popular Lectures on Science and Art, (Lardner's)	*	New York,	Irregularly.
Railroad Journal,	3	New York,	Weekly.
Spirit of the Times,	5	New York,	Weekly.
Westminster Review,	3	New York,†	Monthly.

* Published in Parts, at 25 cts. each. † Republished.
‡ In 21 Parts, at 25 cts. each.

These publications are all—each in its particular line—the best of which we have any knowledge, either in the United States or in the old world. Many of them are too well known to require more than the mention of their names. Others, though not as well known, are equally excellent. Samples may be seen at our office; and subscriptions paid us will be cheerfully forwarded.

The situation of the farmer is that in which the Almighty placed his people in their days of comparative innocence, and to that situation many of His laws refer; and when in the fullness of time the Messiah came, it was to the shepherds that his advent was announced by a chorus of angels. It was chosen by the Almighty for his people under the old dispensation, and they were the earliest recipients of his favor under the new. Agriculture conduces to health and competence; and in giving these it gives all this life can bestow, and if rightly improved, they will open to him a glorious future.—*Quincy's Address.*

CHICAGO PRICES.

Corrected, Jan. 1, 1846.

WHOLESALE.

PROVISIONS.		$ cts.	$ cts.
Beef	℔ 100	2 00. @	2 50
do. Mess	℔ bbl	5 00. @	5 50
Pork	℔ 100	3 50. @	4 50
do. Mess	℔ bbl	@	15 00
Lard	℔ lb	7½ @	8
Butter	do	12. @	15
Cheese	do	6. @	9
EBRAD STUFFS.			
Flour, superfine	℔ bbl	@	3 50
do. fine	do	@	3 00
do buckwheat	℔ 100	1 50. @	1 75
Corn meal	℔ bush	@	37½
GRAIN.			
Wheat, winter,	℔ bush	75. @	78
do. spring,	℔ bush	65. @	67
Oats	do	@	25
Corn, shelled	do	31. @	33
SUNDRIES.			
Hides, dried	℔ lb	@	7
do. green	do	2½ @	3
Feathers	do	22. @	25
Beans	℔ bush	75. @	87
Cranberries	do	@	1 50
Potatoes	do	25. @	30
Onions	do	@	40
Wood	℔ cord	2 25. @	3 50
Eggs	℔ doz	20. @	25
Flax seed	℔ bush	85. @	90
Turkeys	each	50. @	75
Geese		31. @	37
Chickens		10. @	12½
Barrels		62½ @	75

RETAIL.

GRASS AND FIELD SEEDS.			
Timothy	℔ bush	1 25. @	1 50
Blue Grass	do		2 00
Red Top	do	1 75. @	2 00
Red Clover	℔ lb	@	12½
White do	℔ lb		37½
SUNDRIES.			
Salt	℔ bbl	1 75. @	2 00
White Fish	do	@	5 50
Mackinaw Trout,	do	@	5 50
Dried Apples	℔ bush	1 50. @	2 00
Lard Oil	℔ gall	37½ @	100
LUMBER			
Boards, 1st quality	℔ M	14 @	15
do. 2d quality	do	9 @	12
Scantling and joist	do	@	9
Flooring and siding	do	9 @	12
Lath	do	@	2 50
do. board	do	6 @	7 00
Shingles	do	1 75. @	2 50
Sash—8by10	℔ light		3
Square timber	℔ ft	6. @	10

The last advices from New York are that there has been quite a decline in the prices of breadstuffs, flour having fallen to $5 50 and 5 75 per bbl. Mess pork sold at from $13 37½ to 13 50. Beef, mess $8 00 to 8 50, and prime $5 00 to 5 50. Sales not large. As a consequence the price of wheat has declined in this city since our market article was written. The correct price of wheat to-day will be found in our price current.

APOLOGY. In consequence of New arrangements, we are unable this month to get in all our advertisements. The next month's cover will be double the present size, when we shall have room for all.

CONTENTS OF THE PRESENT NUMBER.

THE PRAIRIE FARMER,

Devoted to Western Agriculture, Mechanics, and Education. Published monthly at Chicago, Illinois, by John S. Wright, containing 32 very large octavo pages, besides a colored cover with advertisements. Terms, $1 per annum, 6 copies for $5, 13 copies for $10, 40 copies for $30, 70 copies for $50, 103 copies for $70, in advance. All communications must be sent free of postage. John S. Wright and J. Ambrose Wight, Editors. Vol. 6, 1846.

REASONS FOR TAKING IT.

1. It is one of the largest and cheapest agricultural papers published in the United States. Specimen Nos. sent to those requesting them.

2. It is not published for the whole country, but for the especial benefit of western farmers.

3. A large amount of the matter is supplied by correspondents, more than three hundred in number, from all parts of the West; as a body unsurpassed in ability and practical knowledge, by those of any other agricultural paper. 4. It is illustrated with an abundance of well executed engravings; is well printed on good paper; and each number accompanied by a cover to keep it clean.

5. A full and complete Index is sent at the end of the year, making a volume of about 400 pages, invaluable as a work of reference,

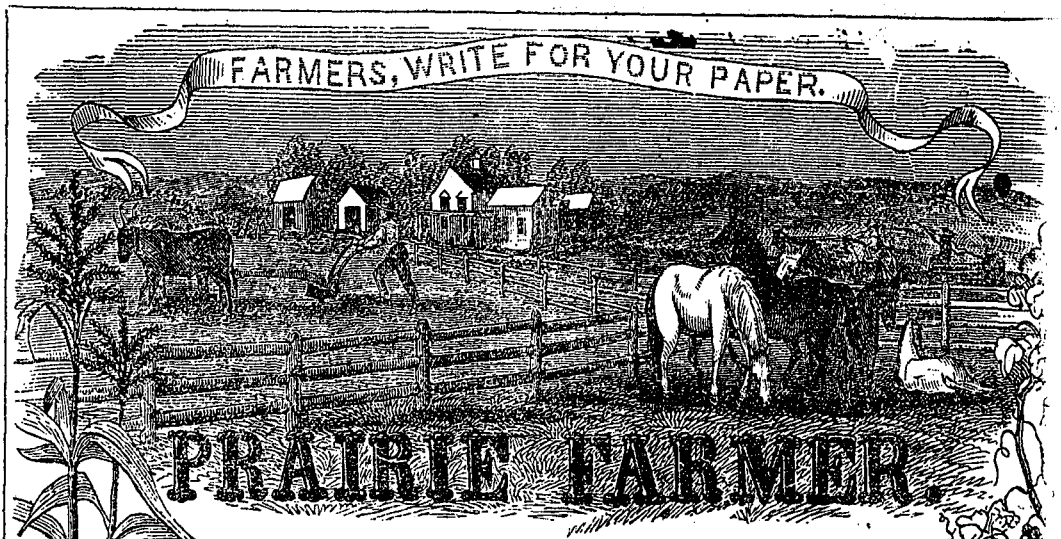
6. The information contained either under the head of "Veterinary Department," or "Household Affairs," or "Orchard and Garden," is worth several times the cost of the paper.

7. It contains Chicago Prices Current, with the latest intelligence of New York and other markets.

8. Common Schools are too much neglected in the West, and two or three pages are occupied with disseminating the most important information concerning them.

9. It is permanently established, and as a western paper should receive the undivided support of Western farmers, particularly as

10. It is pronounced by those who have taken it from the commencement, and by the public press generally, the best agricultural paper for western farmers, that is published.



PRAIRIE FARMER.

DEVOTED TO WESTERN

AGRICULTURE, MECHANICS AND EDUCATION.

EDITED BY

JOHN S. WRIGHT AND J. AMBROSE WIGHT.

Vol. 6. **FEBRUARY, 1846.** **No. 2.**

JOHN S. WRIGHT, PUBLISHER,

171 LAKE STREET, CHICAGO.

Subject to single newspaper postage only.

Terms—$1 per annum.

WINE MAKING FROM NATIVE GRAPES.

BY D. LATHROP.

Messrs. Editors: If any of your numerous correspondents or readers of the Prairie Farmer know any thing of the properties of the native wild grape of Illinois, for wine making, they would confer a favor on one at least, by communicating the same to you for publication. I am of the opinion an excellent wine may be made from them, and that it would be far better to make all the wine we use for medicinal and sacramental purposes than to purchase the foreign wine. I have several experiments in progress with the juice of the above mentioned grapes, some of which I think bids fair to produce a good article. I have supposed the grape to be deficient in saccharine matter, and have supplied that deficiency with sugar. My experiments are all by weight and measure, a register of which I have kept, and will give you, together with the result, if you think the matter worthy of notice.

La Salle co. Ill. January, 1846.

The native grape referred to by Mr. Lathrop is, we suppose, the frost grape, *vitis vulpina*, which is the only wild grape we have seen in this State—although we believe there is more than one variety of it. Are there not larger and better wild grapes in the south of this State?

HISTORY OF THE WESTERN PLOW.

BY J. T. GIFFORD.

Messrs. Editors: I gave you encouragement some time since of throwing together a few thoughts in relation to the first introduction of the steel plow in the West, which I will now attempt to do.

That there has been improvement made in the plows used on our prairies within the last six years, of incalculable value to the farming interest, will be denied by none who have had sufficient acquaintance with the matter to judge; and that the important result has been gained through the efforts of any one individual exclusively, will, I presume, be claimed by none. Indeed, among some half dozen of our prominent plough manufacturers within the bounds of the Union Agricultural Society, who have, with such commendable spirit and perseveverance, aided in bringing out the invaluable implement which now blesses many of our farmers, it is hard to make distinction. Each is entitled to honor greater than the conquerer of armies. Mr. Lane of Will county, Messrs. Pierce, and Scovill & Gates of Cook, Jones of Dupage, the lamented Bristol, with Guptil & Renwick of Kane, and among the rest your humble servant would claim a small portion. The first plow made with steel moldboard I believe was made by Mr. Lane. It was made of separate strips, as at that time (1842) no steel plate had been manufactured, or at any rate none had been introduced in the West of width to make a plow moldboard entire. In the spring of 1843 the proprietors of the Elgin plow factory, Mr. Renwick and myself, negotiated through Mr. I. B. Eddy of your city, with manufacturers in Pittsburg and Philadelphia, to have a quantity of steel made of sufficient width for an entire moldboard. Owing to various delays in the manufacture and forwarding, the steel which was expected in July had not arrived, when the Ottawa fair crowded hard upon us in October. Having waited until within a very few days of the fair, and no steel arriving, our minds being made up for a steel plough for that occasion, we purchased the largest and thickest circular saw to be found in Chicago, from which we made two plows of steel face entire, to one of which the first premium was awarded at the Ottawa Fair in October. About the 1st of November of that year some of the steel was received from each of the manufacturers at Philadelphia and Pittsburg, and before the close of navigation in 1843 another small lot was received by Mr. Eddy from Sheffield, England, an agent in New York finding the article coming into requisition, and having prompted manufacturers there to make and forward steel of that description. So that from those different establishments many of our prominent iron dealers at Chicago and other western towns are now supplied, and steel plate for moldboards is very extensively used in prairie soil. As to the comparative merits of steel and boiler plate, for plow moldboards, there is some diversity of opinion, I find, among farmers. Time and observation on the durability and operation of each, when made of the same form, will settle the question, and it is one deserving the attention of practical farmers.

Elgin, January, 1846.

WANT OF TIME TO READ—EARLY SOWING, &c.

Messrs. Editors: I have read about five numbers of your paper, the perusal of which gave me the greatest satisfaction, being the first of the kind that I ever read. I believe it is just the paper that every farmer in the entire West should take, —if he is able to take but one—in preference to any other. I think there are many farmers in this vicinity who are able to take it, but have not the disposition; or rather, (as they say) have not the time to read it if they should take it. This will not apply to all. I would just ask if there are not many such farmers that are criminally prodigal of their time. In the first place every farmer should have a good time piece, and then in the second place he should plan out his time systematically, so as to make room for the improvement of the mental faculties entrusted to him. I believe there is not a farmer in this western country that cannot with proper management obtain at least two hours out of the twenty four, to devote to the cultivation of his mind; and many can go as high as five or six hours out of the twenty four, and still not encroach on their working hours, especially in the winter season.

I fear that many such, that plead their want of time to read, waste, they know not how, from one to three hours in every twenty four, in dosing in bed after the wants of nature have been fully gratified, or for the want of a proper division of their time, or a little energy or perseverance, in spending said time to the best advantage, which would be ample time to read the Prairie Farmer through carefully every month, and a large amount of other profitable reading besides.

Supposing we just ask ourselves the questions—What is done with my time from six until nine in the evening, and then again from four until seven

in the morning? I question whether some will not be obliged to say (if they tell the truth) that a large proportion of the above mentioned time is either spent in unnecessary sleep, or else in hanging about stores, groceries, taverns, grogshops, or in some other unprofitable place.

Now supposing every such farmer should save each fragment of spare time, and diligently and studiously apply the same in poring over a well selected library of books, periodicals (monthlies and weeklies) for a term of twenty years; what a vast amount of information might he have laid up in store for his own and others' benefit. It is my humble opinion that farmers as a general thing (myself with the rest) are very much in fault with respect to systematic farming, especially in reference to a proper division of their time. Farmers are not aware of, or are prone to forget, the fact, that they have within their possession the time, the means, (if disposed,) the physical strength, and the natural powers of mind, that can be cultivated to almost any extent, at least to that extent that they are not to be sneered at by the best educated youth that ever graced the walls of a New England college.

Now concerning my crops. I have only been in the West long enough to raise two crops of wheat—the first not worth noticing. The second I sowed on ground that I stubbled in, in the fall of 1844, which I cut last harvest. It yielded me about a a bushel to nine sheaves. In the spring of 1845 I sowed some hedge-row spring wheat, which produced about 25 bushels to the acre. I think I sowed the fore part of March, two bushels to the acre.

I see that some of your correspondents recommend planting corn as early as possible. I believe it will not do every season. Those that planted the earliest last spring, in this vicinity, almost entirely failed, as their corn was cut down two or three times with the frost.

I am of the opinion that there will be a scarcity of fodder in this neighborhood in a few years, unless farmers come upon some plan that will produce more feed than I have seen yet. I have noticed several pieces of tame grass, but none of them appear to do well. It is probable this is owing to bad management. What kind of feed would millet make for cattle? I see it is highly recommended for sheep. Will some one of your subscribers give his experience in growing corn sowed broad-cast and harrowed in purposely for provender—the amount used to the acre, the time of sowing, &c? Will some one also please give through your columns his method of making a dwelling house out of unburnt brick—the probable cost, one story high, fourteen by twenty feet on the ground?

A READER OF PR. FARMER.

Walworth, Wisconsin, Jan. 1846.

An orchard in Westchester county Pennsylvania, contains 20,000 apple trees, which have yielded the present year about 4,000 barrels of apples, which are readily sold for six dollars per barrel in Philadelphia, for exportation to England, where they are expected to command $12 to 20 per barrel. They are the Newton Pippins.

REVIEW OF THE NOVEMBER NUMBER.

MESSRS. EDITORS: Where is your reviewer? Self-constituted, here. November No. received here 10th December. Who did it?

"Farmers' warehouses." Ask the "forty thieves" of the Wisconsin Legislature why such warehouses were not established years ago. Any "banking privileges" tucked under your wheat sacks?" Look out, Messrs. Southport farmers, that you don't get *Sweet*-ened in the operation.

"Winter management of sheep." Mr. Morrell should be voted an annuity for what he has said on this subject, if only for the attention which his remarks are calculated to awaken on the subject of feeding, as applied to all manner of stock.

"Wire Fences." No go! Too many posts—too much iron—too little fence.

"Agricultural Fairs." Fncourage Wisconsin in getting up "such doins."

"Southern Illinois for Wheat." I fear you ploughed too "shallow" when you *ploughed* no deeper for the causes of wheat failure. Are there *no* good farms in Southern Illinois? I think I've seen *some* there who failed in their wheat crops, and ploughed well too.

"Fattening Hogs." Worth at least one year's subscription to the farmer. But I am so exceedingly dull that it is by no means "obvious" to me why corn boiled soft in the grain is not as soft, as easily masticated, as nutricious, containing as many of the essentials to make *fat*, and as readily digested, as though it were first "ground" and then cooked soft. If so "easily explained," give it a little "further remark."

"Tom Jones on Wheat culture." Friend Churchill, did you ever rotate corn, oats, and wheat, (wheat following the oats) for a few years in succession? If not, try it and write again.

"Horticultural Festival." If the time of the exhibition was taken "up in eating fruit," &c. I think your "iron is hot" enough, and that you'll have no difficulty in getting "strikers" enough to help you.

"Coleman's European Agriculture." I say now, had thee rather write about the "Galway women" and other women in general, or about "European Agriculture?" That "natural diffidence" of thine! 'Tis too bad!

"Wheat raising compared with cows." Try your *cultivation* over again, brother farmer, or folks might think you were looking through cow-skin spectacles, and thick ones at that.

"Carlyle Truth Teller." "By their *fruits* ye shall know them."

"Sweet Potatoes." How I would like to manage myself into an invitation to dine with you occasionally in "sweet potatoe time." I shall certainly try your plan of raising the "long roots" in this northern country, and report in proper time. Do tell us more about it.

"A Pencil sketch."

> "That strain again (!!!) it hath a dying fall;
> —Enough! No more!!
> *'Tis not so sweet now as it was before.*"

"Okra." *Pretty good*, but not *quite* equal to the "ginnewine" berry. I've tried it, "off and on" for the last twenty years.

"Fall Ploughing." Why is it being abandoned by old farmers at the east? My limited experience is decidedly in its favor.

"The Potato Rot." A subject of very great interest and importance, on which I hoped to have found more in the present number of the Farmer. Many causes are assigned for this terrible malady. There are one or two of them which are likely to lead farmers astray for the next season. They are erroneous. I therefore state them, with the hope that they may divert the attention of those believing them into other channels. I do not pretend to tell what *is* the cause—only what is *not*.

1st. The opinion often expressed, that potatoes grown upon dry land will not suffer, is an error. I raised two acres on *dry, gravelly* land. More than half rotted. 2d. The notion that the rot is occasioned by the potato's having "run out," and that a resort to the ball for seed will remedy the evil, is equally erroneous. I keep always a nursery of seedling potatoes. This year I planted nearly an acre of land with potatoes two years from the ball (the present crop three years old.) They have rotted quite as badly as my old potatoes. I have lost about three fourths of them, and of my whole crop some 3½ acres, (of which about one half were Neshanocks.) I think I shall not save a single Neshanock, either seedling or other. Let those, then, who have grounded their hopes of a sound crop upon either of these sources, look to some other, or they will be disappointed. It is true, however, that my potatoes rotted *worse* in wet than in dry land, and worse also where there was much stable manure.

"Choice of Location."

> "'Tis in tastes as in opinions,
> Some love oysters, some love ing-uns."

"Smoking Seed Corn." Very good if true.

"Transplanting." New to me, but good reasoning. Can friend Overman furnish to order, seed or plants of the Virginia Hedge thorn? If I can get them I will grow a good hedge fence, whilst he and Judge Robinson are finding out whether it can be done.

"McCormick's Reaper." Where can it be had? Great many puffs now-a-days.

"Editor's table." I have put up several specimens of "insects" for you, though not such as prey upon trees. One of them was taken on a bedstead, and has "a kind of spicy smell." The other I found making some "hivey" and most uncomfortable looking pimples under a stocking, and when I caught him he was gone. Can you contrive some way to get rid of them? How would your "rat powder" *operate* on their stomachs? By the way, that powder is about the greatest *puff* I know of. I hope the Telegraph will not be so unfortunate as to get some of it into his apple barrel. Perhaps his barrel did'nt hold *quite* 10 pecks. "Lord, how this world is given to ——!"

You need not go to India for the Nepenthus.* The most beautiful specimen of "Nature's Providence" in this fashion is found in our tamerack and cranberry marshes. If you wish them I'll try to send some specimens next year. SCRIPSI.

As we do not know our reviewer from a piece of potash, we will frankly state to him, that he has not chosen, in our opinion, the best style of commenting. Still he has convinced us that he is capable of doing the work properly, if he will choose a better model.

The part of reviewer to an agricultural paper is a very difficult and responsible one. It does not require any rare qualification to say something hap hazard of each article, and even something witty; but this is not what is required. Those whose communications are commented upon in such cases are apt to feel that injustice is done them; and although truth is said, it fails to have its weight when told in a flippant, sarcastic tone. What is required is a calm, well considered, candid treatment of the contents of the paper; and to do justice to the matter, it is hardly possible to name or refer to a great number of the articles in each number.

Our critic is doubtless acquainted with the comments of Judge Garnett in the Albany Cultivator *some years since*; and if he will refer to them, he will get an idea of what we mean. Suppose he tries his hand in that vein.

[*Extract from a Report to the Sugar Grove Institute.*]

CORN AND WHEAT.

BY S. S. INGHAM.

No. 10 Is a field containing about forty acres, and is fenced with rail fence six and seven rails high, staked and ridered—this year's crop twenty acres of corn. I let the ground out. I am not able to say how much labor has been expended on it, but it is generally thought that it will yield fifty bushels per acre. I sowed fourteen bushels of winter wheat, which yielded seventeen bushels to the acre. It was on sod, and it cost one day's work per acre to harvest the same. I sowed sixteen bushels of spring wheat and fourteen bushels of oats, which cost about the same per acre as the winter wheat. I have threshed two acres of the spring wheat (the poorest,) which yielded twenty-

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* Our correspondent is mistaken here. The *Nepenthes*, (not Nepenthus) is a tropical plant, of which there are three species only. The leaf, which is about nine inches in length, is shaped very much like a jug, except that the top is not as small as the nose of that vessel. In the bottom of the leaf springs up a spiral stem, which grows to a considerable length—projecting beyond the leaf—on the top of which grows a beautiful cylindrical urn, having a very neat lid, which opens during the day and allows a part of the water contained in it to evaporate. In the morning, however, the pitcher is again full, and the lid closed. The urn or pitcher is about three or four inches in length, by one in diameter.

A gentleman in this city, who was bred a nurseryman in London, informs us that he owned one of these singular plants—of which there were probably not a dozen specimens in all Europe—and which he sold for twenty-five guineas!

The plant referred to by our correspondent is undoubtedly the *sarracenia*, of which there are in this country two northern species—the *purpurea* or *side-saddle* plant, and the *heterophylla*—and five southern. The sarracenia heterophylla we gathered in our boyhood from the swamps in Massachusetts, and if we mistake not, saw a sample of it in this town a year since. One species, we are uncertain which, grows about seven miles north of this city. The botanical catalogue which we are now publishing contains no reference to this genus. We should be glad to obtain the specimen spoken of.

two bushels. I think that the remainder will go twenty-five per acre. As to the amount of oats, I think there will be something more than 200 bushels, as there were something rising of 2000 bundles.

No. 11 Is a field containing 20 acres. Plowed 10 acres winter wheat on oats stubble. It cost a little less than a day's work to the acre to plow, sow, and drag, and a trifle less than a day per acre to harvest. Yielded 23 bushels per acre. Planted the remainder to corn and potatoes. As to the labor expended on it, I plowed it last fall very deep, drew some manure last fall and some this spring, in all about 250 loads. I then dragged and ridged it this spring, furrowed it across the ridges, and then planted it. I plowed it twice and dragged it twice. It yields me 73 bushels and 6 quarts. It took me one day to drag it each time, two days to plow it, and four days each time to hoe it. It is fenced all round with rail fence six rails high, staked and ridered.

The whole that has been raised on my farm for the year past is about as follows: Winter wheat 349 bushels, spring wheat 194 do., corn 1500 do., potatoes 425 do., oats 590 do., peas 9 do., beans 2 do., wool 82 lbs.

Sugar Grove, January, 1846.

HEDGE LOCUST—PRAIRIE GRASS.

BY F. D. BOWMAN.

MESSRS. EDITORS: I wish to make one enquiry of you. Is there such a shrub as thorn locust—a something of the locust species, different from the honey or black locust, that will make a good hedge? I have heard two or three reports of some man in Dodge county, who with such a named shrub has made a hedge of three years' growth that would turn cattle, and defy the veriest land pike in all Suckerdom. I think, however, there is too much of the multicaulis smell about it. The story is that he planted the seed. Where did he get it? Perhaps the gentleman will please to inform me through the Prairie Farmer.

I just recollect seeing in a New York city paper two articles copied from the Daily News, Chicago, and the Prairie Farmer, upon the subject of keeping sheep. In each article I think the authors have gone to extremes. I have kept sheep four years in this part of the Territory, and never, except one season, has there failed to be good and sufficient feed for sheep from the first week in April to the middle of October. I think the prairie grass starts quicker in the spring than any other, and makes more hearty feed. Horses and cattle will thrive better on it, and be stronger to work in the spring, than on any other grass I ever saw. I believe in having fall pasture of tame grass, and no man should commence the sheep business without first seeding down enough for his stock to feed on from the 1st of October—although for sheep it will seldom be wanted till the 15th. For winter feed I want nothing better for sheep than the hay cut upon our natural meadows in this part of the Territory. I think the meadows here are superior to those of Illinois, being well drained. The grass is sweeter and finer. Southern farmers travelling here remark this.

Waupun, Wisconsin, January, 1846.

In speaking of prairie grasses, in papers which circulate widely, it is necessary to speak of them as they are in the great majority of places; and although there are large prairies and particular locations to which our remarks alluded to would not apply, we are satisfied that they are true as regards most of the country spoken of. Our correspondent will see from his own letter that his location is strictly an *exception*. The herbage of our upland prairies, where we have seen them, will by no means keep sheep from the first of April to the middle of October—and yet we know of low lands covered with the Indian blue grass, where they might feed a good part of the winter.

[*From Morrell's American Shepherd.*

SHEEP FEEDING.

The next table, showing the nutriment of a large number of articles of food, is translated from the French. by W. Rham, of England, and is said to be "the result of the experiments made by some of the most eminent agriculturists of Europe in the actual feeding of cattle." Mr. Rham accompanies it with the following observations:

"Allowance must be made for the different qualities of the same food on different soils and in different seasons. In very dry summers the same weight of any green food will be much more nourishing than in a dripping season. The standard of comparison is the best upland meadow hay, cut as the flower expands, and properly made and stacked, without heating; in short, hay of the best quality. With respect to hay, such is the difference in value that if 100 lbs. of the best is used, it will require 120 lbs. of the second quality to keep the same stock, as well as 140 lbs. of the third, and so on till very coarse and hard hay, not well made, will only be of half the value, and not so fit for cows or store cattle, even when given in double the quantity. While good hay alone will fatten cattle, inferior hay will not do so without other food.

"I shall give the table as it stands, and add the notes which accompany it.

	lbs.	
Good hay	100	is equal in nourishment to
Lattermath hay	102	
Clover hay	90	made when the blossom is completely expanded.
Do.	88	before the blossom expands.
Clover, second crop	98	
Lucerne hay	98	
Sanfoin hay	89	
Tare hay	91	
Clover hay, after the seed	146	
Green clover,	410	
Vetches or tares, green	457	
Shelter wheat straw	374	
Rye straw	442	
Oat straw	195	

	lbs.
Pea straw	153
Bean straw	140
Mangold-wurtzel	339
Turnips	504
Carrots	276
Swedish turnips	308
Wheat (cleaned)	45
Barley	54
Oats	59
Vetches	50
Peas	45
Beans	45
Wheat bran	105
Wheat and oat chaff	167

"Lattermath hay is good for cows but not for horses. Raw potatoes increase the milk of cows, but they must be given with caution, and only a few at first, till the stomach is accustomed to them; boiled, they fatten every kind of stock; mixed with cut chaff, they are excellent for horses; 14 lbs. of boiled potatoes will allow of a diminution of 8 lbs. of hay; hence their value in this way is calculated.

"Every kind of cattle eat turnips except horses. Turnips will feed store pigs, but they will not fatten them. Carrots and parsnips are excellent for horses, and, when boiled, will fatten hogs. Rutabaga is liked by horses; it makes their coats fine, but it must not be given in too great quantity, or it will gripe them."

In the German Farmer's Encyclopedia, Petri, an honorary and corresponding member of many societies for the promotion of agriculture, contributed a valuable paper on "The keeping, care, and breeding of Sheep," in which will be found the following table of the comparative nutriment of various kinds of food.

			[matter.
100 lbs.	aromatic meadow hay contains	50 lbs.	nutritious
100 "	Clover hay,	55	do
100 "	Tender vetch hay	55½	do
100 "	Wheat straw	14	do
100 "	Corn straw(stalks)	20	do
100 "	Barley straw	47½	do
100 "	Oat straw	25	do
100 "	Pea straw	25	do
100 "	Vetch straw	20	25
100 "	Millet straw	26⅓	do
100 "	Chaff	27½	do
100 "	Potatoes	25	do
100 "	Cabbage turnips	25	do
100 "	Yellow turnips	25	do
100 "	White turnips	12½	do
100 "	Beets	16½	do
100 "	Corn	95	do
100 "	Wheat	95	do
100 "	Rye	90	do
100 "	Barley	82	do
100 "	Buckwheat	78	do
100 "	Oats	70	do
100 "	Peas	93	do
100 "	Vetches	93	do
100 "	Wheat bran	48	do
100 "	Rye bran	46	do

Petri confirms what has already been said in relation to the fondness of sheep for variety of food, by enumerating 252 plants which they eat with salutary effects, and 39 others of which they partake, of an injurious tendency.

He gives the following as examples of average of fodder for a ewe in the month of January, when the yeaning commences in March:

1st day—	morning	¾ lb.	good oat straw
	noon	½ "	good hay or clover
	evening	¾ "	good barley straw
2d day,	morning	¾ "	millet straw
	noon	2 "	potatoes with 4 oz. chopped straw, and 4 oz. of oats
	evening	¾ "	barley straw
3d day,	morning	¾ "	hay
	noon	¾ "	hay
	evening	1 "	wheat, oat, barley or buckwheat straw
4th day,	morning	¾ "	summer straw
	noon	¾ "	chopped straw, with 3 oz. oats and 3 oz. bran, moistened with water
	evening	¾ "	winter straw
5th day,	morning	¾ "	hay
	noon	2 "	potatoes with ½ lb. chopped straw
	evening	¾ "	winter straw
6th day,	morning	¾ "	hay·
	noon as in 4th day		
	evening	1 "	straw

ECONOMY—WHAT IS IT?

It is not economy to burn green wood. The water contained in the wood requires a certain proportion of fuel to drive it off, which must be done as combustion proceeds; so that there is not only a loss of so much heat, which instead of passing into the room passes up the chimney, but the extra hauling amounts to about one sixth of the whole.

It is not economy to delay banking the house till the ground freezes, and the winds are left to play their pranks under the floors, through the cracks of which they will ever be whistling during the whole winter.

It is not economy to keep a smoky house. The smoke blackens the paint, plastering, or papering—if there is any; at any rate it gives a dingy and disagreeable tinge to the whole interior—spoiling the complexion of the women and children, which is worth something—causing weak eyes and uneasy throats, a great wear and tear of temper, and thus makes life more uncomfortable than there is any need of.

It is not economy to keep a cold house. Modern ways of economizing fuel are so many and cheap, and it costs so little more to make a house tight than it does to leave it open, that cold feet, colds, inflammation of the lungs, and twenty other diseases—to say nothing of the discomfort endured—are paid for too high, when their price is a little neglect and want of enterprise in fitting up an abode to prevent them.

It is not economy for children and the females of a family to wear calico or other light material for dress in winter. Their price may be a little less, but the horrible deaths occasioned by their taking fire, of which the papers are full every cold season, a thousand times overbalance this little advantage; besides, woolen stuffs are plenty,

easily obtained, warmer, and every way more suitable for winter use.

It is not economy, when a good grindstone can be got for a dollar, to depend upon a neighbor for this article—especially if the neighbor lives a mile or two off.

It is not economy to half feed sheep, cattle, swine, or horses, in winter. The food they consume is the fire that warms them. If they do not have plenty, its place must be supplied by the fat they have laid up on their bodies, in which case they will become poor; and if they have no fat laid up, they must suffer terribly, if not perish.

It is not economy to keep animals shelterless. They consume a sixth more feed, freeze their feet, ears, and noses, suffer greatly, and are less likely to come out healthy in spring.

It is not economy to send children to school without books.

It is not economy, in short, to indulge in any careless, shiftless mode of doing business; or in any want of energy in attending to one's own affairs.

It is economy to get up the year's supply of wood in the winter, when time is less valuable than at any other season, and when snow can be used—thus saving an immense amount of lifting over wheels which will have to be done if the hauling is left till summer.

It is economy to keep farm books in which are entered the expenses of all crops and stock raised on the farm, and the avails of all sales set opposite—a careful balance being statedly struck so as to exhibit clearly the progress made—whether it is real progress, or of a kind with the Irishman's march to Cork when "every time he took one step forward, he slipped back two."

It is economy to settle with all persons with whom a running deal is had, at least as often as once a year.

It is economy to have a clear understanding in advance in relation to all small matters in making bargains, instead of leaving them to be settled at the end, under some such "arrangement" as "We sha'n't disagree about trifles."

It is economy to attend to all matters in their season—to be energetic and beforehand with all farm and every other kind of work—to be at a little more expense when the return is sure to be better in proportion—and in short to do things as one's better sense shows they ought to be done.

It is economy to expend one, five, or ten dollars—as the case may be—annually, for good, well-conducted newspapers and magazines—including from one to four agricultural ones—thus getting a knowledge of passing events and the ways of the world—obtaining information of inventions, better modes of culture and management—hints which save an animal or a crop, and which enable one to *make* as well as to save money—giving reading for the children and family, and something to think and talk over—thus promoting good family feeling and making life glide on pleasantly and profitably.

Some one says, the water in which potatoes have been boiled, sprinkled over plants, completely destroys all insects in every stage of their existence, from the egg to the fly.—*N. E. Farm.*

SPIRIT OF THE AGRICULTURAL PRESS.

Moss on Roofs. The Amherst Express says that white lead, sprinkled on a roof so as to be washed down by the rains, effectually kills the moss which grows upon them and causes the decay of the shingles. Would not salt do the same?

Improved Farming. A good many people imagine that all the talk about improvement in farming is a mere fancy matter, fit only to be attended to by men of wealth and leisure. On the contrary it is in good part a matter of dollars and cents, as the following extract from a letter to the New York Farmers' Club, by a farmer in Yates county, will show.

"Eighteen years ago, Yates county was not more than one half of it considered a wheat-growing county, and the rest of it hardly fit for grazing. It has abundant water power.

It has been no uncommon thing to raise thirty and forty bushels of wheat on an acre—this has been an average of many crops this season. In one instance fifty seven bushels of spring wheat was raised on one acre, measured by a surveyor's chain. In 1844 three acres produced 135 bushels of the Hutchinson variety, a bearded wheat. The lands which ten years ago would not produce ten bushels an acre are now giving twenty to twenty five. The soil is chiefly clay, loam, sand, and marl. Barley has been raised among us in great quantities, and pays better than wheat. Corn and potatoes are chiefly consumed in our own county. Some farmers have undertaken to raise carrots—the drought has discouraged them.

When I began on my farm, white beans would not grow on it, and I found wheat on it at about eight bushels an acre. By plowing eight inches deep, by good manuring, &c. I have had thirty bushels of wheat from an acre, forty seven of barley, and instead of twenty bushels of shelled corn to an acre, I have forty. I have 300 bushels of potatoes from an acre, and from two and a half to three tons of hay per acre. I have used plaster with great advantage."

Canada Thistles. This pest is gradually finding its way into the western country, and we are informed that in some places no effort is made to stay it. Every farmer within ten miles of a patch of it had better spend a week four times each year in eradicating it than to allow it to get a foothold. Mr. J. J. Thomas in the Albany Cultivator details some of the ways in which it may be destroyed.

"I have had some experience in destroying them, and more observation; and I know of no way which will at all compare with thorough and repeated plowing.

The first plowing must be left till about the time that the thistles appear in flower, or when they have become considerably exhausted by growth, when they must be *well* and *deeply* turned under, mowing the thistles previously, if necessary to the success of the work. Then they must be again turned under at least once a month till mid-autumn, or thereabouts, when, if the work has been *well done*, the patch will be killed forever, or till the ground is again seeded with thistles from elsewhere. Wheat may be sown on the ground the same au-

tumn. A statement of a few experiments may place this in a clearer light:

Daniel Wilson, of Covington, Genesee co., N. Y., had a patch of Canada thistles so dense that the roots formed a complete mat. "He plowed the ground at regular intervals of four weeks for four successive times, when after the fourth plowing, there was not a thistle to be seen, and the ground was in fine tilth for sowing wheat, loose and nice enough for any garden vegetables; and now, July, 1833, there is a most luxuriant crop of wheat on the old thistle bed, and not a solitary thistle has been found, although it has been carefully examined by those interested in testing its efficacy."

"I commenced about the first of June," said the late V. Yeomans, of Walworth, Wayne co., N. Y., "and ploughed them about once a month, and harrowed them as often, till about the first of October. The result is, their entire destruction, except a few places where the ploughing could not be well done."

Augustus D. Ayers, of Romulus, Seneca co. N. Y., says, "The field contained six acres, principally occupied with Canada thistles, on which a Florida war had been waged for twenty-five years or more, with little prospect of success or termination. In the latter part of May I broke it up, plowed the ground deep four times, and harrowed it in the heat of summer. The result was, it killed the Canada thistles, and my ground is in good condition for after cropping."

An experiment of the kind I also tried myself on about four acres of Canada thistles, by causing the ground to be plowed thoroughly four times during the season. The occupant, who bought the land that year, informed me that none appeared the following season.

The importance of doing the work well, and of cutting off and deeply burying every plant, must be obvious; and the superiority of throwing them so far under the surface as to require a month for them to creep out, over a mere skimming of the surface with the hoe, or cutting them off above the surface with the scythe, must be also evident. A correspondent of the Genesee Farmer, (vol. 4, p. 324,) killed a patch by hoeing to the surface *twice a week;* but he worked from spring till nearly the first of eighth month (Aug.) before each successive three days' crop began to diminish; after which, by closely following their retreat, they rapidly disappeared. But they had a much better chance to *breathe* in this case, being a part of the time above ground, than when kept wholly under by a deep plowing as soon as they made their appearance above the surface. Such treatment would prevent the necessity of taking up and *burning* "every plant and vestige of the root," as Dr. Smith recommends in the article above alluded to, which, in large patches, where the roots often run several feet below the surface, would be wholly impracticable; or of pulling up every shoot as soon as it appears, "*for seven or eight successive years*," as Loudon recommended—the phrase "as soon as it appears," meaning, probably, from one week to one month, or more; for it is impossible for *any* plant to live *wholly* beneath the surface for half that number of years."

Deep Plowing. During the past year we have on several occasions drawn attention to the subject of deep plowing; and our observations have been confirmed by conversations with others. The Albany Cultivator has the following.

"Dr. D. H. Robinson, of Farmington, Ontario co. N. Y. plowed a piece of grass land late in the summer for wheat, to the depth of nine or ten inches. This was thoroughly harrowed, with a light dressing of well-rotted manure, and the seed sown upon the inverted sod. The product was thirty five bushels per acre on land where twenty are usually considered a heavy crop. Another skillful farmer finds so much benefit from the mixture of the subsoil, that he considers a decided advantage would result, so far as fall wheat is concerned, if six inches of the surface of his land were entirely removed and carried off."

Wild Ducks. The Maine Farmer asks the question why the wild ducks which inhabit our waters cannot be tamed, so as to make valuable improvements on the present breeds; and states that the wood duck has been domesticated.

We have forgotten how many species of duck we observed in the settlement of this country, but think it as many as twenty. Some of them—among which are the wood duck—are both beautiful in plumage and delicious in flavor and would be a valuable addition to our poultry yards, if the domesticating could be successful.

Value of a little Knowledge. A new article has been of late discovered in Maine, called "the American Metallic Lustre," which seems to be unequalled for cleaning and polishing metals. Its discovery, as related by the Maine Farmer, was on this wise. A young man from Boston, who had paid considerable attention to geology and chemistry, was traveling for the purpose of obtaining subscribers to a newspaper, when, passing through the town of Newfield, he noticed some bricks of a very peculiar color. He traced up the bricks to their clay bed, and purchased the farm on which it was situated, for which he paid fifteen hundred dollars, went to Boston, and sold half of it for four thousand dollars. Verily knowledge is better than strength.

A Horse Tax. The State of Maryland, with the view of improving its horses, or with some other view, has, it seems, imposed a tax on stallions. The effect is said to be in the highest degree beneficial. No man cares to pay a tax on a horse which is not worth something; and as a consequence, the scrubbs are disappearing, and their place is in process of being supplied by first rate animals, to the great benefit of the farmers, who now have access to the best blood of the state.

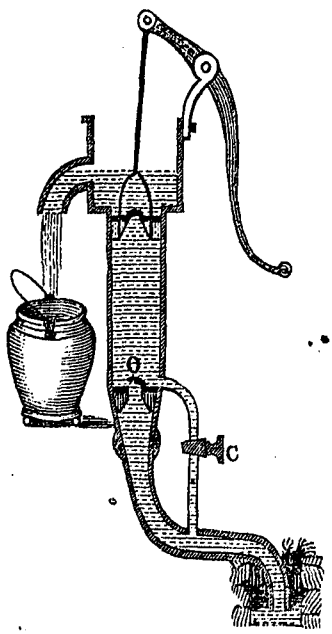
As the brilliancy of the diamond is increased by friction, so is truth by investigation.

MECHANICAL DEPARTMENT.

THE PUMP.

Among the triumphs of civilization, there are but few which mechanism has given us more useful than the pump. Unlike many other of our mechanical improvements, this is not a modern invention; it having been in use among the civilized nations of antiquity. Mr. Ewbank regards its use in fact as marking the transition from barbarism to civilization more truly than any other implement. He says that in Germany, France, Holland, Great Britain, and the United States, it is common. In Spain, Portugal, Mexico, and South America, its use is very limited In Turkey, Greece, and Egypt still less so; while in Russia it was formerly very rare, but is now becoming common, as the people advance in knowledge. Nothing, indeed, so truly marks the progress of a people, as the improvement in labor saving machines among them.

There are a great variety of pumps in use, applicable to the different purposes for which they are employed; all, however, being constructed on the same principle, and designed to take advantage of the same fact, viz: that the pressure of the atmosphere on the surface of water, will cause it to rise in a tube, from which the air is extracted, to the height of 32 feet. One of the simplest forms of the pump is that represented in the first figure, which



is merely a metalic tube, with two valves—the first attached to the handle, and represented as shut; the second made stationary at O, and represented as open. Supposing the pump empty, and the end of the handle elevated, the tube will of course be full of air. On lowering the handle, the upper valve is raised in the tube, and with it comes all the atmosphere contained in the tube between the two valves. The pressure of the atmosphere on the water in the well forces it up in the tube, to fill the vacuum when the air is displaced. In the beginning of the operation, the upper valve is a mere sucking machine, designed to exhaust the air; but very soon it works in the water, which rushes up and escapes, as shown in the figure.

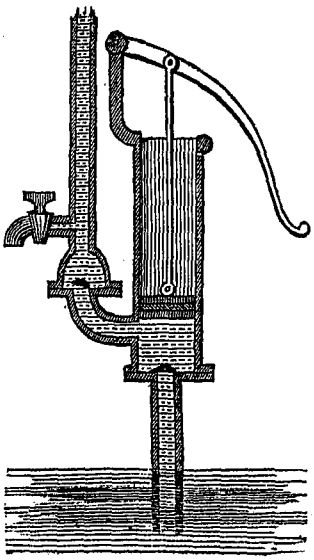
This pump is a very cheap and neat implement for household use; and even though the well may be very convenient to the house, will save its cost many times over in a year, by dispensing with running to and from the well. The pump may be placed in a sink in the kitchen, wash-room, or where it is most wanted, and the lead pipe connected with its lower extremity, extended to the spring or well, even though it should be one or two hundred feet distant. It must not be more than 32 feet perpendicular from the top of the pump to the bottom of the well; and in practice it is not common to place this pump more than 28 feet from the top of the water. In putting down the pipe also, one or two things must be regarded. If the pipe is carried any distance horizontally, it should be buried in the earth out of the way of frost; and it ought also to be so far inclined toward the lower end, as to allow the water to drain out of it. The water which stands long in lead pipe is neither palatable nor wholesome. Small pumps of this sort, very neat in their construction, are for sale in this city. Those made of iron cost about 5 or $6, and those of copper $8. They are equally proper for use in wells or cisterns.

It is known, however, to those who have used them, that in a neatly constructed article of this sort, that when the pump is filled with water, unless some mode is adopted to empty it, a column of it will stand in the tube and pump for an indefinite time, and in cold weather become frozen, to the damage of the pipe, and delay in procuring water. To remedy this inconvenience, a variety of expedients are devised. The one in the cut is to have a small pipe connecting the lower tube with the tube of the pump between the valves, and furnished with a cock, as shown at C. By turning this cock, the water is emptied from the pump, and also from the pipe below. Others are so constructed as to prevent the valve O from shutting close, by pressing the sucker upon a pin attached to it. This is the mode used in the pumps alluded to for sale here; but it is ineffectual, unless in careful hands; and when a whole family use a pump it will be overlooked. The chief danger is not, after all, from water freezing in the pump above the lower valve, as that can be thawed out very soon; but in

pp 50 + 42 misplaced

the pipe below, which cannot easily be reached, and which is easily bursted. A good way is to make a small gimlet hole in the pipe below, which may always be left open, and which will not materially injure the working of the implement, but which will empty the pipe always when not in use. The chambers of the pump can be emptied by the ordinary means.

The second cut is a simple representation of the forcing pump. The water is raised in this case in



the same manner as before; but when it has reached the chamber, instead of being thrown out at the nose, as in the other case, it passes into an additional pipe, which is supplied with a valve to prevent its return, and which may be continued upward to an indefinite length. This pump must be like the other placed within about 28 feet of the water. It is used frequently to convey water to the upper rooms of a house, to water gardens, and in large buildings as a fire engine, to which use it is peculiarly applicable. A neat article in this line is the one invented by Farnum, which is manufactured by Lewis & Tunison, at Springfield, in this State.

The principle of the forcing pump is applicable to a great variety of uses, and is that employed in the stomach pump, which is one of the triumphs of modern medical practice.

MAKING WHITE LEAD.

The Galona Gazette states that not less than 55,360,000 pounds of lead have been shipped from that place the past year. This lead is carried South and East; and a part of it, after being manufactured into white lead, is brought back to the West to the place of starting. It is singular that no one, up to the present time, has thought of commencing the manufacture of this article here on the ground, instead of suffering it to be carried fifteen hundred miles to undergo the process, and then brought fifteen hundred miles back again—thus taxing the consumer a considerable sum for more transportation. Why not save this amount, besides retaining the profits of the labor and capital necessary to carry on the business here among us. The manufacturing process is not a difficult or complicated one, as may be seen by the mode as laid down by a correspondent of the N. Y. Farmer and Mechanic:

"The lead to be converted into White Lead is first run into sheets about the thickness of the foil which lines tea chests. Each of these sheets is then loosely rolled up and put into a glazed earthen pot, holding about two quarts, along with a small quantity of strong vinegar. These pots to the number of many thousands are then built up into a large pile, consisting of alternate layers, first of pots loosely covered with boards, and then a layer of *horse manure*, and then pots again—until the pile is carried up to the rude roof which shelters the heap from the weather. The gases which this manure throws off while fermenting, together with the moderate heat and the acid of the vinegar, so act upon the thin sheets of lead, that at the end of three or four weeks, it is taken from the pots completely oxidized—in which state it is known as White Lead. This is subsequently washed to free it from impurities, and, being pulverized by grinding, is ready to put up for market. The two establishments of the Messrs. Conklin & Co. yearly manufacture about sixty thousand kegs of oil ground white lead, each keg containing twenty-five pounds."

Cement Roofing. A correspondent of the Louisville Journal gives the following as his mode of making a roof which he says cost him a third less than one made of shingles—that it will not take fire from sparks or cinders, is entirely water proof, and with an outlay of five dollars once in three or four years will last thirty years. We have doubts whether it would stand the extremes of the climate as far north as this.

"On the rafters I use a sheeting of plank, laid close but not jointed; then from one eve to the other, over the ridge, I draw and tack down any kind of strong tow or cloth—cotton osnaburg. I prefer such as is made by James Anderson & Co. Tack the cloth close to the eaves, and a tack once in three inches, all along the edge over the roof. These strips of cloth I lay down, letting the edges overlap about one inch, until the whole roof is covered. I am not very sparing of tacks, but put them in cross rows at intervals of four or six feet from the eaves to the ridge.

"The cement is prepared as follows: Melt in a kettle 8 lbs. rosin and 8 lbs. tallow; then, in a tub standing by, mix it with four gallons North Carolina tar. (Be careful and not get coal tar, as it will rot the canvas.) Then stir in two quarts of fine water-lime, as you would in making mush—then take the cement, in a warm state, in a bucket, and, with a common white-wash brush, lay it on to the cloth, rubbing it thoroughly in. Let it then be, for drying, about four days. Then make more cement in the same way, and lay it on, as before, and sift dry sand on the surface—as much as will stick on. In a week put on a third coat in the same way; and if it is well done, not a drop of water will get through it for five years, and then it will require another coat."

AMERICAN RAILROAD IRON. The Sunbury American thus describes the manner in which the iron T rail for railroads is manufactured at the Montour works, Danville, Pennsylvania:

"In order to make the T rail, the iron is first rolled through one set of rollers into heavy flat bars, about three inches in width, and three fourths of an inch in thickness. These bars are then cut into pieces, something less than three feet in length. A number of the pieces, probably 15 or 20, are then placed together, making a square bundle or faggot, weighing 400 pounds. This faggot is then placed into one of the furnaces and brought to a white heat, when it is drawn out on a small iron hand-cart, and conveyed to the rollers. The great weight and intense heat of such a heavy mass requires considerable skill as well as strength, in passing it through the rollers. The bar, as it passes through, is caught and supported by iron levers fastened to chains, that are suspended on pulleys from above. The first bar passes through the square grooves of the rollars three or four times, before it is run through the different grooves that gradually bring it to the form of the edge or T rail, as seen upon our railroads. Through the last grooves it passes five or six times before it is completed. It is then placed on a small railway carriage, on a track 18 feet wide, and hauled up about 20 feet, when the rail comes in contact with two circular saws, one of which is placed on each side of the railway. These saws revolve with great rapidity, and the moment the rail, still red hot, reaches them, the red sparkling iron saw dust is scattered in every direction. The rails are thus cut off square at each end, exactly 18 feet long, apparently as easy as if they were made of tough hickory wood. The rail is then dragged to the pile and left to cool, perfectly finished. The rails we saw made were intended for the Harrisburg and Lancaster road, and weighed fifty-one pounds to the yard, or something more than three hundred pounds each. These are said to be the first rails ever made with anthracite iron in this or any other country, and are, we believe, superior to any that have ever been imported.

NEW REASONS FOR TAKING AN AGRICULTURAL PAPER. Three years since when a farmer was asked to subscribe to an agricultural paper, his reply was generally, that he had no money to pay for it, and that even if the information contained in it should enable him to double the produce of his farm several times over, it would be of no use to him, as he could not sell his produce when it was grown; and that it was useless to raise more than he could consume on his own farm.

It was pretty hard replying to this, inasmuch as the fact is obvious that poor markets make poor farmers, the main inducement to endeavors at improvement being the profit it brings into the pocket.

Now, the state of the case is changed. Crops are abundant all over the West, and their quality is most excellent. Prices for wheat, corn, oats, pork, wool, hemp, and every other thing raised by the farmer have advanced quite unexpectedly, till they have reached rates which pay him for his labor. This being the case, as a matter of course he wishes now to find out the best and easiest ways of getting the best returns on his capital. It is now an object to him to increase the product of his land and stock to the best degree. Many too are enabled by the rise in prices to extend their operations, to put up buildings, plant orchards, and do a thousand things which they would not have thought of doing a while since. They will wish to avail themselves of the best plans and most economical modes of doing all this; and as a natural result, will wish to obtain the information contained in an agricultural paper. We shall therefore expect to see the circulation of these journals largely increased.

HOW PHILOSOPHERS ARE MADE.

"About a hundred years ago there lived in Boston a tallow chandler. He was too ignorant to give and too poor to pay for his children's instruction, but he was a wise and an honest man, and there was only one book upon whose precepts he relied, as being able to instruct his children how to live prosperously in this world, as well as to prepare for another. We are told that he daily repeated to them this proverb: "Seest thou a man diligent in his business? He shall stand before kings." In the process of time this tallow-chandler died and was forgotten. But the good seed had fallen upon good ground. One of his little boys obeyed his father's instruction; he was diligent in his business, and he did stand before kings, the first representative of his native land! He lived as a philosopher, to snatch the lightning from heaven; as a statesman, to wrest the sceptre from tyrants. And when he died, he confessed that it was the moral teachings of his father, added to the little learning he picked up in a town school at Boston, to which he owed his success, his happiness and his reputation. He did what he could to testify how sensible he was of these obligations. He bequeathed liberally to his native city, the means of inducing the young to improve their advantages, and to enable the industrious to succeed in their callings. And he erected a monument over his father to tell his virtues to another age. But the glory of the father was in the child. His son's character was his noblest monument. The examples that son set, of industry, perseverance and economy, have excited and are exciting many to imitate them. And thousands, yet unborn, may owe their success and happiness to the manner in which a text was enforced, by a tallow chandler, upon Benjamin Franklin."

FRAZER says—"I certainly blame no young lady, who has been accustomed to the ordinary elegancies of life, for refusing to marry a poor man; but must beg my sweet friends to recollect, though a man without money is poor, a man with nothing but money is poorer."

EDUCATIONAL DEPARTMENT.

WESTERN EDUCATION—NO. II.

Practical Difficulties to be obviated.

BY G. F. MAGOUN.

In a previous number I glanced at the difficulties arising to the teacher and the school, from the want of good family government. The importance of this subject would warrant a long series of articles or the publication of a volume. I have time only to note down a hint or two respecting one or two great points.

I. *Deportment.* Very few persons seem to be fully aware how much the deportment of children at school depends upon good government at home. The child petted and indulged in the family, subjected to no proper and wholesome restraint, but given up to the lawless rule of his passions and his self will, will be at the school room a pupil of whom every good teacher will be glad to be rid. Nothing is more certain than that such a child will be disorderly, disobedient, and, if he have energy enough, a disturber of the peace and a rebel. The fact is, the family is the place where the primary ideas of law and order ought to be inculcated; and if they are *not* inculcated there, it is not to be expected that the child, when sent to school, will be orderly and law-abiding. "A corrupt tree will not bring forth good fruit." Nay more—if the teacher, as in duty bound, endeavors to introduce ideas of law and order into a mind thus destitute of them, and to enforce obedience to just authority in a person thus utterly undisciplined, he will meet with resistance. "Such things are not insisted on at my father's house," the pupil thinks, "why should they be here?" His reasoning, reversed in form, is sound enough—if they ought to be here, *they ought to be at his father's house.* It is from such unfaithful and wrong-headed parents that a teacher, if ever, meets with resistance in the exercise of his duty. *seditionis causa frequentissima*—his boy is right, and the instructor wrong, without enquiry. Does such a parent remember that the violator of a law always thinks the penalty too severe? Does he remember that by placing his son under the instructor, *he has expressed his opinion* that the instructor is a person of maturer and more correct views and judgment than the boy he has given him to instruct, and correct if need be? If the child is so much wiser and better than his teacher that he is immediately to be sided with, why place him under that teacher at all?

A few years since I had occasion to punish two pupils in the school then under my care, the parent of whom complained bitterly, saying that he was never obliged to do so at home, and did not believe there was need of it at school. I found on inquiry that these were the worst boys in town—profane swearing, lying, and petty thieving being among their cardinal virtues, and that when they were uncommonly ill-behaved, their father was in the habit of taking them apart and giving them a gentle expostulation, from which they quickly escaped to engage in new mischief, and laugh at their lax and inefficient parent. The history of how many a parent and child is the counterpart of this!

An experienced teacher can tell by one day's observation how many of his pupils, and who, are poorly governed, or not governed at all, at home. How many family secrets are thus laid bare!

There are some parents who have correct *views* on the subject of family government; but fail to enforce them at home. Can such parents wonder that there is difficulty with their children sometimes at the school house? Are they doing their duty to their offspring, to their teacher, or to society? Need they wonder if the disorderly child takes courage from the parent's laxness? Is it right to compel the teacher to do the parent's duty in producing correct views and habits, and that too *against the force of the parent's example?*

II. *Intellectual Improvement.* I hazard nothing in asserting that a lawless, reckless, disobedient pupil cannot secure his highest intellectuol improvement. The regulations of a school are made for the purpose of securing the progress and benefit of the pupils. I know of no other object to be gained by making rules. Now the parent who is lax in family government not only fails to secure the highest profit and progress of his children *at home*, (with which we have nothing now to do,) but he hinders their progress at school. There is no advancement without order; there can be little order at school if there is none at home. What parent will take the responsibility of thus frustrating the efforts of the teacher? Above all how inconsistent to blame the instructor for failing to do that which he hinders or prevents his doing. Let me say in all sincerity and earnestness, if the regulations of the school are not fitted to secure your child's progress, place him elsewhere; but in the name of consistency, in the name of justice, do not withstand by the education your laxity gives him at your hearth, the education which the teacher's authority and precepts would give him at the school room. If the educator is to work, *work with him*, for economy's sake, if for the sake of nothing else—not *against* him.

A third head on this topic I must reserve for another number.

Platteville, Wis., January, 1845.

Mr. Alfred Churchill, the School Commissioner of Kane, having made the circuit of that county, reports the following to the Prairie Messenger as among the wants and difficulties in the way of organizing and maintaining schools, viz:

First, a want of knowledge of their duties on the part of officers, and second, a want of disposition to perform them. To remedy the first, I send you for publication a partial exposition of the duties of school officers. The second difficulty must be remedied by the people.

Duties of Trustees—to meet quarterly, and oftener if necessary, for the transaction of business—to form a quorum (44.)*

To appoint treasurer (45.)

To examine books, notes and papers (45.)

To lay off townships into districts suited to the convenience of a majority of the inhabitants of the districts so laid off, &c. (59)

To adopt by-laws directing the mode of conducting schools, &c. (59)

* The figures refer to the school law; and such parts as are not marked by the figures are my individual opinions.

To distribute interest or township funds, and the amount received from the State of the school, college and seminary fund to each district, *according to the number of white children under the age of twenty-one years, residing in each district*, (71, 72): not according to the number of scholars taught.

To examine teachers "touching their qualifications properly to teach orthography, reading in English, penmanship, arithmetic, English grammar, modern geography, history of the United States," and if the person sustain a good moral character, to give a certificate of qualification, which may be in the following form:

We, the trustees of town No. ———, range No. ———, east of the third principal meridian, certify that A. B. is qualified to teach a common school.

Dated at —— this —— day of —— 184

C. D, }
E. F, } Trustees.
G. H, }

The examination must be made in the presence of two or more trustees.

Duties of treasurer in regard to schools—To visit schools from time to time, and to confer with teachers and directors. (46)

Of distribution of funds—School, college, and seminary funds, and the interest on township funds are to be distributed to each district according to the number of white children under the age of twenty-one years, residing in the district.

If the distributive share of any district "is not called for after distribution for the space of forty days, (53) said share must be loaned" for the time being (71, 72,) (on demand.) Such distributive shares should never be added to the township funds in less than ten months from the time of distribution. (71)

District funds must be paid to teachers, or their order, not to directors, (74) and should never be paid to teachers unless the schedule is in proper form and correctly certified by the directors, (73) nor unless the teacher has a certificate of qualification signed by at least two of the trustees (44) or county superintendent, which certificate must have been given prior to the commencement of the schedule. (12)

All moneys in the hands of a treasurer belonging to a district must be paid on the first schedule presented from that district, if correct, provided it does not exceed the sum agreed to be paid to said teacher, by the directors. (73)

Money loaned "for the time being" is in fact in the hands of the treasurer, and must be considered so for the payment of teachers.

Interest which is due should be collected promptl, (31) as the trustees are liable to suits for neglect to pay teachers when called for in a legal way. (74)

Duties of Directors—Directors must be elected on the first Saturday of October. (60)

Vacancies occasioned by death, removal or resignation may be filled at any time.

Their duties—"To select building places for school houses, to employ teachers and fix their compensation, to visit schools, and to make all such rules and regulations as are necessary and proper, and not contrary to the laws of this State." (60)

The following rules may be adopted, or such others as shall be deemed most advisable by the directors. The first rule is absolutely necessary, as the law makes no provision for keeping a record of the proceedings of the districts.

Rule 1st. One of the directors shall serve as clerk and keep a record of all the proceedings of the directors, and record the votes of the meetings of the district, whether for electing directors or voting taxes, and shall also give notice ten days previous, of all meetings which are appointed by law, and such other meeting as the directors may appoint.

2d. Each scholar attending the school may furnish —— cords of wood, for which he or she shall be credited —— dollars per cord.

3d. Any scholar who shall be guilty of using profane or obscene language, or disorderly conduct in the school house, on the school house premises, or while going to or returning from school in company with other scholars, may be expelled from school or fined at the discretion of the directors. And such other rules as may be deemed necessary as designating what books are to be used, how the school is to be governed, &c. Such rules, when adopted, are of equal force with the statute. The law is imperative that the directors see that the school house is supplied (60, 61) with necessary furniture and fuel, so that if any person should suppose himself injured for the want of its performance, on the part of the directors, of this part of their duty, might bring his action for the same, and must necessarily recover all the damage which he could prove. And if directors fail to visit the school, or neglect whereby the district loses its share of the funds: each individual who sends to school is injured to the amount of his share, and may recover the same of the directors.

Directors, if not present at their election, should be notified on the day of their election in time to elect others if any refuse to serve, as no person can be compelled to serve.

If the person elected is present or notified of his election, and does not refuse to serve, it is a tacit acceptance of the office, and the person becomes liable for his acts, or if he perform a part of the duties and neglect a part, he is liable for the neglect.

FATTENING CATTLE. It is not often that the "*reductio ad absurdum*" is used as a mode of demonstration in agriculture. So good an example has occurred to me that I cannot but offer it. I had directed my manager, a young and inexperienced man, to fatten three or four steers, while kept up, instead of permitting them to run at large with the rest, (bad management, too; I hope to adopt shortly the soiling system.) "What are these!" I exclaimed in astonishment, at seeing the lean and ill-favored kine. They had been placed on the *north* side of a shelter, were fully exposed to wind and rain, and were up to their knees in mud, which the overseer hoped to make dry and comfortable by drawing in leaves, straw, &c.!!!—and hoped to fatten them by furnishing abundance of corn! Enough had been wasted on them to have fatted a herd, and he could not conceive why they remained so poor! "Turn them out," said I, "till we can put up more houses." The situation had been selected for convenience of watering. S. *Alb. Cultivator.*

HIRED MEN.

All over our country, on almost every well-conditioned farm, are employed more or less persons under the above title—some for the whole year, some during the summer, and others during a short part of the season when work is most pressing. As a matter of course the subject involves no inconsiderable interests; and though it is one in which third persons have no business to meddle, yet a well-defined and rational mode of management is of no small importance here as elsewhere.

Having had some opportunity for observing several modes of conducting hired labor, we will offer a few ideas on the subject; for which, however, we ask no further consideration than they are entitled to. It is within the observation of every one, that while one man will secure a fourth more work from a number of men than another, he will at the same time secure their good will, which the other will lose; and though much of this difference depends upon individual temperament, a considerable part of it depends on a skill which may be acquired.

We have now in our eye three distinct modes of management, to which we were witness some years since, and which were about as follows. The first was that of a real sharper of a fellow, lynx-eyed to what he thought his interests, but a little too sharp, in the opinion of his neighbors. He was what we should call a pretty good sample of Yankeeism run to seed. He was not a large farmer, but employed, in the busy season, several hands on his farm. While the cutting of hay was in progress—which in New England is a driving time—he would make his appearance in the field about half past ten o'clock—though he always forgot to bring along the lunch for the men, and which consequently they did not get until dinner. His scythe was in first rate order, and he was now ready for getting up a race with some of the mowers, cutting their corners, and starting races between the boys, by telling them that such a one could cut the best swath, or another was the better mower—and various such expedients. His zeal did not slacken with the sound of the dinner horn; but he would lead off with "Let us have one more round before we go, boys." About three o'clock in the afternoon he was in the field again; and as the sun began to get low, was very zealous to make the most of the time with "Let us see how many times we can go round before sunset;" and when the sun was fairly down he would expatiate on the coolness of that part of the day, and insist that it was the pleasantest of all the twenty four hours for work, and would be anxious to see how many times the field could be compassed before dark. He generally changed his hands each season, and sometimes oftener; and many observed that his haying was not done quicker nor better than that of his neighbors.

Another case was that of a pretty large farmer. He did not forget to calculate upon getting as much labor from his men as could well be done, but was careful that his men did not suspect that to be his purpose. He was up betimes in the morning, and the door latches rattled till the boys were up also. When the hands were in the field, he was there, to see that nothing obstructed their work—that all tools were in order, and that each wrought to the best advantage. When he saw a good swath he spoke of it; gave a word of encouragement to the younger mowers, and made all feel that he appreciated a good workman. In the long summer days he took care that the men had a lunch between ten and eleven, and in general took care of the comfort of his men. His work was laid out so that all parts of the day were filled out, and there could be no getting out of the field until dark or after; but if work held on till very late, the boys were allowed an extra shilling each. This man never had any difficulty in procuring hands, or in keeping them; though it was not unusual that one gave out from inability to keep up with so severe a regimen.

The other case was that of a man who neither seemed, nor in fact did, study to get the utmost amount of work from his men. He was a small farmer, and employed two or three hands for getting in his hay. He never called up his men in the morning; but as he was stirring himself pretty early, they were generally careful to be on hand without much delay. The day's work was so laid out that there should be enough to do, yet so that it could be completed in season. At five o'clock in the afternoon all hands were punctually summoned to tea; and as he kept a dairy, unless work drove pretty hard the men were not expected to take the field again that day; but after milking half a dozen cows each, to grind up their scythes and put matters in readiness for the next day's work. If under this management a man took it into his head to be idle or inefficient, his dollars were counted out, and his walking papers given him at once, without further words. And it was always observed that nobody got his hay and harvest done so easily and well as this man.

It is not our business or purpose to decide that either of these is on all accounts and in all circumstances the best sort of management; but to draw attention to the fact that there is much difference in modes of conducting the labor of hired men, and that the subject is worthy of reflection by those who have it to do.

DEEP TILLAGE—KIDNEY WORMS IN HOGS.

BY W. BLAIN.

Messrs. Editors: I have been premeditating an infliction on your columns in regard to my experience as an agriculturist, but my experiments are all in embryo as yet, except one or two on a small scale. For example, I had always supposed that shallow culture was just as good for onions as deep, providing the ground is rich. But circumstances induced me to dig a piece of ground from a foot to eighteen inches deep, at the same time mixing in well rotted manure. On this ground in part I sowed onions; and the result was that on the deep digging the onions were abundant and very large, while on the shallow, though the ground was more than ordinarily fertile, they were not much larger than the common onion sets. The same result was observed in a patch of peas.

Another experiment I will relate. A good hog got down with the "kidney worm." As soon as I found it, I put it in a pen, and mixed all its food in lye. On this treatment I thought I could perceive some improvement; and I am inclined to think

pp 47 + 55 misplaced

this course would ultimately have effected a cure. After a few days I gave it a dose of tartar emetic, which seemed to do some good. I then concluded to administer a cathartic. For this purpose I gave it nearly half a teaspoonful of arsenic. This killed the hog and ended the experiment. But though it did kill it, yet from the manner in which it acted on the kidneys, I am fully satisfied that if it had been given in small doses and at proper intervals, it would have effected a cure, or helped to do so. It killed the hog, not from the ordinary effect of poison, as some might suppose, but from its producing excessive urinary secretions.

Hebron, Ia., January, 1845.

ORCHARD AND GARDEN.

"The Fruits and Fruit Trees of America—*By A. J. Downing: Wiley & Putnam, New York.*"

Mr. Downing, the author of the above work, is, as we unnderstand, the proprietor and cultivator of a very beautiful and extensive nursery and fruit garden, at Newburgh, on the banks of the Hudson, in the State of New York, where he was born, and in which he has spent his life. He may therefore be presumed to be qualified for the work undertaken. But the work itself gives us something better than presumptive evidence on the subject. It consists of about 600 12-mo. pages, giving the history, description, and modes of culture, of all the standard fruits grown in this country—including almonds, apples, apricots, cherries, currants, gooseberries, grapes, melons, peaches, pears, plums, quinces, strawberries, blackberries, raspberries, and many others but partially acclimated, and little cultivated among us—illustrated by a great number of cuts; and treated of, in a very plain and familiar style, so as to be adapted to the comprehension and use of the great body of the people. In fact, as far as we have had time to examine, it is peculiarly such a work as was needed to induce the love of fruit, incite to its culture, and direct in its production all over the country. The first few chapters are taken up with a consideration of "The Production of New Varie- budding, layers, and suckers, and the position of trees, ties of Fruit, and Propagation;" including grafting, with soil and aspects. Then follow general remarks on insects; after which the different kinds of fruit are taken up in their order and considered.

In his description of fruits Mr. Downing is particularly judicious in avoiding an error into which men less experienced, and possessing a less correct judgment, are apt to fall: he does not select the largest of any variety as specimens, but those of middling size—both as being better examples of the fruit described and more apt to convey correct ideas concerning it, and because the largest specimens of a particular fruit are not the best. Who does not know that a great potato, or beet, or turnip, is far inferior to one of medium size? The same is in a degree true of fruit. An overgrown apple is proportionably coarse in texture and inferior in flavor; and we have often thought that one of the tests of good fruit—not indeed of itself sufficient, but proper to be considered—would be its weight. We have never seen this alluded to as a test, but have often remarked the very great difference in the weight of apples of the same size, and often of the same name, and that superior weight was equivalent to superior quality.

Mr. Downing divides insects, with reference to the feasibility of destroying them, into four classes, as follows:

"1st, those which for a time harbor in the ground, and may be attacked in the soil; 2d, winged and other species, which may be attacked among the branches; 3d, aphides, or plant lice which infest the young shoots; 4th, moths, and all night-flying insects.

Insects the larvæ or grubs of which harbor in the ground during a certain season, as the curculio or plum weevil, are all more or less affected by the application of common salt as a top dressing. On a larger scale—in farm crops—the ravages of the cut-worm are frequently prevented by sowing three bushels of salt to the acre, and we have seen it applied to all kinds of fruit grounds with equal success. Salt seems to be strongly disagreeable to nearly all this class of insects, and the grubs perish, where even a small quantity has for two or three seasons been applied to the soil. In a neighborhood where the peach worm usually destroys half the peach trees, and where whole crops of the plum are equally a victim to the plum weevil, we have seen the former preserved in the healthiest condition by an annual application of a small handful of coarse salt about the collar of the tree at the surface of the ground; and the latter, made to hold abundant crops, by a top dressing applied every spring of packing salt, at the rate of a quart to the surface occupied by the roots of every full grown tree."

Salt however must be used in small quantities and with caution, or it will kill the trees. An application as a top dressing once in two or three years is often enough; and refuse or coarse salt is as good as any.

"*In the winged state*, most small insects may either be driven away by powerful odors, or killed by strong decoctions of tobacco, or a wash of diluted whale oil or other strong soap. Attention has but recently been called to the repugnance of all insects to strong odors, and there is but little doubt that before a long time it will lead to the discovery of the means of preventing the attacks of most insects by means of strong smelling liquids or odorous substances. The moths that attack furs, as every one knows, are driven away by pepper-corns or tobacco; and should future experiments prove that at certain seasons, when our trees are most likely to be attacked by insects, we may expel them by hanging

bottles or rags filled with strong smelling liquids in our trees, it will certainly be a very simple and easy way of ridding ourselves of them. The brown scale, a troublesome enemy of the orange tree, it is stated in the *Gardener's Chronicle* have been destroyed by hanging plants of the common chamomile among its branches. The odor of the coal tar of gas works is exceedingly offensive to some insects injurious to fruits, and it has been found to drive away the wire worm, and other grubs that attack the roots of plants. The vapor of oil of turpentine is fatal to wasps, and that of tobacco smoke to the green fly. Little as yet is certainly known respecting the exact power of the various smells in deterring insects from attacking trees. What we do know, however, gives us reason to believe that much may be hoped from experiments made with a variety of powerful smelling substances.

Tobacco water, and diluted whale oil soap, are the two most efficient remedies for all the small insects which feed upon young shoots and leaves of plants. Tobacco water is made by boiling tobacco leaves, or the refuse stems and stalks of the tobacco shops. A large pot is crowded full of them and then filled up with water, which is boiled till a strong decoction is made. This is applied to the young shoots and leaves with a syringe, or, when the trees are growing in nursery rows, with a common whitewash brush; dipping the latter in the liquid and shaking it sharply over the extremities or the infested part of each tree. This, or the whale oil soap-suds, or a mixture of both, will kill every species of plant lice, and nearly all other small insects to which young fruit trees are subject.

The wash of whale oil soap is made by mixing two pounds of this soap, which is one of the cheapest and strongest kinds, with fifteen gallons of water. This mixture is applied to the leaves and stems of plants with a syringe, or in any other convenient mode, and there are few of the smaller insects that are not destroyed or diven away by it."

"*Moths and other insects which fly at night* are destroyed in large numbers by the following mode, first discovered by Victor Adouin, of France. A flat saucer or vessel is set on the ground, in which is placed a light, partially covered with a common bell glass besmeared with oil. All the small moths are directly attracted by the light, fly towards it, and in their attempts to get at the light, are either caught by the glutinous sides of the bell glass, or fall into the basin of oil beneath, and in either case soon perish. M. Adouin applied this to the destruction of the *pyralis*, a moth that is very troublesome in the French vineyards; with two hundred of these lights in a vineyard of four acres, in a single night, 30,000 moths were killed and found dead on or about the vessels. By continuing his process through the season, it was estimated that he had destroyed female moths sufficient to have produced a progeny of over a million of caterpillars. In our orchards, myriads of insects may be destroyed by lighting small bonfires of shavings or any refuse brush; and in districts where the apples are much worm-eaten, if repeated two or three nights at the proper season, this is a very efficient and cheap mode of getting rid of the moth which causes so much mischief. Dr. Harris, knowing how important it is to destroy the caterpillar in the moth state, has recommended flambeaux, made of tow wound round a stake and dipped in tar, to be stuck in the fruit garden at night and lighted. Thousands of moths will find a speedy death, even in the short time which these flambeaux are burning. The melon-bug may be extirpated by myriads in the same way.

A simple and most effectual mode of ridding the fruit garden of insects of every description, which we recommend as a general extirpator, suited to all situations, is the following. Take a number of common bottles, the wider mouthed the better, and fill them about half full of a mixture of water, molasses, and vinegar. Suspend these among the branches of trees, and in various parts of the garden. In a fortnight they will be found full of dead insects, of every description not too large to enter the bottles—wasps, flies, beetles, slugs, grubs, and a great variety of others. The bottles must now be emptied, and the liquid renewed. A zealous amateur of our acquaintance caught last season in this way, *more than three bushels* of insects of various kinds; and what is more satisfactory, preserved his garden almost entirely against their attacks in any shape.

The assistance of birds in destroying insects should be duly estimated by the fruit-grower. The quantity of eggs and insects in various states, devoured annually by birds, when they are encouraged in gardens, is truly surprising. It is true that one or two species of these, as the ring-tail, annoy us by preying upon the earlier cherries; but even taking this into account, we are inclined to believe that we can much better spare a reasonable share of a few fruits, than dispense with the good services of birds in ridding us of an excess of insects.

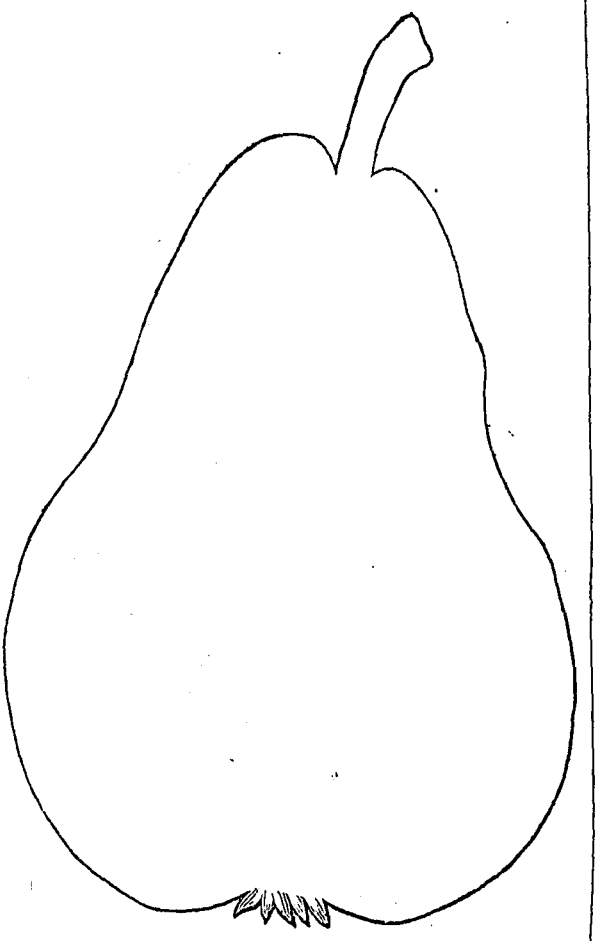
The most serviceable birds are the common sparrow, the wren, the red-breast, and, in short, most of the birds of this class. All these birds should be encouraged to build nests and inhabit the fruit garden; and this may most effectually be done by not allowing a gun to be fired within its boundaries. The introduction of hedges or live fences greatly promotes the domestication of birds, as they afford an admirable shelter for their nests."

We have room for one extract more, and it shall be a description of the famous pear known as the Bon Chretien, or Bartlett Pear, so named because introduced by Enoch Bartlett Esq. of Dorchester, from England, where it originated in 1770. It stands at the very head of summer pears, and ripens in this country better than in England.

"It has the unusual property of ripening perfectly in the house, even if it is picked before it is full grown. It has no competitor as a summer market fruit. The tree grows upright, with thrifty, yellowish brown shoots, and narrow folded leaves.

Fruit of large size, irregularly pyramidal. Skin very thin and smooth, clear yellow, (with a soft blush on the sunny side of the exposed specimens,) rarely marked with faint russet. Stalk one to one and a half inches long, stout, inserted in a hollow, flat cavity. Calyx open, set in a very shallow, obscurely plaited basin. Flesh white, and exceedingly fine-grained and buttery; it is full of juice, sweet, with a highly perfumed, vinous flavor. (In

damp or unfavorable soils, it is sometimes slightly acid.) Ripens from the last of August to the middle and last of September."



DISCORDANT VIEWS—GRAPE PRUNING.

BY R. H. SPICER.

Messrs. Editors: Enclosed is a token of remembrance, though small; yet should you receive similar ones from all your subscribers it would not only contribute to the cold comforts of a bachelor's life, but would enable you to meet the expectations of your patrons in a manner satisfactory to yourself and to them were they not too ungrateful.

In your last volume, I doubt not but all have received instruction who have perused it; to me it has been a source of profit. Yet with all the instruction that has been given, there is much yet to learn; and it is not unlikely that at the close of the present year many of your subscribers will look back with grateful hearts to the "Prairie Farmer."

Though I have been instructed on many subjects, on others I have been as much amused at witnessing the conflicting opinions of various writers. Situated as you are, echoing the views of your numerous correspondents, scattered over the length and breadth of the whole Union, it should not be a matter of surprise if their views are somewhat contradictory.

With reference to the culture of grapes, a subject in which I take some interest and on which I am seeking information, your correspondents are extremely diffuse: one recommends pruning in October, another in February, another in the spring, and another to not prune at all. One says, prune that they may bleed freely; another says that to bleed is sure death; and so on, *ad infinitum*. Now it is possible that none of these may be wrong, but it is not probable that they are all right.

The kinds I have attempted to cultivate are the Isabella and the Catawba. By pruning some so that they have bled freely, they have either died or been so enfeebled as to be worthless. Others by letting them stand during the winter have died. Now if you or any of your correspondents for whose practical experience you can vouch, will give the proper instruction with that explicitness and care which friend Shillaber requires for growing grass, (whose views I endorse, believing that certainty is more likely to result from continued practice than from a single experiment, from accident, or from theory alone,) you will confer a favor upon many of your readers, doubtless, as the information contained in the journals and in the works on horticulture is so vague—particularly with reference to winter and summer pruning—that little reliance can be placed upon them.

Pope Creek, Mercer co. Jan. 1846.

To prevent late frosts from injuring Fruit. It is suggested that plowing an orchard very deep, early in the spring, would tend to protect it against late spring frosts. When ground has been stirred, it is a better conductor of heat, receiving it in the daytime, and throwing it off at night more freely, thus tending to equalize the temperature—and the deeper the ground is loosened, the greater the effect produced. Hoeing corn ground to prevent frost from injuring it, is a well known expedient of considerable efficacy, and the benefit proceeds from the operation of the principle above mentioned. It would sometimes be advisable to plow the orchard two or three times in the course of the spring.

We deem this recommendation well worth a trial.—*Michigan Farmer.*

Sex of the Strawberry. This has been a subject of much dispute of late years; and some have taken the ground that because the blossom contained, in its natural state, both the male and female organs, no such thing as male and female blossoms could be possible. The fact is, it has been proved conclusively that external condition will change the sex of the blossoms of other plants than the strawberry. For instance, Mr. Knight, in the Horticultural Transactions, details an experiment made by him upon a watermelon plant, which

he grew in his house—keeping it in a temperature of 110° during the day and 70° at night, plentifully supplying it with water, and giving it imperfect ventilation. The result was this: the blossoms were plenty enough, but all males. This he says did not surprise him, because he had before succeeded in making cucumbers produce female flowers only, by a long continued low temperature. These plants are dioecious, but we do not see that this would alter the principle materially.

TREES GIRDLED BY MICE OR RABBITS. These may be saved by taking in the spring of the year a piece of bark off from any limb and putting it on where the bark is gnawed off—using care to fit it nicely at the ends—and then covering it all over with grafting clay. It is not material that the bark so put on should extend entirely around the tree; if a channel is formed for the flow of the sap, the tree will be saved.

GRAPES. The Sangamo Journal has the following in relation to the Isabella Grape. The Isabella is not valued as highly at Cincinnati as at the East. Mr. Longworth gives it only a secondary rank, preferring the Catawba very much before it.

"Illinois proves most favorable for the cultivation of the grape. The native Isabella hardly ever fails of producing a good crop—and its production, when properly trained, and a little care is bestowed on it, is enormous. We believe it is now conceded in and about the city of New York, that the Isabella is the most profitable, and best variety of grape, taking all circumstances together, cultivated in that region. Dr. Underhill, of Croton point, expended a large sum of money in attempting to cultivate foreign and other native varieties; but he has abandoned their cultivation for the Isabella. And if our friends could see and eat of his Isabellas, they never would want a better grape. He now supplies a very large amount of grapes, for the New York market, upon which it is said he annually realizes a profit of some 10,000."

PROPAGATING GOOSEBERRIES. Gooseberry plants should only be raised from cuttings. New varieties are of course raised from seed, but no one here will attempt to do what, under more favorable circumstances, the Lanchashire growers can do so much better. In preparing cuttings, select the strongest and straightest young shoots of the current year, at the end of October, (or very early in the ensuing spring;) cut out all the buds that you intend to go below the ground (to prevent future suckers,) and plant the cuttings in a deep rich soil, on the north side of a fence, or in some shaded border. The cuttings should be inserted six inches deep, and from three to six or eight inches should remain above ground. The soil should be pressed very firmly about the cuttings, and, in the case of autumn planting, it should be examined in the spring, to render it firm again, should the cutting have been raised by severe frost. After they have become well rooted—generally in a year's time—they may be transplanted to the borders, where they are finally to remain.

HOUSEHOLD AFFAIRS.

ICE AND ICE HOUSES.

It has generally been considered, and is so yet among the farming population to a great extent, that ice is a mere luxurious superfluity, to be enjoyed only by the rich, or to be used at public houses where great attention to guests is deemed necessary. Two things are needed to be understood to dissipate this notion. One is, that it is not a mere article of luxury, but one greatly conducive to health and comfort; and as much or more to be considered a matter of necessity as fifty things acknowledged to be so—including tea and coffee and one half the sugar generally made use of. When these things are well understood—and they are learned by a little experience—every farmer who makes a pretence of living comfortably may as easily have his supply of ice as his supply of potatoes.

Our long summers, particularly in many parts of the West, where during three months the thermometer is frequently up to 90° Fahrenheit, are very enervating and debilitating to most constitutions, and their effect is greatly heightened, when there is a lack, as is often the case, of household comforts. The use of salt meats continually, to which many are confined from inability to preserve them fresh for any time, and of half-melted butter, have in some seasons a very deleterious effect upon the health of hundreds. Every one has noticed the utter impossibility of assuaging thirst in hot weather by pouring down any quantity of lukewarm water, while a half tumbler of cool water would effect the thing instantly. Besides, in bilious fevers, to which a western population is liable, in long dry seasons, the use of ice is an absolute necessity; and will often do more to soothe the stomach and restore the deranged functions of the muscular and nervous systems than all the medicines that can be given.

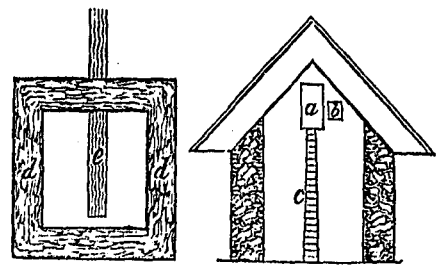
The proper use of ice by persons in health is believed to be no less salutary. It is the testimony of travelers that the use of ice in Italy and the Sicilies tends greatly to preserve health during the long summers experienced there.

An ice house not only gives the family the use of cooling drinks, but enables them to preserve their butter, fish, meat, poultry, game, &c.; and in our opinion ought to be considered as much a necessary appendage to a farm establishment as a cellar.

But the expense may be objected. It is our purpose to show not only that this need not be large, but that it is no difficult operation and may be done by any man who can build a respectable pig pen. An ice house a story and a half high has been put up this winter, within our observation, and filled with ice, which would readily be taken for a barn; and this we are told is the general character of those now built at the East in which ice is kept the year round.

It was formerly supposed that a cellar must be dug, and the principal part of the concern must be below ground. This mode is now generally abandoned. The earth communicates its temperature more readily than the atmosphere, with the additional disadvantage of transmitting moisture also, which is much more liable to destroy ice than any other agent to be contended against. In building an ice house, then, place it wholly above ground, and if possible on the north side of a slope where the water drains readily. The first requisite to be seen to, indeed, is that all water which drains from the ice, shall be carried off promptly. If the ground is sandy, no further trouble is necessary; but if it be a tight clay, the earth under the floor of the house should be scooped to a point at the center, from which a ditch may be dug out from the house, and filled with loose sand, or any substance which will exclude air and conduct off the wet.

A house 8 or 9 feet cubic in the clear will contain ice enough for a very large family; though the greater the body of it is, the longer and better it will keep. In erecting the building, lay such a foundation as will exclude all air and water from the bottom; then erect the studs, which may be of plank two inches by eight or twelve, and board them up on both sides, so as to allow a hollow of eight or twelve inches in the wall. This hollow should be filled with tan bark, saw dust, or pulverized charcoal, some one of which can be obtained almost any where; but in the absence of these, straw well packed in will answer. The roof must be made hollow in the same way with the walls, and filled in the same manner. If the house is painted or whitewashed on the outside it will improve its non-conducting properties as well as its appearance. The entrance is the next thing to be attended to. This is best placed up some distance from the ground, to which the ascent is furnished by stairs as shown in the cut. There should be, however, two doors without fail—an outer and inner one—which may be from two to four feet apart, both well fitted, to exclude air; so that when any one enters the house he may first pass the outer door and shut it before he enters the inner—thus



preventing the ingress of damp or heated atmosphere from without. There ought also to be small apertures through the walls on opposite sides for ventilation in dry or cool weather and which can be perfectly shut when the air is damp.

The floor is placed about a foot above the earth, and may consist of loose plank or rails. This floor should be covered with straw to the thickness of a foot, on which the ice is laid. The common mode is to cut the ice in square blocks, and pack them closely together, filling up the interstices, and if the weather is sufficiently cold, water can be poured on from time to time as it is filling, and be allowed to freeze. The more compact the ice is filled in, the better it will keep. When the filling is done, cover the whole with a good thickness of straw, and the only care it will require will be to give it occasional ventilation.

Success in keeping ice, it should be borne in mind, depends more upon draining off promptly all water, and in preventing dampness than any one thing else.

There are a variety of other modes of constructing ice houses recommended; such as driving down stakes and filling in straw between them: but when a good one can be built so cheaply, we do not think it worth while to speak of these.

There is some difference in practice in getting in ice which should be noticed. A mode not uncommon is to put it off till the last of winter, and when a thaw of three or four days gives indication that spring is coming, all hands are called out to procure ice, which is already rendered loose in its texture, and at least half spoiled. The time to get it is, when it is solid and clearer than crystal—during the coldest weather. If put up then, it will last much longer and be found better than if suffered to become spongy. That also made partly of snow is poor; and the pond or river where it is to be cut should if possible be kept clear of snow till the crop is secured.

There will undoubtedly be weather enough yet in which ice can be gathered; and he who secures a good supply for the days when the dog star rages will not regret it.

CATALOGUE OF PLANTS

Growing spontaneously in the State of Illinois, the principal part near Augusta, Hancock county.

BY S. B. MEAD.

Geranium carolinianum L (H Bks.
Impatiens pallida N (T, jewell weed, touch me not.
" fulva N (T, speckled jewells.
Oxalis violacea, L (P, violet wood sorrel.
" corniculata L (P, lady's wood sorrel.
" stricta L (T B, yellow wood sorrel.
Zanthoxylum americanum T & G (B M.
Ptelia trifolitaa L (T
Rhus glabra L (B D, sleek sumach.
" copallina L (B 6 D, wing rib sumach, mountain sumach.
" toxicodendron L (T Pn, poison vine, poison ash, several
" aromatica Ait (B. [varieties.
§Malva rotundifolia L (M, low mallows.
" § sylvestris, L (M, mallows.
" § crispa (L, curled mallows.
" Houghtonii T & G (s P & B 0 4 5.
Abutilon avicennæ Gaert (R, Indian mallows.
Sida spinosa L (R
" dioica Cav (B 7.
Hibiscus militaris Cav (Bts 0 8.
Tilia Americana L (T M, basswood, linden.
Vitis bipinnata T & G (Bks 9, grape.
" indivisa W (Bts 8.
" æstivalis Mx (T fr, summer grape.
" riparia Mx (T fr, odoriferous grape.
Ampelopsis quinquefolia Mx (T, false grape.
Acer nigrum Mx (Bts, sweet tree, black maple.
" dasycarpum Ehrh (Bks D, white or silver maple.
Negundo aceroides Mœnch (Bks, ash maple, box elder.
Descutus glabra Willd (Bts, little buckeye.
§Cardiospermum palicacabum L.
Staphylea trifolia L (T, bladder nut.
Celastrus scandens L (T M, false bittersweet, red root.
Euonymus atropurpureus Jacq (T M 0, spindle tree.
Rhamnus lanceolatus Ph (B
Ceanothus americanus L (P M Ta, New Jersey tea.
§Vicia sativa L, tare.
Lathyrus myrtifolius M (Bks 10.
" palustris L (Bks 4, marsh tea.
Phaseolus helvolus L (P B.
" leiospermus T & G (P.
Apios tuberosa Mœnch (B E.
Amphicarpæa monoica pitcheri ? T & G (T Fd.
§Robinia pseudoacacia L (cltd 0, locust, false acacia.
Tephrosia virginiana, Pers (P B H 0, goat's rue.
Psoralea floribunda N (P.
" onobrychis N (Bks.
Amorpha fruticosa L (Bks O.
" canescens N (P O, lead plant.
Petalostemon candidum Mx (P B O.
" violaceum Mx (P O.
§Trifolium pratense L (Fd, red clover.
" stoloniferum M (Bks Bts Fd, buffalo clover.
" § repens L (Fd, white clover.
" § procumbens L (Fd, hop or yellow clover.
§Melilotus officinalis Willd, balm.
Astragalus pachycarpus ? T & G (s P & B O. perhaps a new species between A. obcordatus and distortus.
" canadensis L (T, wooly milk vetch.
Desmodium nudiflorum D C (T Fd.
" acuminatum D C (T Fd.
" canadense D C (B Fd, bush trefoil.
" cuspidatum T & G (T Fd.
" sessilifolium T & G (B H, bush clover.
" paniculatum D C (B.
Lespedeza procumbens Mx (B.
" violacea Pers (T H.
" reticulata Pers (B H.
" capitata Mx (B P.
Crotalaria sagittalis L (4 rattle box.
Baptisia leucophœa N (P O.
" leucantha T & G (B O.
Cerus canadensis L (T O red-bud judus-tree.
Cassia Marylandica L (T Bts M, wild senna.
" chamaecrista L (T, cassia, partridge pea.
" nictitans L (s H 5, wild sensitive plant.
Gymnocladus canadensis Lam (T.
Schrankia uncinata Willd (1, sensitive briar.
Prunus americana Marsh (B fr, meadow plum.
" § chicasa Mx, summer plum.
Cerasus virginiana D C (T M, wild cherry.
" salicifolia L (W P Ta O
" serotina D C (T M, choke cherry.
Spiræa opulafolia L (T Bks M O, nine bark, snowball, hardhack.
" aruncus L (T H, steeple weed.
Gillenia stipulacea N (T H M O,
Geum virginianum L (B M, avens.
" vernum T & G (T Bts.
Sanguisorba canadensis L (W P Pds 4, burnet saxifrage.
Agrimonia eupatoria L (P T M, agrimony.
Agrimonia parviflora Ait (P Bts, dotted agrimony.
Potentilla Norwegica L (P Bts, cinquefoil.
" canadensis L (T H M, common five finger.
" arguta Ph (P.
Fragaria virginiana Ehrh (P T fr, wild strawberry.
Rubus occidentalis L (T M fr, black raspberry.
" villosus Ait (T M fr, high blackberry.
" hispidus L (T H fr.
" § idens L (cltd fr, garden raspberry.
Rosa rubifolia R Br (B O.
" carolina L (Pds 5 O, swamp rose.
" lucida Ehrh (P O.
" § rubiginosa L (cltd O, sweet briar.
Crataegus crus-galli L (T 20, cock spur thorn.
" coccinea L (T, thorn bush.
" var Mollis Tor & Gr.
" tomentosa L (T.
Pyrus coronaria L (T O fr, crab tree.
Amelanchier botryapium D C (T H O, shad bush june berry.
Rhexia virginica L W P 4 O, meadow beauty, deer grass.
Hypobrychia nuttallii T & G (Pds.
Ammania latifolia L (W P.
" humilis Mx (W P.
Lythrum alatum Ph (W P O.
Cuphea viscosissima Jacq (H T Bks, wax bush.
Epilobium coloratum M (Bks W P.
Œnothera biennis L (P T, scabish primrose.
" fruticosa v. incana T & G (P sundrops.
" hirsuta, N.
" var phyllopus.
Gaura biennis L (P O, Virginia loosestrife.
Ludwigia alternifolia L (W P T, seed box.
" polycarpa T & G (W P Pds.
" palustris Ell (W P Pds.
Circæa lutetiana L (T, enchanter's night shade.
Proserpinaca palustris L (W P Pds, mermaid weed.
Myriophyllum heterophyllum Mx (Pds.
Mentzelia oligosperma N (13.
Sicyos angulatus L (Bts.
Echinocystos lobata T & G (Bks T.
Ribes rotundifolum Mx (B fr
" §floridanum L Her (cltd fr, wild black currant.
" §nigrum L (cltd fr, black currant.
" §rubrum L (cltd fr, red "
" §aureum Ph (cltd O.
Opuntia vulgaris D C (s P & B 5 13 O
Henchera richardsonii R Br (P M ?.
Hydrangea arborescens W (O 15.
§Philadelphus grandiflorus Willd (cltd O, flowery syringa.
" § coronarius L (cltd O, mock orange.
Sanicula marylandica L (T M, sanicle.
Erysyum aquaticum L P M ?, button snake root.
§Bupleurum rotundifolum L (O, thorough wax.
Cicuta maculata L (W P M Pn, hemlock.
Sium latifolium L (Pds, water parsnip.
Cryptotænia canadensis D C (T.
Zizia aurea Kock (P meadow parsnip.
" integerrima D C (B.
Thaspium cordatum T & G (P.
" aureum N (T Bts.
Archemora rigida D C (W P Pn.
§Pastinaca sativa L (E, parsnip.
Heracleum lanatum Mx (Bts M Pn, masterwort, cow parsnip.
Polytænia nuttalia D C (B.
Cherophyllum procumbens Lam (Bts.
Osmorhiza longystylis D C (T E, sweet cicily.
" brevistylis D C (T E.
Erigenia bulbosa N (bts.
Aralia racemosa L (T H M, spikenard.
Panax quinquefolium L (T M.
Cornus stonolifera Mx [T.
" paniculata L Her (T, bush dogwood.
" asperifolia ? Mx (Bts.
" sericea L (Bk M, red osier, red sod.
Symphoricarpus vulgaris Mx (T H O.
Lonicera parviflora Lam (B O.
Triosteum perfoliatum L (T M, fever root, horse ginseng, wild coffee.
Sambucus canadensis L (T Bts M, black berried elder.
Viburnum prunifolium L (T fr, black haw, sloe.
" § opulus L (cltd O, guelder rose, snowball.
Galium aparine L (T, catch weed, goose grass.
" tinctorium L (P T D, wild madder.
" asprellum Mm (T.
" pilosum Ait (s B 4 5.
" circæzans Mx (B M.
Spermacore glabra, Mx (Bts 8 5.
Diodia virginiana L (Bts 8.
" teres Walt (s Bks 8.
Cephalanthus occidentalis L (Pds M, button bush, pond dogwood.
Vernonica novæboracensis Willd (W P M, flat top.
" fasciculata Mx (W P.
Liatris cylindracea Mx (P O
" pycnostachia T & G (P O.
" scariosa Willd (B O M.
" aspera Mx (P O.

(To be continued.)

GALVANISM—GRUBS IN CATTLE.

BY J. J. VAN ANTWERP.

MESSRS. EDITORS: I would address you with much diffidence, were it not for two things. One is, that you know how to dispose of matter that is not appropriate for your useful journal, or that is calculated to do mischief by misleading any one: the other is that you call upon all your readers to write for your, or rather *their* paper. Without farther apology, then, allow me to express my gratification, not with the failure of your experiment, but with the candor and honesty with which you stated the result. It is doubtless a humbug that Galvanism has such wonderful effects on vegetation as has been stated by some. I was much amused with *your* theory of Galvanism, and must candidly confess I have as much, or even more faith in the marshaling of your toads on either side of the field, to excite the "fluid" by the snapping of their bright eyes at each other, than in the zinc and copper plates, wire and all. At any rate the "*thunder and lightning machine*," you have doubtless heard of, was much better than the splendid Galvanic humbug. That experiment was decisive: for though it did not make the vegetable outstrip Jonah's gourd, yet it knocked the experimenter down, and with it all chance for humbug and imposition. Permit me now, Messrs. Editors, to bring to your notice an experiment which I have made a great many times, and *always* with success. You may call it what you please, so that you call it not Galvanism. I take *steel* plates instead of copper and zinc, and instead of 6 ft poles I use 3½ or 4 ft poles, to suit convenience. By means of an eye or socket upon the plate, I attach the pole to it, and then to the pole, instead of iron wire, I attach human "bones and sinews." By means of the *human* "*fixins*" and the poles, the plates are buried in the ground near the vegetables, and immediately taken up again, and again buried, &c., till the operation is completed. This repeated weekly during the proper season gives such an impulse to vegetable growth as to astonish some of my neighbors. I recommend it to you and to all. I can assure you it is no humbug, and I think it would go as far, at least, ahead of *your toads*, as they do of Galvanism. My fellow farmers need not fear to trespass, as the "patent right" has not been secured.

What is the name of the grub or worm that is frequently found in the backs of cattle, at this season of the year, or more especially toward spring? How does it get there, and how prevented, and what the best mode of getting rid of it? Please don't answer by referring to a back volume,

Northville, LaSalle Co., Ill.

The grubs or worms inquired about are the larvæ of the *oestrus bovis*, or gadfly, and are called in England warbles. This fly makes its appearance in the latter part of summer, and generally attacks the young and well conditioned part of the herd, chiefly perhaps because their hides are thinner and softer, and of course more easily penetrated. The fly is armed with an ovipositor, constructed like a gimlet, with which it bores through the skin, and in the puncture thus made it deposits its egg. The cattle do not take the operation very patiently, but with tails erect make off over the pasture with all their speed, and if possible find their way into water.

The egg hatches a white grub, which lies with its tail to the air,—the respiratory organs being posterior—and with its mouth in the bottom of the sac in which it is bedded. Here it grows until June or July, when it drops out; a little round puncture having been kept open in the skin of the animal during the whole time of its sojourn beneath it. When it leaves the animal—which is always done in the morning between about six and eight o'clock—if it escapes the birds, which are apt to be on the lookout for its appearance—it seeks the nearest hiding place, and speedily becomes a chrysalis, with a very hard shell enclosing it. In this state it continues about six weeks, when a little valve or lid in its shell flies up, and allows it to come forth a perfect fly. This fly first seeks its mate, and the female then makes for the cattle, to deposit its eggs as its parent had done.

Mr. Youatt says that these grubs are productive of no ill to the animals in whose backs they are bedded, but only to the hides. We can bear testimony to the latter part of the assertion, as we have often seen hides perforated with from ten to forty pretty good sized gimlet holes, distributed through the best part of the skin. The first part of his assertion is, however, contrary to our observation. We have always found the poorer animals to be plentifully supplied with them in the spring of the year, while the well conditioned had few or none.

Very few modes of getting rid of the grub seem to have been adopted. They may easily be squeezed out with the thumb—a piece of work at which we were accustomed to amuse ourselves in our boyhood—or a little corrosive liquid may be put upon the orifice beneath which the grub lies.

Mr. Lawrence, in the Farmers' and Graziers' Guide, recommends the following:

Take yellow basilicon ointment	4 ounces.
Spirits turpentine	1 "
Oil of vitrol	½ drachm.

First mix the ointment and turpentine together, and afterwards add by a little at a time of the oil of vitriol, keeping it constantly stirred until well incorporated.

PRODUCTIONS AND INCREASE OF NORTHERN ILLINOIS.

At the Railroad Convention, held at Rockford on the 17th of January, several of the counties presented interesting statistics of their products during the past year. We copy such of them as we find in the report of that convention, contained in the Chicago Journal. That of Jo Daviess was misluid by the editor of that paper, and that of Cook appears not to have been presented. It is probable that these statistics may not be minutely correct; but they will convey a substantially accurate idea of the agricultural wealth of these several counties.

The exports of Chicago during the business season last past is also appended.

Wheat	956,860 bushels.
Flour	13,752 bbls.
Beef	6,199 "
Pork	7,099 "
Tallow	1,000 lbs.

Lard	66,000 lbs.
Wool	216,00 "
Hides,	12,256 in number.
Tobacco	52,000 lbs.
Potatoes	600 bush.
Oats	5,900 "
Hams	22,926 lbs.
Stearine	8,839 "
Hay	227 tons.

McHenry County. Population (by census) 10,049, in 1840 3,002.

Wheat, about	400,000 bu.	Pork,	13,000 lbs.
Corn, "	550,000 "	Neat cat.	20,000 head.
Oats, "	250,000 "	Hogs,	25,000 "
		Sheep,	6,000 "

Kane County. Population (by census) 12,718; in 1840, 6,725.

Wheat,	689,000 bushels.
Oats,	662,400 "
Corn	549,000 "
Barley	29,800 "
Pork	1,080,00 pounds.
Butter	191,700 "
Cheese	41,850 "
Cows	4,680 head.
Working oxen	729 pair.
Horses	2,079 "
Other stock	6,264 "
Mercantile capital	$180,000
Manufacturing do	315,000
Flouring mills	11 in number.
Saw mills	19 do

De Kalb County. Population (by census) 4013, in 1840 1744.

Wheat	200,000 bu.	Cattle	3000 head
Corn	275,000 "	Hogs	2000 "
Oats	125,000 "	Sheep	2000 "

Boon County. Population (by census) 5,508, in 1840 1769.

Wheat	275,000 bushels.
Corn	400,000 "
Oats	200,000 "
Potatoes	200,000 "
Hogs	8,000 head
Neat cattle	3,000 "
Horses	2,000 "
Sheep	5,000 "
Merchandize imported	$100,000
Tonnage	400 tons
Lumber	500,000 feet

Town of Belvidere, county seat, population by census, Dec. 5th, 1845. 971.

Ogle county. Population (by census) 6,113, in

Wheat	325,000 bu.	Oats	195,000 bu.
Corn	375,000 "	Stock not given in.	

Winnebago County. Population (by census) 7,831, in 1840 4545.

Wheat	300,000 bu.	Sheep	13,000 head
Corn	383,760 "	Neat cat.	6,571 "
Oats	185,700 "	Hogs	8,279 "

Merchandize imported, including salt, coal, iron, for Rockford, from Chicago and Galena, 582 tons.

Stephenson County. Population (by census) 6,344, in 1840 2869.

Wheat	250,000 bu.	Butter	75,000 lbs
Corn	300,000 "	Wool	30,000 "
Oats	200,000 "	Neat stock	8,000 head
Potatoes	40,000 "	Hogs	8,000 "
Buckwheat	5,000 "	Horses	3,000 "
Pork	250,000 "	Sheep	10,000 "
Cheese	10,000 "	Capital in merchandize for 16 stores, $88,000.	

CENSUS OF ILLINOIS.

Counties.	1845.	1840.	Counties.	1845.	1840.
Adams	13,518	16,023	Logan	3,907	2,363
Alexander*	1,315	3,006	Macon*	2,929	3,233
Bond	6,218	5,211	Macoupin	10,062	7,867
Boone	5,508	1,719	McLean	6,904	6,571
Brown	5,372	4,174	McDonough	6,266	5,348
Bureau	5,293	3,159	McHenry	10,049	3,002
Calhount		1,650	Madison	18,043	13,260
Carroll	2,682	1,178	Marion	6,176	4,800
Cass	5,471	2,974	Marshall	2,883	1,840
Champaignt		1,582	Marquette		
Christian	2,168	1,742	Mason	2,135	
Clark	10,496	7,654	Massac	3,198	
Clay	3,556	3,283	Menard*	4,807	4,481
Clinton	5,033	2,823	Mercer	4,279	2,532
Coles*	8,675	9,857	Montgomery	5,603	4,436
Cook	21,581	11,955	Monroe	6,083	4,466
Crawford	6,337	4,632	Moultrie	2,492	
Cumberland	2,859		Morgan*	16,544	15,444
De Kalb	4,013	1,744	Ogle	6,113	3,447
De Witt	3,332	3,382	Peoria	10,549	7,063
Du Page	7,194	3,615	Perry	4,752	3,222
Edgar	9,265	8,307	Platt	1,037	
Edwards	3,413	3,073	Pike	15,974	11,832
Effingham	2,561	1,736	Pope	4,057	3,874
Fayette	7,849	6,223	Pulaski	1,795	
Franklin	4,979	3,737	Putnam	3,129	2,103
Fulton	17,161	13,592	Randolph	8,866	8,156
Gallatin	11,175	11,058	Richland	3,844	
Greene	11,510	10,993	Rock Island	5,058	2,560
Grundy	1,304		Sangamon*	18,697	15,222
Hamilton	5,730	4,275	Scott	5,653	6,162
Hancock	22,569	10,025	Schuyler	8,631	7,132
Hardin	1,802	1,398	Shelby*	6,972	6,759
Henderson	3,418		Stark	2463	1,632
Henry	2,327	1,261	St. Clair	17,348	13,340
Iroquois	2,730	1,749	Stephenson	6,344	2,869
Jackson	5,038	3,595	Tazewell*	7,615	8,566
Jasper	2,360	1,415	Union	6,344	2,869
Jefferson	7.611	5,620	Vermillion	10,235	8,919
Jersey	5,659	4,572	Wabash	3,359	4,433
Jo Daviess	12,625	6,494	Warren*	6,101	6,910
Johnson	2,822	8,743	Washington	5,895	4,809
Kane	12,718	6,494	Wayne	6,497	5,148
Kendallt			White	8,080	7,936
Knox	9,680	7,175	Whitesidet		2,457
Lake	8,236	2,905	Will	10,156	9,219
La Salle*	10,149	10,013	Williamson	5,780	4,340
Lawrence*	5,609	7,061	Winnebago	7,831	4,545
Lee	3,182	1,921	Woodford	3288	
Livingston	1,000	750			
			Total	643,482	472,929

* Portions of these counties have been cut off.

† In these four counties the census for the year has not been received.

Too true. The time was when industry was fashionable, and none were ashamed to practice it. Such times have changed: fashion rules the world, and labor has gone out of fashion with those that can live without it, and those that can't—and until a reform is had, and industry again becomes fashionable, we may bid farewell to many a comfort we might otherwise enjoy.

VETERINARY DEPARTMENT.

SWELLED LEGS. At the request of a friend, who says he can testify to its correctness from his own experience, we insert the following from Clater's "Diseases of Horses," by Skinner. The difficulty alluded to is a very common one in this country:

"This is a very frequent and most troublesome complaint. The cause is often exceedingly difficult to be detected, and when discovered, is often so complicated, and the disease becomes so inveterate, that the practitioner has little prospect of completely eradicating it.

The fore legs occasionally take on a disposition to enlarge; but it is oftener, and running to a greater extent, found in the hinder ones. A horse is sometimes left in perfect health at night, and is found, on the next morning, with one or both hind legs enormously enlarged. The skin is tense and glistening; it is hot and exceedingly tender; the horse cannot bear to have it touched; he catches up his leg suddenly; the limb moves as if the lower part of it had no joint; and, in the convulsive effort to get it out of reach, the animal not unfrequently loses his balance, and falls, or threatens to fall, on the examiner.

This complaint, which is known by the name of *weed* in many parts of the country, is evidently sudden and very intense inflammation of the absorbents of the leg. A considerable degree of general fever often speedily follows; the pulse quickens; the mouth is hot; and the horse is entirely off his feed. Young horses are peculiarly subject to this, especially if, after being taken from grass, they are too highly fed, and suffered to stand idle in the stable. Sometimes in older horses, as well as in the younger ones, it is the sudden shifting of inflammation from some other part, as the lungs or the intestines.

This apparently formidable species of swelled leg readily yields to proper medical treatment. The leg should be frequently fomented with warm water; from four to six quarts of blood should be taken away, and a good dose of physic administered, which should be followed by a diuretic medicine. The swelling, however, having subsided, and the tenderness having gone off, the legs should be well rubbed, and then lightly bandaged; gentle exercise should be used and alterative medicine administered; for the over-distended vessels must necessarily be weakened, and the disease is apt to return.

If an old horse, or a young one that has been over-worked, is suffered to stand a day or two in the stable, his legs often fill, but without pain or heat. The legs of some horses regularly swell every night. This is connected with debility, either general or of the part. The case must be considered very attentively before any measures are adopted. The horse may be too highly kept, but his legs are suffering from occasional over-work: then mild physic, mild diuretics, regular exercise, hand-rubbing, and bandages around the leg, will be the proper means to be adopted; decreasing a little the quantity of food, and giving mashes and green meat, if the season will allow it. The habitual use of the bandage is an excellent thing in these cases, and has often gradually strengthened the vessels of the part, and rendered the leg as fine as ever.

Frequently an enlargement of the leg is connected with general debility. The horse has been cruelly over-worked—or he is recovering from serious illness—or he has been half starved, and he is generally weak, and these weaker and injured parts yield. A very mild dose of physic will sometimes be indicated even here, and especially if there is any foulness about the horse. A daily mash should be given; a fair allowance of corn; green meat if it can be procured; gentle and regular exercise should be used; and small doses of cantharides, varying from three to five or six grains, and a few tonic diuretic balls. Every thing should be done to increase the strength of the system generally, and the vessels of the extremities will soon regain their proper tone.

This course of treatment will be particularly proper if the legs swell at the spring and fall of the year. The horse is then shedding his coat, a process which is always attended by some debility. The tonic diuretic balls will here be exceedingly useful.

In every case, however, of swelled legs, a great deal more depends upon management than on medicine; and there is nothing so likely to be injurious as the frequent use of diuretics, of which many grooms are so fond. They are fruitful sources of debility (the worst cause of swelled legs): they first weaken the urinary organs, and loss of tone in the system generally too soon succeeds."

SPAYING HEIFERS.

Several subscribers have requested us to give the mode of spaying heifers with a view to facilitate their growth and fattening. As we have never witnessed the operation, and there is very little reference to it either in books or the agricultural journals, we are not able to make out as complete an article as we could wish. We infer from this general silence on the subject, that it is a thing very seldom performed; though we believe it is somewhat practiced in the southern States.

The object is similar to that sought for in the castration of the male, viz: the prevention of any desire for sexual intercourse; and consists in the extraction of the ovaries. These are small roundish masses connected with the uterus, (womb,) and upon their healthy action, impregnation by connection with the male depends. The operation is performed in very much the same manner with heifers as with sows. The animal is laid upon her right side, and fastened there so as to be kept still. Her legs should be so tied that she cannot kick nor indulge in contortions of the body. The operator stands behind her and makes an incision just below her hip, and between that and the short ribs—cutting through the skin, flesh, and muscles to the membrane which envelopes the bowels. This he carefully cuts so as to admit the hand. He then

lays hold of the uterus, which will be now exposed, and lifts it a little carefully, and works his fingers till he feels one of the ovaries, which he cuts off close to the uterus. The other is felt and exterminated in the same manner. The wound is now to be sewed up. For this purpose a long straight needle is used, carrying a strong waxed thread. The wound must be sewed so that its inner part may unite first. The first stitch is made by passing the needle through the skin from the out to the inside, and drawing most of the thread through; and the needle is now entered beneath the outer skin and passed through inwardly as before. From four to six stitches will be sufficient to draw the inner edge of the wound together, and the outer skin may then be closed in the same way; when the ends of the thread may be tied and the wound anointed with some tar salve. The greatest care must be exercised not to wound the uterus or the intestines, either with the knife or needle. The ovaries will be pretty readily distinguished from the horns of the uterus, near which they lie, by their feel—the former being hard, and the latter soft and flabby.

The operation is usually done when the heifer is about a year old; and she must be kept for the *thirty six hours previous to the operation without a particle of food or water*, so that the intestines may not be distended; as also to allay all tendency to inflammation. The heifer, it is said, will go to her food, and require no further attention except a spare diet for a short time.

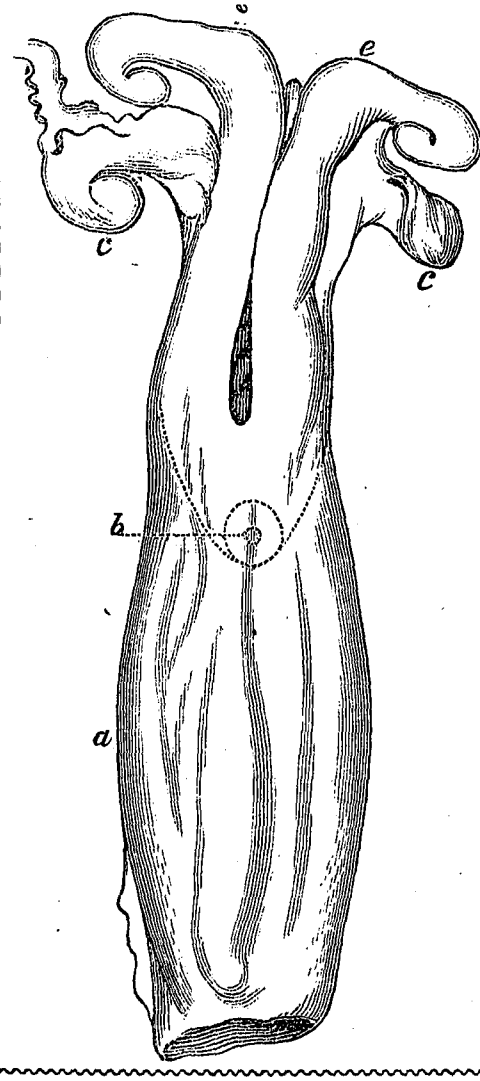
Cows when spayed, it is said, become as large as oxen, and take on fat remarkably; or if spayed when in milk will continue so for a number of years without any diminution. It is not uncommon, where spaying is practiced, to work the animals thus treated, like oxen, to which they are fully equal for strength and activity.

We have seen a great number of spayed swine; but the operation was successful only in a proportion of the cases; many dwindling away, losing the use of their hind legs; and others having an unsightly swelling, or hernia, in the lower part of the belly. In these cases, however, the work was done by hanging up the sow by the hind legs on a pin, and cutting open the belly between the four back teats; and we are suspicious that the whole thing—and the closing the wound particularly—was done in a very unskillful manner. It does not appear to us—though we are not authoritative on the subject—that the hanging up part would do at all for heifers, as it is certainly not the best way for swine. It would seem also that this work should be done by hands made skillful by experience; as any bungling would risk more than could be made by it: though a skillful spayer of pigs would probably perform the same operation upon heifers. If a new hand is to take it up, he had better practice upon dead specimens, till he gets acquainted with the situation of the parts, and a little skill in cutting flesh.

A mode of destroying the generative power of sows obtained considerable notice a few years since, and was tried by many—but with what success we have never known. It was as follows: Take a goose quill, and cutting off the ends insert it into the vagina two inches or more, according to the size of the animal, and through it drop six or seven No. 3 shot. Probably many could answer as to the result of this experiment.

We shall be greatly obliged to any one who will give definite and practical information on the subject treated of above.

The cut, which is from the Quarterly Journal of Agriculture, represents the generative apparatus of a full-grown cow. *a* is the vagina, *b* shows the mouth of the orifice into the uterus, *c c* the ovaries, and *e e* the horns of the uterus.



GRAVEL IN HORSES. Messrs. Editors: I would call the attention of your contributors to a disease common to horses in the West, which I denominate "gravel." It is known by a continued straining of the horse, and if he has an opportunity, a disposition to roll frequently, throwing himself from one side to the other with great facility, and often many times without getting up. Any information with reference to the cause and *cure* will relieve many a horse from the most excruciating pain, and probably prolong the life of a noble animal.

R. H. SPICER.

Pope Creek, Ill., Jan. 1846.

POTATO ROT. A PEACH INSECT.

BY F. K. PHŒNIX.

MESSRS. EDITORS: Although your complaint of the desertion of your correspondents in your last number cannot apply to me, yet, thinking there might be something of the kind in your next, I send you the following for insertion, then or sometime.

The Potato Rot, Curculio, &c. The much vexed question in regard to the origin of this terrible disease among potatoes, and its remedy, seem as far from being satisfactorily settled as ever. It seems to me, however, that your solution of the matter in the December No. is the most probable, viz: that it is an epidemic, and prevails like diseases of that kind among animals, and like them will, after a time, cease. It may be that its great fatality is partially (can it be wholly?) owing to the great improvement which has been made in the size and flavor of this vegetable, and the consequent distance which it has been removed from its original condition, as regards not only size and flavor, but also its original vigor or hardihood. I believe it is an acknowledged fact that the greater the improvement made in any species of plant—the farther it is removed from its natural habits, the more liable it becomes to disease. This theory, it seems to me, derives considerable support from this fact, which I have observed in all my acquaintance with the disease, that our best table varieties are most subject to it—for instance the Neshanock or Mercer. There is another theory that has been formed in regard to the apparent decay of some particular, old varieties of fruit which, if true, would account for the decay of our present old varieties of potatoes—that is, if it would apply to potatoes as well as fruits, and I do not see why it might not,) and would also furnish a remedy. The theory is this: that the varieties of fruits have a certain period of duration beyond which they cannot or will not flourish as fruits, and that the only way to keep up the supply of varieties is to sow the seed and obtain new ones to take their places. I have not, I confess, a great deal of fellowship for the idea, yet there may be more or less of truth in it, at least enough, if there were no other inducement, to lead us to attempt the production of new varieties of potatoes, as well as of fruit, from the seed. The first theory looks to me somewhat probable; and if so, it might be that raising them from the seed would partially or wholly restore them to their original vigor and health.

In view of the prospective increase of the disease the coming season, I wish to state a fact. In the season of 1844 my potatoes were late planted, and did not grow much till late in the season, when they grew very fast and large. The seed potatoes were small. In consequence of this late, rapid growth, (as I suppose,) an unusual number of them were hollow. Last spring I sold some few bushels from a heap to a man living six miles from here. He very naturally took the largest of them. A part of them he planted, and his crop was about half diseased, though, as near as I can learn, it is a different and perhaps mitigated form of the rot. He tells me the bad cannot be distinguished from the good ones in the heap, and it is only on cutting them open that they are discovered. They are hollow, and smell badly when cut open, but they are not moist or wet, as the affected ones generally are. We both planted late, but *I planted small potatoes*, and mine are almost perfectly sound and good. There are perhaps half a dozen Neshanocks in a bushel that *seem to be* infected with the rot, though the decay progresses very slowly, and from the outside. The inference is to my mind very plain. I shall also plant a part of other kinds than the Neshanock, as I did the past year. The potatoes I sold were all Neshanocks. I have not found among my own any diseased except them.

I notice that very many of my peach limbs, and some plum and apple limbs, are bored by what I suppose to be the curculio. On peach trees the places are readily detected by the gum which has flowed from the wounds—on the others by the rows of punctures, which rows are from ½ inch to 2 inches long, containing from 3 to 30 eggs about ⅛ of an inch in length, of a yellowish color and very small diameter. They are generally laid on the present year's growth, and horizontally as deep as the heart of the shoot. If they be not destroyed, our smooth-skinned fruits, such as plums and apricots, will come off very slim. Let all the tops and limbs of trees that are cut off be burned early in the spring, and thereby very many of them, and the eggs of other noxious insects will be destroyed.

Delevan, Wisconsin, January, 1845.

COST OF CROPS IN ILLINOIS.

BY C. CADWELL.

MESSRS. EDITORS: I would respectfully solicit your assistance in a matter of great importance, which I must acknowledge is beyond my ken—a mystery of which I have read, but have not seen. That is, how farming as a general thing can be made to yield 60 per cent. or more on all labor, with a capital or first cost standing at 12 per cent; or how a man can do his work well and sow 50 acres of wheat for $2 50; or how he can harvest and market 10 acres of corn for $12 50; or how he can sow 8 acres of barley for 50 cts; or how he can sow oats for 7 cts and drag them in for 25 cts to the acre; or how he can harvest 500 bushels of ruta bagas for $2 50; or how he can crossplough for 37½ cts per acre; or how he can dig and store potatoes for 1 penny per bushel; or how he can pull and market 200 bushels of onions and get 50 cts per bushel, for one dollar, the average price for wages per day being 75 cents. In short, Messrs. Editors, you must assist me out of this dilemma, or I must conclude Wisconsin goes far ahead of Illinois in farming.

I would not be so selfish as to require so much, did I not suppose many others to be in the same predicament. Come on, ye farmers from the East, and ye capitalists all, and from Europe come on to Wisconsin, for where can you get 60 per cent. per annum on capital and labor in farming but there?

Now I supposed the reason why so much capital was invested in farming was because it is an honorable and healthy occupation, and although less profitable than some other branches of business, the risk was less also; and many seek a safe investment with less profit, rather than a risky one with greater profit; and since it is not easy to give up old opinions or prejudices, you must help us out of this.

Shall we gain any thing by filling up our country, by such calculations, with wild and visionary people, who come here expecting to find roasted pigs running about the streets with knives and forks sticking in their backs, ready to be eaten, and who are sure to be homesick and discontented as soon as they find the reality?

The West is a great country and a good country, and one that a great deal of capital may be safely and profitably invested in, and in a great many ways; and there is no necessity for deceiving people. Then let them come, there is plenty of room yet.

Lake co. Ill., Janunry, 1846.

"The Horse—*By Youatt: Edited by J. S. Skinner. Lea & Blanchard, Philadelphia.*"

Mr. Skinner's edition of Youatt was brought before the public in this country nearly three years since, and by this time is pretty well known by those who take most interest in the rearing and care of horses.

There is however a great class of farmers, comprising perhaps eight tenths of the whole body, who yet know nothing of the work. Probably nine tenths of these either use or are in some way concerned in the care and use of horses; and have more or less to do with feeding, training, working, and curing them of diseases. Very few of this number have much of that accurate knowledge of the anatomy of the animal, or of his physiological structure, which will enable them to understand the principles concerned in skillful breeding; and in curing his various maladies. So far as this latter thing is concerned—although most men are from necessity obliged to have more or less of it to do—with some exceptions, it consists in the use of a few mere recipes, which are of course often used without any clear perception of the true nature of the disease they are intended to cure.

There can be no sort of doubt but the wealth saved to the country would be considerable, could all those who have the care of horses be furnished with the more perfect knowledge of the animal which is contained in a very few works now easily accessible to all.

Among these works the one quoted at the head of this article stands foremost. Anatomy, with the diseases to which each part is liable, are here treated of in the fullest and most satisfactory manner, by one capable of handling the subject: to which are added such variations, additions and suggestions as are demanded by difference in climate and feed in this country. The whole, illustrated by plates, constitutes a volume of 450 pages, and is within the means of every man who owns horses, and certainly ought to be in his hands. An essay on the ass and mule is added by the American editor.

It is impossible to give any extracts which will convey an index of the work; but we shall draw from its pages hereafter, as occasions and circumstances require.

COMPLAINTS OF WHEAT SELLERS.

The complaints of those who sell wheat in our market are so many and are concurred in by such a number of respectable and candid men, that it is impossible to believe them without foundation. The complaints respect the various modes made use of to chisel them out of a part of their loads of wheat, and are laid to the charge, not of one buyer, but of many. One farmer represents to us that he has platform scales at home, which he knows to be correct; that he weighs his load of wheat entire before bringing it to market—that his bags are sound and his wagon box tight; and that his load when sold falls short about four bushels. This four bushels is about the quantity alleged to fall short on a load of 35 or 40, by all who complain. Another states that he makes an especial bargain that if he is not satisfied with the weight, it is no sale, but he will pay for the weighing—and that his wheat holds out; while his neighbor, who makes no such stipulation, but whose load was weighed on the same scales at home, loses in selling, five bushels. Another still says that on carrying his order, which he had not attentively examined, from the warehouse to the counting-room for payment, he finds that it calls for one cent less on the bushel than the stipulated price; and that afterwards, on charging it upon the perpetrator, he laughed at it as a good joke.

These complaints, it will be seen, charge not merely mistakes upon the dealers, but *dishonesty*. It is very common for men to grumble—it is a right which they feel bound to exercise; but to suppose that all we hear is mere grumbling, is to suppose a more incredible thing than that the agents of many purchasers are either unaccountable blunderers or suppose a per centage of plunder from the farmers not bad to take.

It has been suggested to us by a farmer that the way to obviate the difficulty is to have an inspector appointed by the common council whose business it shall be to see to this matter; and to tax a small per centage on all wheat weighed, for his payment. This tax would be very light indeed. The quantity sold this season will not probably fall short of 2,000,000 of bushels; and when interests of such magnitude are at stake they certainly ought to be looked after.

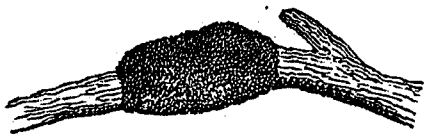
Lest it should be thought that we are personal, we will state that we have no personal acquaintance with the agents complained of, and have not even heard them named.

The Potato Disease. This malady is more prevalent in this vicinity than was at first supposed. We hear of it in all directions; but what proportion of the crop has been injured by it is a matter of conjecture, and will not be ascertained with any accuracy until spring, when those stored in pits or in the fields will be opened.

Professor Lindley, editor of the London Gardeners' Chronicle, remarks that the water in which potatoes affected with the disease are boiled, has an offensive odor. This odor is a sure sign of incipient decay, though the disease has not yet made itself visible in the potatoes. When this is the case, such potatoes should be used at once, or they will invariably spoil. Perhaps spreading them out to the air might delay it for a time.

Productive Farm. The farm of James Gowan, Esq., near Philadelphia, consisting of 100 acres, exclusive of woodland, maintains from 40 to 50 head of cows, the necessary number of horses, a large stock of swine for breeding and fattening; and produces for market hundreds of bushels of rye, some wheat, and on an average 400 bushels of potatoes, and 3 to 400 bushels of carrots, beside providing for the family. Mr. G.'s products per acre, are, commonly, 100 bushels of corn, 400 of potatoes, 50 of wheat, [we suspect there was some *guessing* in stating these quantities as common yields,] 1000 of sugar beet, nearly 700 of carrots, and more than 800 of ruta bagas. High manuring, thorough cultivation, the soiling system—in short, the thorough adoption of all the improved modes of farming, are the secret of this success. By these means, he makes four or five acres do the work of thirty.—*Selected.*

CATERPILLARS. There are a great many worms known by this name; but the one to which it is particularly applied is that pest of the orchard known among naturalists as the *Orgya antiqua*, or vapor moth, which spins its web in the forks of branches of cherry, apple, and several other trees, where the worms live, and swarm forth by thousands from April to July, devouring all the green foliage near them. They are very active worms, and so well known that no particular description of them is needed. What the farmer wants to know is, how best to be rid of them. The mother of this worm is a moth which appears in great numbers about the month of July, flying about, and entering houses by night. About this time it lays its eggs on the small branches of wild cherry or apple trees. About 400 are laid by each moth; being placed endwise to the limb and close together, and covered over with a sort of varnish which protects them from the wet—resembling the black bunch shown in the cut. When vegetation starts in the spring,



the eggs hatch, and the worms commence eating and spinning their tents.

The farmer should never suffer them to hatch. During the winter or spring let him take a basket and pair of shears, or knife, and look carefully over all his trees and cut off every twig on which a nest is found—then carry them to the fire. He can thus root them out entirely. If he suffers them to hatch, it will be far more difficult. If he watches them, however, he will see that they only leave their nests twice a day—once in the forenoon about nine o'clock, and once in the afternoon. On wet days they do not come forth at all. The time to make war on them is when they are at home. There are various ways of doing this: Some burn sulphur under them, others blow them up with gunpowder, others catch and crush them, and others thrust a sort of broom into their nests and wind them all into it, and then kill them. Others again fix a sponge to a long pole, and dip it in strong suds, ley, strong whitewash, or cheap oil, and thrust it into the nest, turning it about till the nest is saturated. Oil will kill every one it touches, and this latter mode, if followed up with spirit, is very effectual. The way to treat them, as all other insects, is to keep them out by unceasing vigilance and effort; for if allowed any quarter, they will overrun the country and defy exertions for their destruction.—*Prairie Farmer Almanac.*

BEE KEEPING.

BY D. LATHROP.

MESSRS. EDITORS: In the July number of the Prairie Farmer for 1844 you have a plan for working bees, which I adopted in the spring of that year. I have now had two seasons experience with it and can say that it fully answers my expectations. I have worked three swarms upon that plan, and have got a swarm from each annually, and an average of 52½ lbs. honey. My hives are composed of sections 16 inches square and 6 inches high, placed one upon another, to the number of 4 or 5. The top of each section is covered with slats 1⅛ inch wide and ⅜ apart, running from front to rear. I take full sections from the top in the fall and place them (empty) at the bottom in the spring. In this way the bees have always room enough, and always work in the same hive; the proprietor has nothing to do with them but to take the surplus honey in the fall and put back the empty sections in the spring. Bees will not (ordinarily) swarm if they have room enough; and if they have room enough for one year they have enough for 50, by giving them the same empty space every spring; for a swarm of bees never increases, under any circumstances, beyond a size fixed by a law of nature; and that is, the whole product of one breeding bee, for one season; for the old stock die annually, and an equal and new stock take their place.

Those who work bees in large rooms and expect a swarm to become a mammoth size, will be disappointed. Bees will work in a large room, if made warm, and lay up annually more honey than they consume, and after a series of years have a large quantity of honey; but it is only the accumulated product of a common sized swarm.

I have by no means said all I wish on this subject; but as you do not like long yarns,* I will say no more at present.

La Salle co. Ill. Jan. 1846.

* Do not be too cautious.—ED.

GOPHER CATCHING.

BY H. COLE.

MESSRS. EDITORS: In one of the back numbers of your paper I saw an inquiry respecting the way by which the gopher of our prairies can be destroyed. I have seen many ways tried to get rid of these destructive creatures, but I have seen none so good as the common rat trap. As the organ of cautiousness is well developed in their heads, it requires some pains on the part of the trapper to succeed well in trapping them. There are two ways in which the trap can be set.

The first way is to open the mouth of the hole where you see they have just been at work; then set the trap, and place it on a level with the bottom of the hole. Then place a piece of board over the trap sufficiently wide to cover all up perfectly tight, leaving a small crack at the farther end to admit light. This plan some of the old ones are cunning enough to evade by throwing out earth on the trap and covering it up.

The best way is this: open the end of the hole where you see they are at work, with a spade or hoe—open the hole back as far as ten feet, if you can trace it so far; here set the trap, on a level with the bottom of the hole, then with your plank cover up the trap perfectly tight, admitting of no light *here*, but keep the mouth of the hole open; in this way the most cautious of them can be taken.

There are some singular facts connected with the history of the gopher. I have never seen one in a section of country where the soil is poor—but it is no sign a country is poor because there are no gophers in it. The gopher is found in abundance in a large portion of Iowa and in some parts of Missouri. I believe there has never been one found on

the north west side of the Illinois River, while on south east side they are plenty; and on the east side of the Wabash there are none, but they abound on the west side. Colony, Iowa, Nov. 1845.

NOTICE

Is hereby given that the executive committee of Union Agricultural Society will be held at the office of the Prairie Farmer, 171 Lake street, at 10 o'clock A. M. of Wednesday, July 4, 1846.

Business of importance is to be acted upon, and in consequence every member will be expected to be present. The executive committee consists of the following gentlemen: Doct. F. T. Miner and O. L. Pierce, of Cook; S. D. Pierce and S. S. Crocker, of Du Page; J. McClelland, of Kendall; and J. A. Gooding, of Will. The other officers of the Society are also ex-officio members of this committee: Lewis Ellsworth, of Du Page, President; E. H. Mulford, of Cook; Charles Parmelee, of Du Page; L. B. Judson, of Kendall; Shepherd Johnston, of Kane; Robert Strong, of Will;—Vice Presidents. J. A. Wight, of Cook, Corresponding Secretary; M. L. Dunlap, of Cook, Recording Secretary; Samuel Goodrich, of Will, Treasurer.

The annual meeting of the Society, for the election of officers and the transaction of other business, will be held at the same place, at 2 o'clock P. M. of the same day.

A general attendance of members and others interested in the success of the Society is respectfully requested.

M. L. DUNLAP, Recording Secretary.

Cazenovia, Cook co. Jan. 20, 1846.

METEOROLOGICAL RECORD.

Lat. 41° 45′ N.; Lon. 87° 35′ W.; from Dec. 26 to Jan. 21. By GEO. F. WILSON, *Principal of Chicago Academy, for Chicago Mechanics' Institute.*

Day of the month.	Height of Barometer in inches and hundredths				External Thermometer.					Clearness of the sky.				Wind, its force and course from.				Rain—Quantity in inches.	Remarks.
	Sunrise.	9 o'cl A.M.	3 o'cl P.M.	9 o'cl P.M.	Sunrise	9 A. M.	3 P. M.	9 P. M.	daily mean	Sunrise	9 A. M.	3 P. M.	9 P. M.	Sunrise.	9o'c A M	3o'cl P M	9o'cl P M		
Dec. 26	29.30	29.25	29.08	29.00	02	11	32	10	13.75	10	10	10	10	NW2	W2	W2	W2		
27	29.10	29.08	29.05	29.00	12	18	26	26	21.00	9	9	9	9	SW2	SW1	S2	SE2		
28	28.90	28.87	28.80	28.76	20	22	30	28	25.00	9	9	9	10	SW2	SW2	SE2	SW2		
29	28.79	28.60	28.62	28 78	21	32	32	22	16.75	10	10	10	10	W2	W2	W2	W2		
30	29.00	28.90	28.60	28.90	20	24	33	28	26.25	10	9	9	9	SW2	SW2	SW2	SW2		
31	28.90	28.80	28.70	28.60	31	33	42	40	36.50	9	9	9	9	SW2	SW2	SW2	SW2		
Jan. 1	28.60	28.50	28.20	28.10	30	36	44	40	37.50	0	0	0	0	SW2	SW2	SW2	SW2	1.30	Rain
2	28.31	28.40	28.40	28.60	32	33	34	28	31.75	2	3	4	9	SW2	SW2	W3	W3		
3	28.70	28.65	28.60	28.80	26	30	32	30	29.50	9	9	9	9	NW2	W2	SW2	SW2		
4	28.90	28.85	28.90	29.10	23	30	31	27	27.75	10	9	8	10	W2	W2	W2	W2		
5	28.90	28.80	28.70	28.80	29	36	44	30	34.75	9	8	7	5	SW2	SW2	SW2	SW2		
6	28.80	28.70	28.60	28.62	29	32	34	34	32.25	9	7	9	0	SW2	SW2	SW2	NE2	.61	Rain
7	28.60	28.60	28.56	28.80	32	34	36	33	33.75	0	0	5	5	W2	NW2	W2	W2		
8	28.90	28.86	28.60	28.86	26	28	31	26	27.75	9	9	7	10	SW2	SW2	SW2	SW2		
9	28.80	28.60	28.54	28.46	26	29	34	28	39.25	7	8	6	10	W2	W2	SW1	W2		
10	28.90	28.80	28.70	28.90	28	33	37	29	31.75	9	10	10	10	W2	W2	W2	W2		
11	28.80	28.70	28.64	28.80	30	38	44	36	37.00	8	6	9	10	SW2	SW2	SW2	W2		
12	28.90	28.90	28.80	28.85	28	22	30	18	24.50	10	10	10	10	NW2	NW2	W2	W2		
13	29.10	29.05	28.70	28.75	19	24	32	26	30.25	10	10	9	10	SW2	SW2	SE3	SE2		
14	28.90	28.87	28.82	28.88	28	32	36	30	31.25	10	9	8	9	SW2	SW2	SW2	W1		
15	28.94	28.90	28.86	28.90	30	33	35	30	32.00	10	10	10	10	W2	SW1	W2	W1		
16	28.97	28.90	28.80	28.70	25	30	31	26	28.00	10	9	8	7	W2	SW2	W1	W1		
17	28.87	28.80	28.70	28.61	27	31	32	30	30.00	10	10	10	10	W2	W2	W2	W2		
18	28.67	28.64	28.60	28.75	27	29	32	27	28.75	10	10	10	10	SW2	SW2	SW2	SW2		
19	28.81	28.80	28.70	28.90	29	31	33	26	29.75	9	5	0	0	E2	E3	NE3	NE2		
20	28.70	28.65	28.50	28.56	29	29	28	27	28.25	6	4	0	0	NE2	N2	NW2	NE4	.68	Snow
21	28.60	28.50	28.40	28.30	29	28	29	27	28.25	3	3	0	0	NE2	N2	NE2	NE2		
Means	28.84	28.77	28.71	28.52					29.26									2.59	

Monthly mean of Barometer, 28.71. Monthly mean of Thermometer, 29.26. N. B. The cistern of the Barometer is placed 36 feet above the surface of Lake Michigan. The external Thermometer has a northern exposure, and is out of the reach of the direct rays of the sun. In the column headed "Clearness of the sky," 0 represents entire cloudiness—10 entire clearness. The figures 1 2 3 4 5 6 denote the force of the wind, 2 denoting a gentle breeze, 4 a strong wind, 6 a violent gale, &c.

EDITOR'S TABLE.

The Penny Magazine, No. 15, from W. W. Barlow, is received. We do not feel that we recommend this work too highly. It is in fact a poor man's Library, containing articles on mechanical trades, inventions, natural history, biography, and numberless other subjects of great interest, abounding with information. We understand that the sales of the republication far exceed those of the original publication in this country.

Sharpers. A certain fellow or fellows too enterprising for idleness and too lazy to work, have taken to getting subscribers to papers whereof they pocket the money, and let publisher and subscriber whistle. The Ohio Cultivator has suffered in this way, and we have reason to think that we have, to a small extent. We would warn friends to beware of paying money for papers to strangers who cannot show authority in the premises.

Boyd's Rhetoric Harper & Brothers, N. York. A work for the use of schools, in the form of question and and answer. It is well adapted, as we should suppose, to further the purposes intended.

Dogs and Wolves. A gentleman in Wisconsin informs us that the loss to him by dogs and wolves, among a small flock of sheep, during the past season, has amounted to seventy-five dollars! As to the wolves, strychnine was invented on their account; and when dogs join them in the work of plunder, we do not know why they should not fare with them in the consqeuences.

Hussey's Reaper. Our readers will notice in another column an advertisement of this reaper. The machine is now extensively used in the South and East, and is declared to be truly a labor-saving implement. It is constructed in two forms: One with four wheels, which is warranted to cut 20 acres per day, and costs from $150 to $170. The other has only two wheels—is warranted to cut 15 acres per day, and costs $125. No sharpening is required during the harvest. Every one knows, however, that the quantity of grain which any machine will cut depends on its weight per acre. It is absurd to suppose that an acre of wheat yielding 20 bushels can be cut as easily as one yielding 10 bushels.

We may add that from the great number of enquiries made at our office this winter, some machine or machines to cut grain will be in great demand in the Western States for a few years to come, and those who wish to make sales will do well to be on hand.

Lives of the Signers of the Declaration of Independence. By Rev. Charles A. Goodrich. Published by R. G. H. Huntington: Hartford, Conn.

This history of the remarkable men of a remarkable time is one of those publications designed to be placed in the hands of youth. The execution of the work before us is equally meritorious with its design. It is written in an entertaining style, and embellished with the portraits of a considerable number of those whose biographies are given, including Hancock, Samuel Adams, Witherspoon, Franklin, Jefferson, and Richard Henry Lee. Those who cannot afford the large works on the same subjects, will find this a useful compend.

The Young Lady's Friend. By Mrs. John Farrar, author of the "Life of Lafayette," "Life of Howard," "The Youth's Letter Writer," &c. Published by S. S. & Wm. Wood.

This book is designed to improve the female mind and character, and will hardly be read without profit by the young of either sex. The topics discussed are "Improvement of time, domestic economy, nursing the sick, behavior of the sick, dress, health, behavior to parents, teachers and brothers, also to gentlemen, conduct at public places, parties, visits, travelling," &c. &c.

These are among the most important things to be learned by young females, and this book will hardly be read without profit to those concerned.

The Medical Remembrancer. S. S. & Wm. Wood, 261 Pearl street, N. York

This is a very unpretending little work of something more than a hundred pages; but its general possession in families might save the life of many a human being. Its object is to point out immediate remedies to be adopted in the first moments of danger from drowning, poisoning, epilepsy, burns, and other accidents. Tests are also given for the most common poisons. The information it contains ought to be in every family, and we know of no better way of getting it than to buy this little book.

The Wheat Fly. A pamphlet, of which the above named insect is the subject, has been forwarded to us by the author, Dr. Asa Fitch. The article composing the pamphlet was originally published in the Quarterly Journal of Agriculture, but was rightly judged worthy of a more extended circulation than it could thus obtain. It contains a beautifully executed plate, showing all the varieties of this fly—of which there are several—so accurately, that there will be no need of mistake in relation to them.

The wheat fly and the Hessian fly, as we have before stated, are not the same insect—the former never having yet made its appearance further west than the Genesee Valley, and even there only of late, while the latter has committed some depredation among us for several years past.

We shall endeavor hereafter to give the substance of this pamphlet, together with the plate, if we think it possible to do it justice.

Popery as it was and as it is. By William Hogan, Esq. Published by Saxton & Miles, Saxton & Kelt, Boston, and by G. B. Zieber, Philadelphia.

The author of this work was formerly a Catholic priest, and of course writes with considerable feeling—not without vigor; and his pamphlet will doubtlesss be esteemed valuable by those who sympathise in its objects.

The Mechanic's Own Book. By James Pilkington. Published by Alexander V. Blake: N. York.

This is a cheap and valuable compilation, not only for the mechanic, but for those who wish to have a work giving in a small compass the application of science to many of the common arts of life. It treats upon that portion of chemistry applicable to the mechanic arts, with abstracts of Electricity, Galvanism, Magnetism, Pneumatics, Optics, Astronomy and Mechanical Philosophy, with mechanical exercises in iron, steel, lead, zinc, copper and tin soldering; with a variety of useful recipes in dying silk, wool, cotton, and leather.

The Knickerbocker or *New York Magazine.* Published by John Allen, 139 Nassau street, N. York.

The Knickerbocker is as much of a favorite as ever, which is saying a good deal. It is now upon the twenty-seventh volume, or the fourteenth year of its existence, and has better sustained its high character during that whole time than any other literary journal ever published in this country. In the great variety of its literary papers, grave, gay, humorous and pathetic, it has not been equalled by any other periodical. No number of it ever appears without something good in it—something which makes a man feel that he has the worth of his money and more too. Its Editor's Table is uniformly the most readable of all its class, and is worth the price of the Magazine. The January No. has been received, but has disappeared from our table—but the one for November is now before us.

The Knickerbocker is strictly an *American* magazine, and stands alone, on ground occupied by none other, and we are glad to see it sustain itself there. If any one wants a good, readable, quiet, drive-away-care journal, get that.

Bees and Dahlias. The Boston Cultivator says that bees and dahlias cannot be successfully cultivated together. Who knows any thing about it?

A Request. Will some friend or friends take the trouble to send us small samples of the following sorts of wheat, viz: Hedge row, red chaff bald, both spring and winter; also China and Canada flint, or other kinds which are new in their locations.

The Washington County (N. Y.) Agricultural Society, the proceedings of whose show have been sent to us by some friend, appears to have done up the work to good purpose. The reports of committees &c. fill about three pages of the Washington Co. Post.

Table of Measures. A correspondent has sent us a table of measures extracted from the Cultivator. He will find the same thing in a back volume of the P. Farmer.

A Cotton Buck. Some wag, who says he has discovered that cotton and wool mixed make the most durable cloth, desires us to tell him where he can obtain a cotton buck, to cross on his flock of sheep, so as to grow the cotton and wool ready mixed. There is no doubt but that this would be a saving equal to the sowing of Indian meal.

Sun Flowers. The St. Louis New Era states that a boat brought to that city from Keokuk, in Iowa, a little time since, sixty barrels of sun flower seeds. Was it sold, and where, and for how much?

Great Suffering. Punch says that when the Baron Rothschild read that the income of Louis Phillippe was only fifty dollars per minute, his eyes filled with tears—he had no idea of such destitution.

Hon. Josiah Quincy's Address. A copy of this address, given at the Fair of New York Agricultural Society at Utica, has been sent us. Never have we seen any thing got up more magnificently. The silky smoothness of the paper, and the clearness of the type, are such only as men of wealth can afford. The address itself is one which when a man begins to read, he will not quit till he finishes, which is more than can be said of all agricultural or other addresses. An extract will be found on another page.

Wheat in Rock Island County. The upper Mississippian states that the amount of wheat grown in that county the last season, will not fall short of 100,000 bushels. The quantity grown in a single precinct, giving about 100 votes, is 30,000 bushels, and of corn 60,000 bushels.

Carrots for Swine, are the poorest sort of feed. So says a writer in the N. E. Farmer. They are excellent, however, for cows and horses.

Our Exchanges. The Daily Journal of this city, in a handsome notice of the Prairie Farmer, seems to fall into the error of supposing our published list of literary and scientific magazines to comprise the whole of our exchanges. That list is published with a view of making some return to those valuable and permanent works for affording an exchange to a journal so far below their cost as ours. A large number of other journals still, we should be glad to notice in a becoming way did it lie within our scope. and were it not that if we began we should find a stopping place difficult. Among these papers are the Daily Journal alluded to, which is the only daily paper we receive—the N. Y. Spectator, Tribune, Courier & Enquirer, the New Orleans Bulletin and Commercial Times, all semi-weekly—the weekly N. Y. Evening Post, Herald and Observer—the Albany Evening Journal—the Boston Courier, Olive Leaf, Shipping List, and Puritan, together with a bushel and a half of weeklies of all politics and different religions published all over the West, East and South, and the whole of them, with scarce an exception, conducted with a degree of ability and industry which is surprising. And while we are on the subject of newspapers, we will take occasion to dissent from the stereotyped complaint of their pugnaciousness and blackguardism, which many regard as settled truth. Newspapers have their quarrels, and some of them do not excel in candor or truth; but they are fully up to the profesion of law, medicine, or the general mass of other people in these respects, though their strifes are more conspicuous. We do not find it in our heart to say less than this of a profession to whose sympathies, courtesy and good will we owe in no small degree our present circulation and success. We insist that the newspaper press as a whole, in this country, is, in respect to its ability, good sense, patriotism, and general dignity of bearing, one of the country's highest honors.

We have said nothing in the above of the cheaper agricultural journals. These we have noticed by name during the past year, and shall take occasion to do the same again.

McCormick's Harvester. As a great number of enquiries have been addressed to us about Harvesters in general, and some about this in particular, we give the results of its operations the past season in the fields of Mr. T. E. Thorn, of McHenry county, who is the proprietor of one. Mr. T. States that it cost him about $115, and that he cut upwards of 100 acres with it. His practice was to work it with two men and two horses, and that thus driven, with the same team all day, without any particular effort, it could average 12 acres of wheat, that would yield from 20 to 25 bushels per acre. His best performance was 9 acres in a single afternoon; and Mr. T. thinks that if the team were changed at noon, it would cut from 15 to 18 in a day A team would work it in cutting 12 acres with less effort than an ordinary plough. The gentleman referred to is much pleased with the machine. The vender of this implement promised us an advertisement of it, and would consult his interest in furnishing it early.

Rock county, Illinois. A paragraph is on travel stating that Rock county, Illinois, has grown the last year 700,000 bushels of wheat. There is no Rock county in Illinois. Probably it is a mistake for Wisconsin.

The Illinois Medical and Surgical Journal for December contains articles of much interest to the profession. This work is principally sustained by the faculty of the Rush Medical College, and it seems to us—though we are no physician—that it certainly contains enough in the course of a year to compensate for the dollar charged for it. The College, as we are informed, is now in a highly prosperous condition—the faculty being full, and the facilities of every sort adequate to confer thorough instruction in every branch of the medical art. Cabinets of materia medica and mineralogy are established, and arrangements for a library, extensive and selected, are made.

The present class is the largest yet entered since the foundation of the institution.

Carroll county. A subscriber in this county writes us in praise of this county, and states that in the township including Elkhorn Grove, or a part of it, the school section has sold for within a dollar and a half of $8,000. His invitation to call will be gladly remembered if we visit that section.

Liberality. The editor of the Southern Planter says that he has been complained of for advising the farmers to make good roads to market—because this was a branch of internal improvements, and that is a political question! We have heard something of Virginia abstractionists; and should suppose that this fellow might be caught and preserved for as good a specimen as any.

"*Familiar Lectures on Botany*, by Mrs. Almira H. Lincoln, new edition, revised and enlarged, illustrated by many additional engravings. Published by Huntington & Savage, 216 Pearl street, New York."

Mrs. Lincoln's Botany is well known in all our higher schools, where it has pretty much superceded all others as a text book, in the study of that delightful science. The student in this work is conducted along so easily, and the successive steps are so well explained, that nothing is left to be desired; and progress is both facile and pleasant. Any child, capable of advancing at all, is able to do it by the help of this work; and every child ought to understand something of the names and properties of the vegetable world in which he lives and moves.

A moment's easy talk with correspondents. Many people suppose the life of an editor to be a very easy one. They imagine him a large fat man, with a red smiling face, seated in a pretty large easy chair, lazily reading some good-humored book, now and then dipping his pen in ink, and scratching down a little editorial, with as little effort as it costs to puff a cigar. In the summer season they

pp 63 & 70 misplaced

picture him once a day on a bob-tail nag, riding out to his farm to see how things go on there. As for work, downright bone-aching work, it does not belong to the picture. It would be easy enough to show the falsity of all this, but it is not our purpose. Suffice it to say, that a single branch of his business, and one which perhaps the uninitiated never think of—we mean the attention he *must* give to his correspondence—often affords pretty constant work to one man.

For *instance*, here are thirty letters by to-day's mail; every one of which must be read through, and each word carefully noted, to see what is conveyed, and what desired. Entries of subscribers' names must be made, and carried out on the mail books, that each may not be overlooked in the distribution of papers; moneys must be properly credited and copies sent; and it will not be strange if half or more of the day passes before these letters are disposed of. Let us look into them.

No 1. "Mr. —— wants the 6th volume of the Prairie Farmer—enclosed is the money."

Short and sweet. The writer of that has no leisure for waste breath. The paper is sent.

No. 2 contains an order on the post master at Chicago for ten dollars and seventy-five cents. If this and all other postmasters will look once more at the instructions of the Post Master General, it will be seen that ten dollars is the largest sum transmissible in this manner.

No. 3 contains an order on the said post master at Chicago for five dollars and seventy-five cents. On presenting the said order, the said Chicago postmaster informs us that the certificate sent him speaks of only five dollars. Of course here is a discrepancy which develops nullification.

No. 4 conveys an order on the same Chicago postmaster for one dollar. The aforesaid postmaster says he has received no certificate of its deposite. Nullification again. Our readers will see in these examples a beautiful sample of the practical operation of the deposite system of paying for newspapers.

No. 5. Orders. —— subscribers, containing the cash therefor. The writer having stated his business, proceeds to chat on different topics in a friendly manner. He feels acquainted with his editor, though he has never seen him, and evidently regards him with a sort of kindly good will right pleasant to contemplate. Such letters are some compensation for the thorns of editorial life; and we should esteem it a pleasure to reciprocate by writing again, but for sheer want of time.

No. 6 bears a like number of subscribers, and with them the correspondent lucre; and then a like pleasant chat tells what subscribers say of the Prairie Farmer. "They are all pleased here but one or two. They decline taking it longer, saying it is a dry, *uninteresting* paper. On enquiry I found they had never read to the amount of one number. They prefer Wilson's Despatch, Brother Jonathan, &c." No doubt it *is* a dry uninteresting paper to a man who does not read it. A sermon is always a dull one to a man who does not hear it—a book is a dull *one to him* who does not read it; and a rain of porridge would be a dry and uninteresting rain to him whose dish was wrong side up. It always is so.

No. 7. A thumping list of names and money to match. "Your paper here is greatly acceptable. A few complain, however, that it contains so many advertisements." Yes, but why should they? The Prairie Farmer—that is, the part for which we ask one dollar per annum, consisting last year of 24 pages, and this year of 32, *does not and never did contain any advertisements.* If we sell a man a pound of tea, provided the tea is good what matter is it whether we wrap it in one or six thicknesses of paper? The present February number gives nearly twice as many advertisements as ever before; but we ask nothing extra for it. When we begin to put such things into the body of the paper it will be time enough to complain—and we suspect these persons have not looked very narrowly into the matter.

No. 8 comes from an office where we have about 50 subscribers, and remarks incidentally among other matter—"I find no one who does not think he gets the worth of his money." That is the way we like it. We will work *hard* to please such men.

No. 9 is from men who wish to know "if a certain machine *can* be got in the city—if so, of whom, and at what cost; and if not in the city, where, and at what cost, and how shall we get it, &c. &c." We look on our list to see if these are the names of subscribers, but cannot find them. To answer these questions properly, will take us at least half a day *running* up and down the streets of the city, besides writing the letter. We will attend to it.

No. 10 is from a subscriber, and contains a similar request. We will attend to it with pleasure.

No. 11 comes under the frank of a postmaster—what can it *mean*? Encloses one dollar, and orders the Prairie Farmer for Mr. A. B. "Here is rank burglaries, look you." Could this postmaster have ever read the new post office law? He will do well to read it soon.

No. 12 is from a subscriber suggesting alterations and *improvements in the paper.* By referring to date, it was written before the new volume commenced. For answer we refer to that.

No. 13 reads as follows: I have not the money in hand to pay for the sixth volume. If I should fail to get it till the *end* of the year, I *do not* like to pay two dollars for one, or 100 per cent. I think that rather high interest. On such conditions as the above I want my paper stopped till I send the dollar."

Very well, that is fair. But you should not complain of the conditions. We do *not* want any man to pay two dollars for one; but we want the one dollar without fail before the time runs out, and we annex the other dollar to the conditions if it is not, so as to place the highest inducement before all to do so. Of course that man must be foolish indeed who will prefer to pay two dollars instead of one. But it is very probable that this very man would be offended if we refused to send him a number till his dollar was paid. He should be satisfied with something. But our space is full. This will do for a sample.

LIST OF JOURNALS,

Literary, Agricultural, and Scientific, exchanging with the Prairie Farmer.

Name of Journal.	*Price*	*Place of publication.*	*How often published.*
Albion,	$6	New York,	Weekly.
American Quarterly Jour. of Agriculture and Science,	3	Albany, N. Y.	Quarterly.
American Jour. of Science and Art, (Silliman's)	5	New Haven, Conn.	Once in two months.
American Review, (whig)	5	New York,	Monthly.
Blackwood's Magazine,	3	New York,†	Monthly.
Democratic Review,	3	New York,	Monthly.
Eclectic Magazine,	6	New York,	Monthly.
Edinburgh Review,	3	New York,†	Monthly.
European Agriculture,	5	Boston (in 10 parts)	Irregularly.
Farmers' Monthly Library,	5	New York,	Monthly.
Hunt's Merchant's Magaz.	5	New York,	Monthly.
Knickerbocker,	5	New York,	Monthly.
Littell's Living Age,	6	Boston,	Weekly.
London Quarterly Review,	3	New York,†	Weekly.
North American Review,	5	Boston,	Quarterly.
Penny Magazine,	6	New York,‡	Irregularly.
Popular Lectures on Science and Art, (Lardner's)	*	New York,	Irregularly.
Railroad Journal,	5	New York,	Weekly.
Spirit of the Times,	5	New York,	Weekly.
Westminster Review,	3	New York,†	Monthly.

* Published in Parts, at 25 cts. each. † Republished.
‡ In 24 Parts, at 25 cts. each.

These publications are all—each in its particular line—the best of which we have any knowledge, either in the United States or in the old world. Many of them are too well known to require more than the mention of their names. Others, though not as well known, are equally excellent. Samples may be seen at our office; and subscriptions paid us will be cheerfully forwarded.

CHICAGO PRICES.

Corrected, Jan. 24, 1846.

WHOLESALE.

PROVISIONS.		$ cts.	$ cts.
Beef	℔ 100	2 00 @	3 00
do. Mess	℔ bbl	5 50 @	6 00
Pork	℔ 100	3 50 @	4 50
do. Mess	℔ bbl	@	12 00
Lard	℔ lb	7½ @	8
Butter	do	12 @	14
Cheese	do	6 @	9
BREAD STUFFS.			
Flour, superfine	℔ bbl	@	3 50
do. fine	do	@	3 00
do buckwheat	℔ 100	1 50 @	1 75
Corn meal	℔ bush	@	37½
GRAIN.			
Wheat, winter,	℔ bush	75 @	80
do spring,	℔ bush	65 @	70
Oats	do	20 @	23
Corn, shelled	do	30 @	33
SUNDRIES.			
Hides, dried	℔ lb	@	7
do. green	do	@	3
Feathers	do	31 @	33
Beans	℔ bush	75 @	87
Cranberries	do	@	2 50
Potatoes	do	25 @	30
Onions	do	44 @	50
Wood	℔ cord	2 25 @	3 50
Eggs	℔ doz	@	25
Flax seed	℔ bush	85 @	90
Turkeys	each	50 @	75
Geese		31 @	37
Chickens		10 @	12½
Barrels		62½ @	75

RETAIL.

GRASS AND FIELD SEEDS.			
Timothy	℔ bush	1 25 @	1 50
Blue Grass	do		2 00
Red Top	do	@	2 00
Red Clover	℔ lb	@	12½
White do	℔ lb		1 00
SUNDRIES.			
Salt	℔ bbl	2 00 @	2 25
White Fish	do	@	6 00
Mackinaw Trout,	do	@	6 00
Dried Apples	℔ bush	1 75 @	2 00
Lard Oil	℔ gall	87½ @	1 00
LUMBER.			
Boards, 1st quality	℔ M	14 @	15
do. 2d quality	do	9 @	12
Scantling and joist	do	9 @	10
Flooring and siding	do	10 @	15
Lath	do	@	2 50
do. board	do	6 @	7 00
Shingles	do	1 75 @	2 50
Sash—8 by 10	℔ light	2½ @	3
Square timber	℔ ft	6 @	10

☞ By a mistake in placing a form upon the press the following pages in this number are transposed: 42 and 50, 47 and 55, 58 and 66, 63 and 71. It was not discovered till too late to be remedied.

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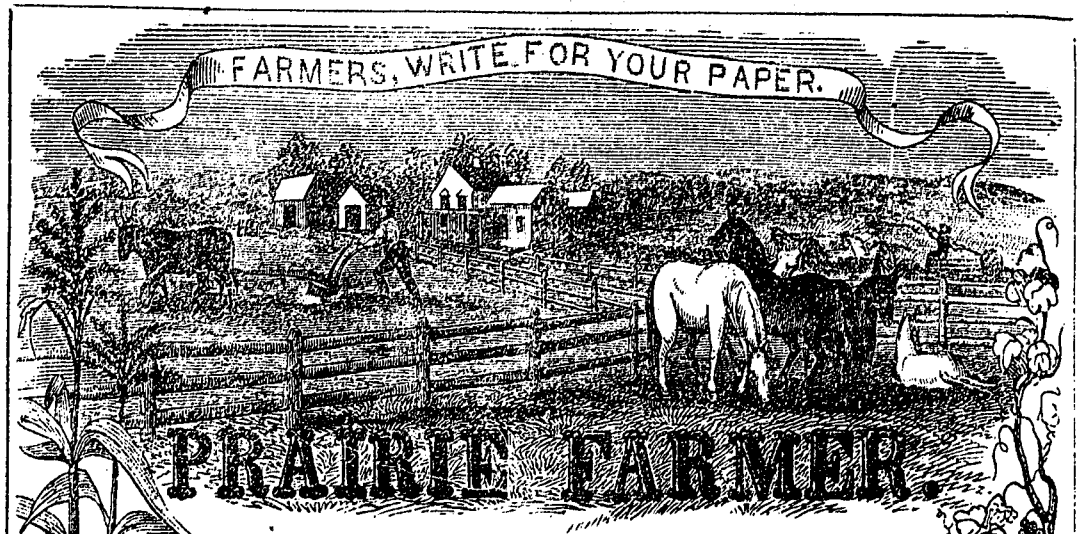

PRAIRIE FARMER.

DEVOTED TO WESTERN

AGRICULTURE, MECHANICS AND EDUCATION.

EDITED BY

JOHN S. WRIGHT AND J. AMBROSE WIGHT.

Vol. 6. **MARCH, 1846.** **No. 3.**

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ORCHARD AND GARDEN.

THOROUGH CULTIVATION OF TREES.

BY EDSON HARKNESS.

MESSRS. EDITORS: Having been "called out" by your correspondent, F. K. Phœnix, I avail myself of the first leisure hour to make such answers to his inquiries as the nature of the case seems to require. "How do you manage your nursery and orchard to make the trees grow so very fast?" is a question we are called upon to answer a hundred times, perhaps, in the course of a season. We sit down to answer fully, and "make a clean breast of it," so that hereafter, when annoyed with questions at a time when we are working so hard that no breath can be spared for talking, we can at once refer the inquirer to the Prairie Farmer. We love to talk, and it gives us great pleasure to see our friends in the nursery, and to give them all such little scraps of information as we have picked up, in regard to the culture of fruit trees: but when we are putting in to hard work, and have a good deal to think about, as to the best selection, in making up a package for a customer, we cannot very conveniently give lectures on cultivation.

The first inquiry to be answered is "what the soil and sub-soil are" upon which the nursery is located. The soil consists of a deposit of black vegetable mold, so universal on the prairies of the West. This mold is more or less mixed with clay, and is 20 inches deep. There are probably 120,000 acres of land in Peoria county as good as that upon which the nursery stands, but none that is essentially better. The sub-soil consists of a layer of very pure yellow clay, of the consistence of putty. This layer is 12 to 20 inches thick, and is found almost every where in this region. Under the pure yellow clay is found a stratum of clay mixed with very fine sand, which is sometimes nearly white, but very often of a red cast. This last named layer generally extends down to the bed of lime-stone, which is from 30 to 100 feet below the surface of the high table lands. This bed of lime-stone seems to extend over a great part of the county of Peoria, and furnishes inexhaustible quantities of building material. Below the bed of limestone we come to that immense coal field which is said by geologists to be better and more extensive than any other on the globe. In Peoria county alone there are more than 100 square miles of this coal bed, which can be worked without difficulty.

The average elevation of the table lands of this region above the Illinois river may be stated at 280 feet—the highest being 340 feet and the lowest about 220. The ground where our nursery stands is on a table of about 270 feet elevation above the river, and 15 miles from it. The descent of the ground is to the north, about one foot in fifty. The tops of the trees in the adjacent groves are very nearly on a level with the prairie land upon which the nursery is situated; so that the winds have just as fair a sweep as upon the wide ocean.

Now for the second inquiry—"How is it possible, where trees are *so* very thrifty, to guard against their total destruction the first or second winter from the graft, by the bark bursting near the ground?" Perhaps it may be well to state *how thrifty* our trees do grow. It is nothing uncommon for our inoculated buds to shoot 5½ feet the first season—and we have had one which *grew six feet and one inch*. The side limbs of our three years grafts often grow four feet in a season, and the young shoots in the orchard are not much behind them. The way we manage to make them grow thrifty, is simply to keep the ground in good order—that is, free from weeds, and in a loose, porous state on the surface—from early in spring till about the middle of August. For setting grafts we plow our land *one foot deep*, and do not wait until the weeds form a crop before we work it over again; in fact we often work it when there is no appearance of weeds. As soon after a rain as land can be worked without baking, we think it needs the plow; for the rain consolidates the surface, and evaporation is very rapid when the surface of the ground is compact. We are also very careful to destroy all insects which prey upon the leaves; for it is obvious that a tree cannot grow when divested of leaves. We use no manure except a little alkali upon the bark of the tree and about the root.

It is astonishing how land will keep moist and sustain vegetation in dry weather, when worked deep and kept loose on the surface. During the extreme drouth of the past season, our deep plowed and carefully cultivated land did not dry down more than two inches; and it kept our young grafts growing all summer—many of which, grafted into roots not larger than a pipe stem and but three inches long, have attained the height of four feet.

How our trees grow so fast and escape injury in winter is something of a mystery; but we attribute it in a great measure to the fact that the growth is stimulated to the utmost extent in the early part of the season, and the land suffered to remain dormant from the middle of August to winter. At our last working in August we rake down the surface smooth, and if weeds come up afterwards we cut them off with the scraping hoe, without disturbing the soil. A few of the latest growing varieties will not stand this highly stimulating treatment, and we are obliged to propagate them exclusively by inoculation upon seedling stocks. Another reason why our trees do not suffer by the first frosts of winter, or rather of autumn, may be on account of their exposed situation. The winds of autumn stop vegetation on the high open prairies sooner than in protected situations among timber. Therefore, when the first hard frost occurs, our trees are better prepared for it than in spots more sheltered, where the cold winds have not been so severely felt. But after all that has been said, I believe the principal reason why our fruit trees are so hardy and at the same time so thrifty, is yet to be stated, to wit: that we are in the midst of one of the best fruit regions to be found in the world. Certain it is, that it has never been my lot to see a country where the apple, pear, peach, plum, cherry, and grape, all seemed so completely *at home*. There is a wild apple tree within a mile of me which is 16 to 20 inches in diameter, and which bears a conical apple near two inches long—or rather it did bear such an apple before the tree began to decay, two or three years ago; it was, however, a regular crab in flavor. The wild apple trees of this region, where they have any chance to grow, present a very thrifty and healthy aspect. And it is remarked by

all travelers that our young orchards are superior to any thing of the kind they ever saw in any country. The table lands along each side of the Illinois and Mississippi, from lat. 40° to 42° ought to raise apples for all the Southern States, the West Indies, Texas, and——but I must forbear, my sheet being full. Fruit Farm, Jan. 1846.

FRUIT CULTURE.

BY T. CHAMBERLAIN.

Messrs. Editors: I have often thought I would say something on the subject of propagating fruit and fruit trees. I have had twelve years experience in the West, and have been an interested reader of your paper, especially on the subject of gardening and raising fruit. I have had frequent opportunities of comparing my experience with the views of those who have written upon those subjects. And without referring to the particular number in which they were published, I will make a few comparisons.

In the first place in respect to raising gooseberries and currants—I have found that I cannot raise them in the tree form, as we used to do at the East; neither can I raise them exposed to the sun's hot rays. I have had for eight years about four hundred currant trees in this situation, and in no one season have I gathered more than half a bushel of fruit from them. It has been the same with my gooseberries—while the bushes from which I procured my cuttings produced abundantly, being cultivated thick, and much shaded. The only place that I know of near me, where fruit was obtained last summer, the bushes grew entirely in the shade, on the north side of a large building. I intend to transplant all of mine into shady places the coming spring.

Next, as to grafting trees in the root—my experience has been the same as one that has already written upon the subject: that some kinds of apples it is not best to graft into the root; some of them were named by the writer. I have found that the Rambo, the Baldwin, and some others, are liable to burst the bark near the ground.

As to pears, I have found no difficulty in raising the trees; and notwithstanding what some say about their being so tender that you must not wash them with lye, I have washed them twice a year with the strongest I could make; I have two hundred standard trees, of thirty varieties, and have found it did them good, as well as the apple and all other fruit trees. I also slit the bark, from the limbs to the ground, with some two or three cuts; this I do to all of my trees, and cultivate them as highly as I can, excepting the cherry and the peach.

Most of my pears are of the modern kinds, and as yet too young to produce fruit.

Cherries. I have found it much more difficult to get them along than any other tree; although I have some handsome trees of the Black Tartarian, Black Heart, and Waterloo. As yet I have had very little fruit except from the Waterloo; a few fine ones from the other varieties. The cherry trees are very apt to burst open in the winter and be injured, upon the south side. For three years I have cut them twice in the season, in order to give the wood an opportunity to expand; and since I have adopted this mode they have done better; but still I have my fears that upon our prairie lands the choice varieties of cherry will not do well.

Nor yet have I been able to have many plums come to maturity, on account of the curculio; but I have had a few fine ones, such as the Queen Mother, Yellow Gage, Duane Purple, and Italian Damask; the Queen Mother was the same size of the Washington, that you gave an outline of in your January number; it was by measurement a little longer.

Grapes I have found no difficulty in raising, to great perfection.

Peaches. Of these I have from thirty to forty varieties, equal perhaps to any in the country. The other day I went out to thin out an old nursery of peach trees, and to my surprise found them nearly all killed within five inches of the ground. I also examined my standard trees, of which I have several hundred, standing in all situations—some on low ground, some on the north side of a hill, some on the south; some of my trees are ten years old, some two years. I can scarcely find one living. The bark looks bright on the outside, also on the limbs; but on cutting into the wood it looks dark and bad. I fear the same is the case with the plum and the apricot. I hope it is not so generally, only in this region. But I fear we shall have to go over the ground again before we shall have peaches. I intend to cut mine high enough from the ground to get a shoot from the old root, so that I can have age to the tree. As I reserved some choice peach stones last year, I shall be able soon to have a new start, if I cannot procure them otherwise. I have been raising some trees from the stones of choice peaches, to see if they will improve or produce the same fruit. I shall be able to have some trees in bearing, as they are not killed quite to the ground. I have my fears that the freeze has extended far and wide.

I would like to say a few words upon an experiment made in grafting. Two years ago I inserted some apple grafts by what is called side grafting, in the month of October, to see if they would not live—as I had conceived the notion from some experiments made during the summer, that I could graft in some form every month in the year. The number of grafts inserted was ten, all of different kinds of early fruit; more than one half lived and grew handsomely last season. What led me to try this was, that when I have been budding, and come near the end of the cutting, I have frequently inserted the cutting, containing six or seven buds, and have scarcely ever failed of having them do well and outgrow those that were inserted with the bud alone.

It has been said by some that putting straw around the body of a tree when frozen, so as to keep it cool, will prevent its coming forward as early as it would if left exposed to the action of the sun. I have tried it myself, but have no faith in it. Twelve years ago I was in New England in the month of February, where the snow was three feet deep and the frost about the same. I went into a hot-house, and after looking about upon the many beautiful flowers, I cast my eye to the northwest corner and saw a limb of a tree in full bloom, but there was no trunk to the tree. Upon examination, it was found

that when shutting up the glass in the fall, they had shut in a small branch of a plum tree, and by the action of the heat of the hot-house upon it, it had blossomed handsomely. What do you have hot-houses for, but to bring forward the grape early, when the roots are some feet from the building, out of doors? These things have satisfied me that warmth applied to the trunk or limbs of a tree will cause the sap to flow.

These are, my dear sir, some of my observations and experience; if you think them worth spending your time upon to look them over, you are welcome to them. There are many more things I might say something upon, but I think I have said enough for the present. I wish you much success in your paper.

Jacksonville, Morgan co. Jan. 1846.

ROOT GRAFTING.

MESSRS. EDITORS: I see in the Farmer for last month some remarks on root grafting. I will give you my plan in a very few words. I take my grafting wax and melt it; then I take old cotton cloth and dip it in the wax, and as I take it out, scrape off as much as I can conveniently. When cool I taer them into strips about half an inch wide; then I take those roots that are less than half an inch in diameter, and prepare them in the form of what I suppose to be cleft grafting. I like to have the scion and stalk as near of a size as possible, though I am not very particular. I bind them together by winding them with one of the narrow strips. It is very quickly and easily done, for it requires no tying, on account of its being sticky. A person with a little experience may graft a hundred or more in an evening. J. B.

Bunker Hill, February, 1846.

Our correspondent does not tell us how he makes his wax.—ED.

CHERRIES.

BY B. HODGE.

MESSRS. EDITORS: Perhaps a few remarks on Fruits may prove acceptable to the readers of the Prairie Farmer. In this number our remarks will be confined to the cherry—a kind of fruit well worthy a place in every garden and orchard. The cherry soon comes into bearing; a very vigorous grower—no fruit more so; a favorite with every body; productive and profitable. Permit me barely to refer to one fact. Mr. Cable, of Cleveland, Ohio, in 1844 realized near $1000 from the sale of cherries which grew on 104 trees. A full statement of this crop may be found in the Genesee Farmer of that year.

Black Heart. An old variety, perhaps more generally known than any other. The tree is very hardy and productive. Fruit large size, heart-shaped. Skin dark purple, and when fully matured, very black. Flesh very dark, tender, juicy, and of fine flavor. Ripens the beginning of July.

May Duke. A well known old variety, highly esteemed; very early and productive. The tree is but a moderate grower, and never attains a very large size. The fruit is highly valued for cooking purposes, and when fully ripe, pleasant and agreeable. Fruit obtuse-heart shaped, and of a dark red color. Ripens about the middle of June.

Early Purple Guigne, or Early Purple Griotte. A new variety, as yet but little cultivated, but bids fair to be very valuable. Matures its fruit earlier than any other variety. The tree is rather a moderate grower, but so far has proved very productive. Fruit of medium size, heart-shaped. Skin very dark red—at maturity nearly purple. Flesh tender and good. Ripens a week or more before the May Duke.

Yellow Spanish, Graffon, or Bigarreau. This fruit is known by some fifteen different names. In the London Horticultural Society's Catalogue, and in Downing's Book of Fruits, it is called "Bigarreau." But why should it be called Bigarreau, merely? There are a large class of the Bigarreau cherries, and each should have its specific name. Why not with just as much propriety call some one of the Heart cherries "Heart," or some one of the Duke cherries "Duke," as to call this "Bigarreau?" May be it is the parent of the Bigarreau family. At all events it is one of the very best of cherries, wonderfully productive, and superior in all respects. Fruit of large size, obtuse-heart-shaped. Skin pale whitish yellow, with a fine crimson blush on the side next the sun. Flesh very firm, juicy, and of a superior rich, sweet, agreeable flavor. The tree comes early in bearing; and the flesh, firm and hard, renders it very desirable as a market fruit. Ripens about the first of July.

White Bigarreau, or White Ox Heart. A popular and well-known variety, extensively cultivated in some parts of the country. Fruit of large size, heart-shaped, somewhat irregular. Skin pale yellowish white, and when fully matured nearly one half of the surface finely marbled with red. Flesh half tender, and of an agreeable sweet flavor. Ripens here about the first of July.

Black Tartarian. In the opinion of many "none better, if as good." A fruit of exalted merit, and well worthy of extensive cultivation. The tree is of vigorous growth—none more so. Its large leaves and beautiful pyramidal form, render it very striking in its appearance. Fruit of the largest size, obtuse-heart-shaped. Skin smooth, of a fine purplish black, but not quite as black as the true Black Heart, and the fruit somewhat longer in proportion to size than the last named. Flesh half tender, very juicy, and of a rich, delicious, high flavor. Ripens here towards the end of June.

Elton. A most superior fruit in all respects—productive and fine. The tree is of vigorous growth; the young wood, however, is rather slender, and often grows rather crooked in the nursery; as the tree advances in growth, it becomes erect, making a beautiful head, and soon becomes a large spreading tree. The fruit is of large size, rather long, heart-shaped. Skin of a fine pale yellow, except on the sunny side, which is finely mottled with red. Flesh rather firm, and when fully matured, of a very rich, luscious flavor. Ripens the last of June or first of July.

Waterloo. A very productive and valuable variety, as yet not extensively known. The original tree is said to have first produced its fine fruit about the time of the battle of Waterloo—hence its name. Fruit of rather large size, obtuse-heart-shaped, skin

when fully ripe of a glossy black. Flesh very tender, juicy, rich, high flavor. Ripens early in July.

Napoleon Bigarreau. This fruit we have not yet fully tested, having fruited it the last season for the first time. It bids fair, however, to sustain the high reputation given it by others. Fruit very large, rather long, heart-shaped. Skin pale yellowish red, richly marbled. Flesh firm, juicy, and fine. Ripens early in July.

English Gaskin. This variety was brought here from England by an English gentleman some thirty years ago. Probably the name is not the true one. However we are not acquainted with any other variety like it. The tree is of unusually vigorous growth. Very productive, and a good market fruit. The fruit, to be fine, should be left on the tree till fully matured. Fruit of medium size, heart-shaped, rather long. Skin when fully ripe, deep black. Flesh very dark, firm, juicy, sweet, and fine. Ripens about the tenth or fifteenth of July.

American Heart. The growth and habits of this variety somewhat resemble in appearance the Black Tartarian. Fruit of rather large size, heart-shaped, often quite irregular. Skin pale yellowish red, but when fully matured becomes much darker, and is then of a sweet and agreeable flavor. Ripens towards the end of June.

Arch Duke, or Late Duke. One of our most valuable late varieties. The tree is truly ornamental, growing in a beautiful pyramidal form, with wide expanded branches. Fruit quite large, obtuse-heart-shaped. Skin of a dark red, somewhat mottled. Flesh quite tender, very juicy, and of an agreeable sub-acid flavor. This fruit in ordinary seasons does not fully mature before the latter part of July; and often can be retained on the tree till the middle of August.

Belle de Choisy. A popular fruit of very beautiful appearance, belonging to the Duke family. Fruit of over medium size, quite round. Skin pale amber color, most beautifully mottled with yellowish purple; the side exposed to the sun handsomely tinged with red and nearly transparent. Flesh tender and fine, and of a sweet, delicious flavor. Ripens towards the end of June.

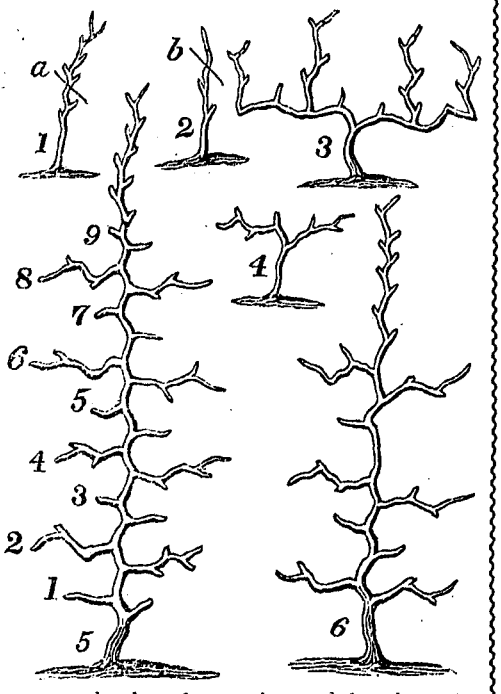
Tradescant's Black, or Elkhorn. An excellent variety, well worthy of extensive cultivation. The fruit being very large and solid renders it highly valuable as a market fruit. Fruit very large, heart-shaped. Flesh very firm, and of a rich, sweet, agreeable flavor. Ripens about the tenth of July.

Buffalo Nursery and Hort. Garden, Jan. 1846.

GRAPE PRUNING.

During the last and the present month, it is the custom of many cultivators to prune their Grapes, and though it is maintained by some that it should be done earlier in the season, no good reason can be given why the present month is not as good as any other time, provided it be done before the sap starts. It is matter of dispute, whether bleeding, as it is called—which results from pruning after the sap has started—is injurious; but it is reasonable to suppose that profuse bleeding will weaken the vine, as it exhausts it of the sap destined for its growth and sustenance.

There are two modes of pruning grapes, each of which may be followed, according to circumstances. This may be understood by explanation of the cut. No. 1 rep-



represents the plant of one year's growth from the cutting, which is to be cut off to one good bud, as at *a*. The lower bud is not counted. No. 4 represents the plant two years after setting out, with the 2 year old horizontal shoots as they must be cut into two or three buds. The two buds next the stem are to be allowed to grow as high as they please, to be tied to the trellis. No. 3 represents the vine four years after setting out, with the two centre branches that bore fruit last year as they must be cut down to their origin, the next two cut down to four buds for bearing fruit; the next two to one good bud for producing one good wood shoot each; and the next and last two to three buds for bearing fruit. That is, the two horizontal branches are extended each way four feet—eight feet in all—and furnished with eight stems, one foot apart from each other, of which one half are to bear fruit one year, and the other the next. In our climate and soil eight feet will be found too little, and the distance should be increased as circumstances require.

The other mode of trimming is that shown in the other figures, where one main upright stem is allowed to grow, and the branches on each side are kept alternately long and short, so they may bear accordingly. These modes are adopted to prevent the accumulation of vine and foliage in any given place, and to keep every part open to the sun and air, so as to grow and ripen the fruit.

We trust that the subject will be understood from the explanations, though with more room we should have made this article more minute. Should any of the vines after cutting be inclined to bleed, the end cut off may be sharpened, and a potato stuck upon it. This is pronounced by one who has tried it, efficacious.

[*From Morrell's American Shepherd.*

MANAGEMENT OF SHEEP—PARTURITION

The usual period of gestation with the ewe is five months, or an average of 152 days.

The proper time for parturition must be determined by circumstances, of which *climate* and locality are the most prominent, and these the flock-master must steadily keep in view. The month generally selected in the Northern and Middle States is May, the vicissitudes of the climate forbidding an earlier period, unless in instances where buildings are provided for shelter, the expense of which is greater than the majority of farmers are willing to incur.

The ewes during pregnancy should be disturbed as little as possible, and every attention paid to the quantity and quality of their food. Ewes, however, should not be kept *fat* at this stage; indeed this state is injurious, as it predisposes them sometimes to abortion; but what is usually termed "good store condition" should be maintained through the whole period of gestation. Neither should ewes be exposed to storms and cold during the winter and early spring months, but thoroughly protected from both. A healthy offspring cannot be expected from any domestic animal, in our rigorous climate, if the dam has been permitted to suffer the hardships of cold and starvation; therefore it will be wise if the sheep husbandman will always hold up to view the apothegm, "*so the dam, so the offspring.*" There must be good condition to sustain the mother in the trying hour of lamb-birth; and like good condition is equally necessary to sustain the lamb subsequently, and impart to it sound constitution, size, and thrift.

The field chosen for the ewes' fold should be dry, free from stumps and open ditches, and possess as level a surface as possible; as in little hollows ewes are liable to be *cast*, which is caused by lazily stretching themselves in sunny weather, when in a lying posture. In this situation they will often be found flat on their backs, and violently kicking the air, without the power of recovery, until aided; and, if unseen by the shepherd, death will follow sometimes in a few hours. But perhaps no field affords that smoothness of surface to prevent these too often fatal occurrences, and therefore, the duty devolves upon the shepherd of passing leisurely over every part of the field several times during the day, to guard against them. But this duty must not be delayed until some of the ewes have dropped their lambs; he must commence his career of watchfulness at least ten days before; for it is very common with ewes that are in over good condition to be found in this perilous situation some days before their time.

Other duties obligatory upon the shepherd are lucidly set forth by Mr. Youatt, as follows:

"The lamber should have with him his lamb-crook; a bottle of milk—ewe's milk if possible, and carried in his bosom or in an inside pocket, that it may be kept warm; some cords to tie the legs of the ewes that he may have occasion to assist or examine; a little pot of grease or oil, to lubricate his hand, if he should have occasion to introduce it into the womb of any of the ewes; a sharp knife, with a round or rather curved extremity, should it be necessary to remove the lamb piece-meal from the mother; a piece of stout polished iron rod, of the size of a goose quill, twelve inches in length, and rounded somewhat like a button hook, in order to remove from the womb a dead or divided fœtus; a small quantity of cordial, consisting of equal parts of brandy and sweet spirits of nitre; and a strong infusion of ergot of rye.

"The period of lambing having commenced, the attention of the lamber should be increased. He should carefully observe every ewe that appears to be in labor. While she walks about and does not exhibit any extraordinary degree of suffering, he should not interfere; nor should he do so if she rises when he approaches, and walks away, unless her labor has been protracted twenty hours or more. He should not be in haste to render his assistance, although she should be continually lying down and getting up again, and showing more impatience or irritability than actual pain; but if her strength appears to be declining, his immediate aid is required. If he has to drive her to the fold or pound, it should be as gently as possible, or he should drive some others with her, in order that she may not be frightened by being alone selected. The early interference of the lamber is always prejudicial, and very frequently fatal. Nature, in the course of twenty or twenty four hours, will, in a great majority of cases, accomplish that which cannot be hurried on by art without extreme danger.

"The state of the weather will cause a very considerable difference in the duration of the labor. When the weather is cold and dry, and especially if the situation is somewhat exposed, the progress of the labor will be slow—the throes will be comparatively weak and ineffectual, and the ewe may and should be left a considerable time before mechanical assistance is rendered. When, however, the weather is warm, and especially if at the same time it is moist, the throes will be violent, and the strength of the sufferer will be very rapidly wasted; there will be a dangerous tendency to inflammation, and the aid of the lamber is speedily required. Except under these circumstances, no motive of curiosity, no desire to know how the affair is going on, should induce the lamber to interfere while the throes are natural and the strength continues, unless it is evident, without handling the ewe, that a false presentation, or some mechanical cause, prevents the expulsion of the *fœtus*. When the ewe is nearly exhausted she will often suffer the lamber to kneel beside her and successfully afford the requisite assistance. If there is a violent struggle between the patient and the lamber, the fœtus will often be destroyed; but his help, when she quietly submits to him, will rarely fail to preserve the mother and her offspring. Let it be supposed that, from certain circumstances, she is driven to the pound, or that she is lying quietly by the lamber in the field. He should first endeavor to ascertain the nature of the presentation. Is the lamb coming in the right way—with its muzzle first and a fore-foot on each side of it? If the tongue is not protruding from the mouth and becoming almost black, and her strength is not quite wasted, a table spoonful of his cordial, with double this quantity of the infusion, will probably increase or recall the pains; and the lamb will soon be born. If this is not effected in a quarter of an hour, a second dose of the infusion should be

given; and, that being followed by no good result, he should try what mechanical assistance will do. He should draw down first one leg and then the other, endeavoring with his finger to solicit or coax the head onward at the same time. If he cannot readily get at the legs, he should push the head of the lamb a little backwards and downwards, when he will probably be able to grasp them. If he does not now succeed, the cause of the obstruction will be sufficiently plain, namely, the too great largeness of the head, which cannot pass the arch of the pubis; and, therefore, either tying the legs of the ewe, or an assistant keeping her down on the right side, the lamber should grasp the two fore-legs in one hand, and with one or two fingers of the other, urge it forward with as much force as is consistent with the safety of the lamb. The young one will rarely fail to be extracted by these means, unless the head very much exceeds the common size."

In addition to the above sound observations, when mechanical aid is employed, it is always accompanied with considerable fright to the ewe, and if she is permitted to escape immediately after the birth of her lamb, will often refuse to own it; therefore, should it be alive, let it be placed at once before her, and by its form and scent she will in most cases recognize it as her offspring. On the whole, the surest way is, to secure the ewe in a small pound or shed, and there leave her for the day; for if she has a supply of milk, rarely further trouble need be apprehended. Should she, however, under these circumstances or any other, refuse to suckle, she must be held, and a teat placed in the mouth of the lamb. This alternative seldom fails to conquer all difficulty.

The lambs of fine-wooled sheep are extremely sensitive to cold and wet when they drop, and to guard against exposure, the sheep-master must endeavor to anticipate storms, and place his flocks beforehand under shelters. These should be capacious, as the ewe dislikes too much company at the time of parturition, as will be noticed in her retiring often quite distantly, if in a field, from the rest of her companions, when the event is about to transpire. In such instances where no shelter is provided, great labor and diligence must be employed, the presence of the flock-tender being constantly needed, with his bottle of warm milk, and putting the more helpless in a large basket, lined with hay or straw, and bringing them before the fire for an hour or more, until animation is restored. When lambs are separated from their dams under such circumstances, care should be observed not to have them wrapped or touched with any thing that is offensive, as its scent, when very young, is the principal source of recognition by the mother. A clean blanket or woolen cloth will be best, if swaddling should be found necessary.

It is proverbial that the Merino and Saxon varieties are not as good nurses as the English breeds, and nature therefore rarely overtasks, by supplying them with twins. When this occurs, however, if the ewe is in her prime, condition good, udder large, and her keep good, it will be proper to let both the lambs run with the mother; but if the reverse of this is, let one of them be brought up by hand, or, as the Spanish custom, be destroyed. A different nurse will probably cause runts of both, and is one of the means by which many flocks, in process of time, are sadly deteriorated.

When the ewe loses her offspring, it is followed by a distension, and frequently an inflammation, of the udder. But such cases will be found by the reader fully treated of in the chapter of diseases, under the head of *garget*.

During the period of lambing, continuing as it does for a fortnight or more, the pasture for the ewes, if they are in fair flesh, should not be luxuriant; but when it is passed, then they may be removed to better keep; and in all cases the situation should be dry, and free from too great exposure. If the season has been unpropitious for early grass, and consequently the keep during parturition too low, the flock should have the run of two lots, which should adjoin, and the communication between them at all times kept open. The adoption of this course prevents the confusion incident to changing the whole flock at once.

The number of ewes herding together at this important period should not exceed one hundred, and a still less number will result advantageously to both the flock and master. He should at all seasons keep before him the fact that *a few sheep kept together will do better than many*, which will be more particularly enforced hereafter.

The affection of the ewe for her offspring is often exceedingly strong, as the following example will testify, although rather an extraordinary instance, related by the Ettrick Shepherd.

"One of the two years while I remained on the farm at Willenslee a severe blast of snow came on by night, about the latter end of April, which destroyed several scores of our lambs, and as we had not enough of twins and odd lambs for the mothers that had lost theirs, of course we selected the best ewes and put lambs to them. As we were making the distribution I requested of the master to spare me a lamb for a ewe which he knew, and which was standing over a dead lamb, about four miles from the house. He would not let me do it, but bid me to let her stand over her lamb for a day or two, and perhaps a twin would be forthcoming. I did so, and faithfully did she stand to her charge. I visited her every morning and evening for the first eight days, and never found her above two or three yards from the lamb; and often as I went my rounds, she eyed me long ere I came near her, and kept stamping with her foot to frighten away the dog. The weather grew fine and warm, and the dead lamb soon decayed; but still this affectionate and desolate creature kept hanging over the poor remains with an attachment that seemed to be nourished by hopelessness. It often drew tears from my eyes to see her hanging with such fondness over a few bones, mixed with a small portion of wool. For the first fortnight she never quitted the spot; and for another week she visited it every morning and evening, uttering a few kindly and heart-piercing bleats; till at length every remnant of her offspring vanished, mixing with the soil, or wasted away by the winds."

War Engine. Col. Ketchum's war Hand Grenades are exciting attention at Washington. One thrown into a vessel will blow it up.

ORCHARD AND GARDEN.

A LIST OF APPLES.

It is not perhaps necessary to remind our readers that the spring will now soon be here; and as a consequence of its coming, several duties will of necessity come with it. Among these will be the one of setting out trees. Perhaps not a few of the readers of this paper have not yet begun to make an orchard—not having as yet got their ground ready; or it may be, that a spirit of procrastination, or some absurd prejudice has prevented. Others may so far have begun wrong, that all hitherto done is little better than though not done at all. It is often the case that when spring comes, and the farmer resolves on buying a few trees, that from not having given the subject previous reflection, he is at a loss how to make a selection of fruits; and as the making of an orchard is a work for life, he is left to regret afterwards that he did not give the subject more reflection. It is with a view of calling attention to the matter that we propose to give a list of apples, embracing a sufficient variety and number to answer the wants of most cultivators. It is however to be remarked that no list will suit all tastes, and that all trees will not flourish equally well in different climates and soils. We have not room for extended descriptions, and shall append the names with such brief remarks as may seem necessary. Among summer apples may be named

Carolina June, or the Red Gum of the nurseries. Ripens two hundred miles south of this from the first to the 20th of July.

Sweet June. Ripens at the same time with the last. Both of these are healthy growers and abundant bearers.

Kirkbridge White. According to the Indiana Farmer and Gardener, this is not found out of the nurseries of Indiana, but we incline to the opinion that some of the nurseries in the centre of this State could produce it. Its fruit ripens from the first of July to the middle of August, occupying about six weeks. Flavor mild pleasant acid.

Summer Pearmain. A rich flavored fruit; ripens from tenth of August to September.

Early Harvest. This is known by a variety of names, as Prince's Harvest, July Pippin, Yellow Harvest, Large white Juneating, Tart Bough, and Early French Reinette. It is an American fruit. It is a rich, beautiful, fragrant apple, and is pronounced by Downing the finest early apple known. Ripens in July.

Early Strawberry. A fragrant and fine summer fruit, ripening about the middle of July.

Large Yellow Bough, otherwise early Sweet Bough., Sweet Harvest and Bough. A fine table fruit.

Drap D'Or—otherwise called early Summer Pippin, Bay Apple, Bonne de Mai. It is an early and abundant bearer.

Kenrick's Codlin. A very juicy, tender fruit, ripening gradually from the middle of August to the end of September. It is a superior cooking apple, and an astonishing bearer. Mr. Hodge states that trees of this sort in his nursery not more than four or five feet high are often loaded with fruit, bending the tops to the ground.

Red Astrachan. A beautiful fruit, ripe the fore part of August; of pleasant flavor, but liable to become mealy if kept too long.

Autumn Pearmain. A very large apple, but a high flavored dessert fruit.

Maiden's Blush.—A tender, juicy, acid fruit, excellent for drying.

Gravenstein. This is a German Apple; but Mr. Downing says that it fully maintains its excellence here, and pronounces it a first rate fruit. Very large. Ripens September and October, but will keep a month longer.

Wine Apple. This, to our taste, is a poor fruit for the table, but is pronounced superior for drying, and will bring, thus prepared, where it is known, a much higher price than any other fruit.

Holland Pippin. Known as the Reinette d'Hollande, Summer Pippin and Pie Apple. It is a large fruit, ripening in August, but lasts to November. A superior kitchen apple.

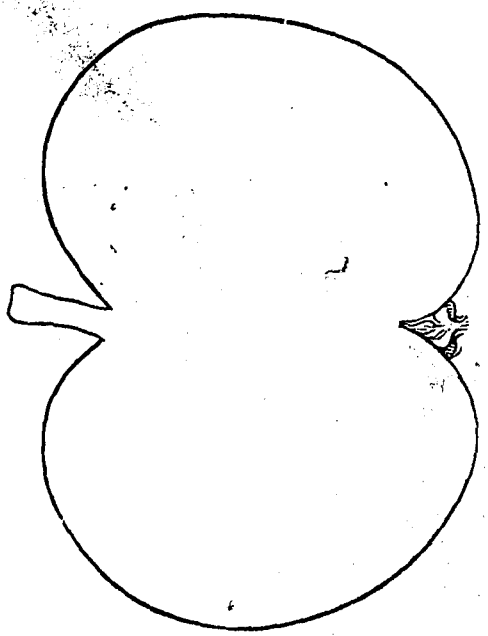
Lyman's Pumpkin Sweet. A very valuable apple for baking.

Porter Apple. This is a decided favorite in the Boston market, and deservedly so. Fruit very fair, and the tree productive. It is a Massachusetts fruit, and may or may not succeed as well here.

Rambo. A medium sized fruit of excellent quality for table or kitchen. Ripens from October to December The tree grows well on light sandy soils, and bears remarkably young. It is known in New Jersey by other names, as Romanite, Seeknofurther, and Bread and Cheese Apple. It is not, however, to be confounded with the true Seeknofurther.

Ross' Nonpareil. An Irish fruit, very excellent. There are many other varieties in repute, as Pumpkin Russett, Jersey Sweeting, both sweet apples—and Red Ingestrie, Lyscom, Golden, Russet, &c.

WINTER APPLES. It may be needless to remark that more zeal and skill have been expended in perfecting the winter varieties of apples than any others, and consequent-



ly the list to select from is very large indeed. We will put at the head of them the apple which in the Eastern States has long, by common consent, stood there, and in our opinion will not be ousted from its position very soon, unless by its own deterioration.

Rhode Island Greening. Too well known to need any description. We however met with a lot a few days since so fair, though of rather less than medium size, that we had its outline taken, which is given on the preceding page.

We have regretted to observe that in many instances this tree has not grown well in our western prairies, but hope it will yet be found to succeed better.

Baldwin Apple. Mr. Downing places this fruit at the head of New England apples, a place which, in our opinion, it does not deserve. It is, however, a splendid fruit, of a rich high flavor—the tree an abundant bearer.

Belle Fleur. Of this there are two kinds, the yellow and white. The yellow is the largest; but the white is more known at the West, being largely produced in Ohio. They are both excellent apples. Keep from October to March.

Gloria Mundi. Known also as Monstrous Pippin, Baltimore Glazewood Gloria Mundi, New York Gloria Mundi, American Mammoth and Ox apple. It is of an immense size—bears on moderately young trees, excellent for cooking, and fair for eating. It is rather a shy bearer, and on account of its great weight is apt to fall from the tree. It sometimes weighs nearly a pound and a half.

Lady Apple. A small but choice dessert fruit.

Newtown Pippin. There are two varieties of this—the green and the yellow, but Mr. Downing pronounces the yellow superior, The tree is a slow grower, and without skill a shy bearer.

Blue Pearmain. A large and exquisitely beautiful apple, whose beauty is not exceeded by its flavor; but a poor bearer, and consequently not very popular.

Swaar. A very fine fruit, but requires a deep, rich, sandy loam to perfect it. The specimens which find their way into our market are inferior.

Ladies' Sweeting. Pronounced by Mr. Downing the finest winter sweet apple for the dessert yet known in this country.

Esopus Spitzenburg. This well known fruit is one of the most beautiful of all apples. The colors differ, however, considerably, from situation. The fruit has few, and in the opinion of some, no superiors. Rather a shy bearer.

Rawle's Janet or Jeanneting. This should not be left out of any western catalogue. The tree is a determined grower, and when it comes into bearing, it produces abundantly. It blooms about ten days later than other varieties. The fruit keeps as well as the Newtown Pippin, and by many is preferred to it.

We have no room for further enumeration, and will barely mention the Red Sweet Pippin, Pryor's Red, Hubbardston's Nonesuch, Sweet Pearmain, and Golden Pippin.

☞ All men who keep bookstores are not wise, though they have so many books.

HOUSEHOLD AFFAIRS.

The Tea Pot. The housewife who wishes to have a good cup of tea, should use a metal tea pot; but to insure the advantages which this material confers, it must be kept bright. Metal is a better conductor of heat than earthen ware, and a far worse radiator; but if its surface becomes dim, its radiating powers are increased, by which the heat is soon dissipated, and the quality of the tea injured—that tea pot making the best tea which retains heat the best. To make a good cup of tea, the water must be poured on it boiling hot; and that the heat may not be lessened, it is well to warm the tea pot by previously pouring into it boiling water and throwing it out, or "scalding the tea pot," as it is called. Dr. Kitchener also says, that all the water to be used in making tea, should be poured in at once; as that put in afterwards lacks the aroma—which is all absorbed by the first water—and is proportionally vapid.

Coffee. The proper roasting of coffee is a very delicate operation. If roasted too little, its full flavor is not developed; and if roasted too much, the flavor is dissipated, and a bitter, astringent, carbonized article is the result.

The nicest way of roasting it is in a hollow cylinder of sheet iron, made close, which is kept turning over a brisk fire, to heat it evenly. When the coffee has attained a deep cinnamon color and an oily appearance, and the fragrance of roasted coffee is perceived to be sufficiently strong, it should be taken from the fire, well shaken, and suffered to cool. Not over a half pound should be roasted at once.

The coffee roasted at once should never fill the cylinder more than one third full, as the bulk is nearly doubled in the operation; and before being put into the cylinder should be dried thoroughly in an open pan over a slow fire, being kept stirred all the while to drive off all moisture. This may be continued till it turns yellow. So says Dr. Webster.

To Cook Eggs. A year since we published the following mode of cooking eggs; and as the egg-eating season is approaching, we are induced to repeat it, particularly as many journals after copying, either seemed to misunderstand, or were disposed to be merry over it.

Pour water, heated to the boiling point, into an iron vessel, and set it upon the stove where the same heat will be maintained, but not where it will boil: then break the eggs into it and let them remain until cooked, which is easily known; then take them out of the water and serve up with salt, butter, and pepper. To our taste, they are far better than those cooked in any other mode. Try it before you spill any wit upon it.

Ants. A writer in the Boston Cultivator says that ants, red or black, may be easily destroyed, and the cupboard cleared of them, by putting a dish of sugar and water in their way. In their eagerness to drink they will drown.

Bread has been made of a great variety of substances: Tacca, Bread nut, Lotus, Acorns, Potatoes, Moss, Bark of the pine, Roots of fern, Wood, Starch of horse chesnuts.

RABBITS. DEEP PLOWING.

BY E. C. LYMAN.

Messrs. Editors: I have a remedy for rabbits which I have tried for the last five years with entire success upon my small fruit trees. Kill a rabbit, cut it in two, and rub the trees with it—blood, hair, flesh, intestines and all—from the ground up as high as the rabbits can reach, until the trees are well besmeared. This will do no injury to the trees unless it is done with the sharp bones of the rabbit. I formerly applied rancid grease, to the great injury of my trees; cornstalks, also, but it was too much labor; in short, all the remedies mentioned in Professor Turner's communication except vegetable oils and the hounds, but have found it for my interest to discontinue them all for the rabbit. Rabbit will not eat rabbit. One word more: keep the pigs from your trees after you have applied the rabbit to them, or they may prove worse foes than the rabbits.

If you please, Messrs. Editors, I will give my experience upon deep and shallow plowing. For corn plow beam deep, in the spring; the foul seeds of last year will thus be turned under so deep that if they vegetate at all it will be so late that the corn will get the start of them, and by diligently using the cultivator and plow they may be kept under during the season. Another advantage is, ground thus plowed stands a dry or wet season much better than ground skimmed over with a plow. The result has been, the deep plowed ground has produced from 25 to 40 per cent. more than the other.

Sangamon co. Jan. 1846.

WHEAT.

BY THOMAS H. RICE.

Messrs. Editors: You call for practical matter—therefore I hope you will allow me to give so much of my practice in wheat culture as differs from that of some of your correspondents.

My plan is to sow 1½ bushels of wheat to the acre. Thick sown wheat has generally yielded heavier crops for me than that sown thin. I have never seen a failure of a wheat crop because it was sown too thick, but have often seen it fail when the only cause was that it was sown too thin, or was not well covered. To be convinced of the correctness of my practice, one has only to cut through a field of wheat that has been sowed unevenly, and notice carefully the difference between the thick and the thin; the former will be found to be much better. Therefore I recommend to sow thick. It ripens earlier, and is consequently less apt to rust. It yields more bushels, weighs more pounds to the bushel, and is worth more a pound.

When I put in a crop of fall wheat I leave the surface of the ground as smooth as I can, and am careful to have it well drained. My reasons for so doing are (and first let me premise that either a very wet or very dry freeze is very apt to kill wheat—the former being more so.) 1st, When soil that contains a large portion of water thaws in the winter, (which it often does,) it slides (if it is not smooth) from the ridges into the furrows; hence the natural position of the wheat is changed, and the roots are stretched. During this preternatural extension, a hard freeze is often fatal to the life of the wheat. And again, when such a thaw is accompanied with rain the earth is washed from the roots of the wheat, which leaves the neck bare and it is only supported by the very small roots, which a few days of freezing wind will completely dry, and the death of the plant is the inevitable consequence. And further, when a heavy rain falls, the water flows to the furrows and a hard and sudden freeze covers the wheat with ice, which deprives it of the air, and the wheat is killed, but retains its green color until the ice melts and the wheat is again thrown into its natural element—exposed to the air and sun—when it withers and dries: hence the notion that only dry freezes injure wheat.

A further reason: if cattle be permitted to trample wheat (but they should not) where the ground is not smooth, the slipping of their feet bruises the wheat, which either injures its health or causes transmutation or death. But where the surface of the soil is level, the extremes of wet and dry are less, the soil is not moved by wind, rain, or thaw, and at harvest the wheat will stand regular on the ground, ripen more evenly, and be of a uniform height; consequently the cradler can do his work better.

The points on which I have written may be deemed of small importance; but when we consider the vast amount of labor and capital that is annually bestowed on the culture of wheat in this State, we conclude every part of the business deserves attention.

Spring Grove, Henderson co. Ill.

GUADELOUPE MERINO SHEEP.

BY NATH. SAWYER.

Messrs. Editors: I am engaged in wool-growing (though I live in this city) on a farm called Milewoods, situated on the National Road, near the town of Lafayette, in Madison county, 20 miles west of Columbus. I have been at great expense and trouble in importing from the State of New Hampshire the pure Guadeloupe Merino stock, which has never been crossed. It comes from the flock of the Society of Shaking Quakers, at Enfield village, in the county of Grafton, in that State. They purchased the original stock about 35 years ago, of Deacon Ticknor, of Boston, who imported them, and have ever since preserved it pure and unmixed. I think I have the best fine wooled sheep which have ever been in the western section of the Union. I was pretty extensively engaged in wool-growing more than thirty years ago—lived in Boston during the importation of the Spanish sheep, and had a good knowledge of all the original Spanish Merino family flocks which were imported. The Guadeloupe was one of the best (by many considered the best) of the family stocks. It belonged to a nunnery of that name, and had for ages been by them nursed and kept pure from mixture. The nunnery was broken up by the Cortes of Spain and the flock confiscated and sold, and many of them brought to the United States.

The animal is clean, compactly and squarely formed, large dewlap or ruffle, (by the Spaniards considered one of the greatest evidences of purity of blood,) and of fine constitution. It is completely covered with wool, over its head, belly, and on its legs, to the hoofs. The wool very thick, and for

the fine wool stock, is long. On opening it, the appearance is beautifully white, free from the hard candied yolk, but saturated with the volatile oil, which gives it a most delightful soft and silky touch. It has a great advantage over the Paular stock in this respect of gum or yolk, which is so much disliked by the manufacturers; and is free from jar or white hairs, to which that stock is subject. The fleeces are heavy.

I enclose you a sample of the wool of a buck called King Philip, who is the sire of the principal part of my flock, and cut last season 10 lbs. of wool, washed on his back; and the same quantity the year before. I likewise enclose you the sample of one of his last spring lambs, called Pokanokett, and also samples of some of my ewes of the same stock. This stock crossed on the common sheep of the country makes a good staple, adds greatly to the quality of the wool and the value of the fleece, and will be a great acquisition to the wealth of the farmers of the West. I mean to keep this blood pure and unmixed, so that I can at all times furnish pure stock.

Your section of the Union is destined to be a great wool-growing country; and you have a great object in increasing the quantity and quality of your fleeces. Cincinnati, Ohio, Jan. 1846.

A Card. Please give my respects to Mr. Wright, of Iowa; I shall be most happy to step over to his farm at my earliest convenience, as I am sure I could learn many things in regard to farming. I think friend Wright misapprehends my views in reference to his article on bad farming. I would like very much to have a few specimens of seeds tested in Iowa, which I have; some of which can be sent by mail at a trifling cost: should you wish to try them, neighbor Wright, just signify it: I will put them up with pleasure, and send by mail or leave them in Chicago where ordered.

Illinois, January, 1846. Mr. Hardup.

CONDENSED CORRESPONDENCE.

Peas—a New Variety. Mr. Hiram Griffith, of Union, Wisconsin, informs us that he has a sort of pea which is much sought after in that section. The pea is nearly white, with a brown eye, but its name is unknown to him. He promises us some for distribution.

Fatal Disease among Cattle. Mr. S. Jameson, of Hanover, Jo Daviess county, writes us as follows:

"We have been visited in this place with a very fatal disease among the cattle, a few days past. One man, out of 19 head, lost 11; others have lost as many, but not as many in proportion to the number they had. When we can arrive at any conclesion as to the cause and remedy, I will write you."

J. E. R. of Philadelphia asks "are there any pure Saxon or high bred Saxon Merino sheep in your section of country, or west of you in Illinois or Iowa, for sale? and for what could they be bought?"

There are pure Saxons in this section, though they are not plenty, and we are not able to say whether any could be bought. High bred Saxon merinos are not uncommon, and can be had at about eastern prices.

Carroll County. A letter from a gentleman in that county informs us that it is "filling up with industrious and enterprising inhabitants." A fact which we can easily believe from the list of subscribers forwarded in his letter.

Grapes—Canker Worm. Mr. William Walker, of Bloomington, Ill. writes as follows:

"I am desirous to be informed more extensively in regard to all kinds of fruit, especially the grape. I have been growing the grape for several years; the vine grows very fine, and the grapes form and grow well till about half grown, and then they blast and fall off. The Isabella is the worst to blast. If any of our friends will give information on the best location, soil, and manner of cultivating the vine, it will be thankfully received. I have also a very fine orchard, but find many enemies both to the tree and the fruit. The span or measure worm is very destructive. They take leaves, fruit and all of many trees. I am going in a few days to try different experiments in order to prevent their climbing up into the trees in the spring. Will some one give us light on the matter?"

We especially desire communications from practical vine growers. There is no fruit which seems to feel a change of climate and soil sooner than the grape; and hence instructions in its culture are often contradictory and inapplicable, leaving the cultivator in doubt whose instructions he shall follow. Mr. W. does not state the symptoms minutely enough to enable us to judge of the cause of his failures; but it may result from either of three causes, viz: mildew, a shallow culture, or too much fruit upon the vines. Mildew may be cured by sprinkling sulphur over the fruit when it is wet with dew or rain.

The vine is a great traveler *under* as well as *over* the ground, and requires a pretty deep, well pulverized soil; but if this happens to be a dry one, and plowed but shallow, the vines often flourish well in the early part of the season, but when the dry weather comes on cannot find sufficient moisture to mature the fruit, which consequently perishes. Vines, too, are apt to grow more fruit than they can well ripen; and a part of it should be removed, as occasion requires.

Native Wine. Mr. Dixwell Lathrop has forwarded us half a dozen bottles of wine made from native grapes, of which the manufacture is as follows: "That marked No. 2 is grape juice and rain water in equal parts, and 2½ lbs. brown sugar to the gallon. No. 3 is two parts water and one of juice, and 3 lbs. of sugar to the gallon. No. 4 is juice and water in equal parts, and 3 lbs. of sugar. The juice was pressed out, and the water and sugar added, and put immediately into casks and set in the cellar, and nothing has been done to it since. I have experiments with the juice without any water, three more in all, which perhaps you may hear from at some future day."

We do not profess to be any judge of wines, having left them off some fifteen years since, in company with brandy, whiskey, gin, and other mighty drinks—to which our imported wines are as nearly related as half brother; but we know enough about it to pronounce this a very pleasant article, both in color and taste; and it would doubtless improve much by age. As to the *economy* of making wine of this kind of grape it may perhaps be doubted, unless the fruit is unusually plenty; and then we should think it easier and better to grow the improved varieties.

We made a mistake last month in calling this grape the *vitis vulpina*. It is the *vitis incisa*. Mr. L. will accept our thanks for this product of his enterprise and skill.

Inquiries. James McConnell of Springfield writes as follows:

"Our people do not generally like book farming, and are so well informed now that they need no further knowledge.

"Please call on your correspondents for information in relation to the cultivation of the locust. I feel a strong interest in this matter, and also in hedging with thorn—as I believe this is the only material that will answer our purpose on the prairies. I am still experimenting a little with the native thorn, but have not succeeded well in making the seeds grow. I have still a quantity of seed in course of preparation; and if I succeed, of which I have not much doubt, you shall be duly informed.

"A few of us down here would be very glad to hear from Mr. B. Squiers, of Winnebago county—what breed of sheep he has—where he got them—what weight of fleeces he cuts—his mode of keeping, &c.; and in return we will tell him some long yarns after shearing.

"That mowing machine of Capt. Wilson, of Buffalo, we would be very glad to hear more about, if in your power to inform us—its mode of operation, the amount of help wanted, cost of cutting grass with it, cost of machine, &c. If it is an object worth having, I would like one; at any rate I would like to give it a trial."

Of the mowing machine we know nothing further than what has appeared. Morrell's Shepherd is here, and can be sent by mail; but the postage would exceed the cost of the book. If there is any other opportunity we will send it.

Prejudices. Cutting Wheat Early. From H. B. Hawley, Esq. Watertown, Wisconsin.

"My experience in farming is limited, and I have profited much by the experience of others, through your paper. Some twenty two years since I commenced the sea-faring life. The sailors were then considered a hard class of men, and very superstitious; I found them so. But as soon as I considered myself competent I bolted the beaten track and depended mainly on my judgment—believing there are better ways than many old established habits. That business has vastly changed; and I find by the agricultural papers that there is as great a change coming over the farmers. But you may take the non-reading farmers of this country, and I will venture to say you cannot find their match in any trade for obstinate adherence to old customs.

"I have been laughed at some, for cutting wheat too early, and wasting salt and lime on seed wheat; also for plowing, making rails, and clearing land, out of season. But I hold that the time to do any thing is, when you can do it to the best advantage; and I care little who laughs if I win—as I did, most particularly, in cutting wheat early. I had my harvest in the barn before my neighbors commenced theirs; and they lost much by shelling and rain.

"I keep notes of some things, and shall end this by saying—one of these days you shall have some of my experience."

Milk Sickness. S. B. Mead Esq. the author of the botanical catalogue now in course of publication by us, writes in relation to the cause of this malady as follows:

"In looking over some back numbers of the Farmer, I observe a writer on milk-sickness (vol. ii. p. 27) notices a non-descript vine, which he believes to be the cause. That vine or shrub, as there figured and described, must be the *Rhus toxicodendron*, often found growing in timbered bottoms, near creeks, throughout the United States. Three varieties of this plant are described by Torrey & Gray, in their N. A. Flora. It has a milky juice, which has been long used for an indelible marking ink on linen and cotton. The juice applied to the skin of most persons produces inflammation in large blotches, and soon after small blisters appear, attended with itching and burning. Some persons are not affected by it. It is not so poisonous as *Rhus venenata*, D. C. common in wet grounds in the eastern and southern States. The suspected plant above mentioned grows abundantly where the milk-sickness is unknown; and as no plant peculiar to the infected district has been discovered, it is more likely to proceed from some mineral in solution in the water."

PRODUCE TO BE SHIPPED

At the Ports on Lake Michigan, 1846.

The following list was furnished us by I. H. Burch & Co., brokers in this city, and is as correct as it was possible to make it.

Wheat in store at Chicago, Jan 31, 1846,	bush.	610,000
Provisions, including Pork and Beef,	bbls.	10,000
Flour, - - - - - - - -	"	5,000
Hides, - - - - - - - -		3,000
Estimated amt. to be shipped next spring, Wheat,		1,000.000
Provisions,		10,000
Flour,		10,000
Hides,		4,000
Total of miscellaneous articles,	tons,	500
Wheat in store at Southport, W. T.,	bushels,	69,000
Flour, - - - - - -	bbls.	1,387
Estimated amt. to be shipped next spring, Wheat,		139,000
Flour,		3,000
Wheat in store at Little Fort, Ill	bushels,	68,000
Estimated amt. to be shipped next spring,		92,000
Wheat and Flour in Michigan City, mostly wheat,		350,000
Corn, - - - - - -	bushels,	175,000
Wool, - - - - - - -	lbs.	20,000
Wheat in store at Racine, about - - -		70,000
Estimated amt. to be shipped next spring,		130,000
Wheat in store at Milwaukie, - - -		80,000
Estimated amt. to be shipped next spring,		150,000

FLOWERS FOR FARMERS' WIVES AND DAUGHTERS TO CULTIVATE.

COLUMBINE, *Aqualegia Vulgaris.* This is one of the earliest among plants in the garden to show its leaves, though it is in no haste to blossom. It blooms in this latitude in June. It is worthy of a place in every garden for the superlative beauty of its leaves, which, regardless of spring frosts, or snows, push forward in thick, luxuriant, beautiful tufts, before almost any thing excepting bulbous plants have ventured out. It is a perennial, and requires no more care than a bunch of clover. The blossoms are of different colors, and consist of a spurr-like nectary, terminating downwards, and alternating with the petals. These nectariferous horns become very numerous by cultivation, and are contained one within another. Like every thing else grown for ornament in a garden, its beauty is greatly enhanced by generous cultivation. It bears plenty of seed, and may be propagated to any extent.

Lichnidia. There are several varieties of this, some of which belong to different species; but all, we believe, comprehended in the Phlox genus. This is an extended tribe of plants; and a great number of its varieties are found wild in the western country.

The smooth-stemmed Lichnidia, *phlox paniculata*, which is found in every eastern garden, and many western

ones, grows every where in what are called the barrens, in this part of Illinois, and often on the open prairies, in immense profusion, where it continues to bloom for a long time in early and mid-summer. Phlox means a flame, and was applied to this tribe of plants, from the red flaming nature of the blossoms; and never was a name better given. One has only to transfer the wild plant to the garden, and with generous cultivation, he will have a showy and beautiful profusion of flowers, well repaying the care and trouble. Some of the others of this this tribe are *Phlox maculata*, or spotted lichnidia; *Phlox pilosa*, or creeping lichnidia; and *Phlox subulata*, or mountain pink. It is very probable that there are others which might be turned to good advantage; and probably some have been, of which we are not competent to speak.

Amaranth. Of this there are several species, among which are *A. albus*, or white coxcomb.

Amaranth melancholicus, or Love lies bleeding, *A. tricolor*, or three colored coxcomb. These add variety to the garden, and at a distance afford a pleasant appearance. They however take up considerable room, and are somewhat coarse, on inspection.

Mignonette is a well known plant, with fragrant blossoms—very hardy—requiring but one sowing, though an annual. It is sometimes sown for bees, the blossoms being very nectariferous.

Phlox drummondii. This is a flowering plant, but lately introduced into this section of country; and is yet unknown in common gardens. It is nevertheless a most beautiful plant, producing an untold number of blossoms, which remain for a long time, covering the bed where it grows with as much profusion as is done by violets. The colors are various. The time will not be long before this will be as plenty as any garden flower.

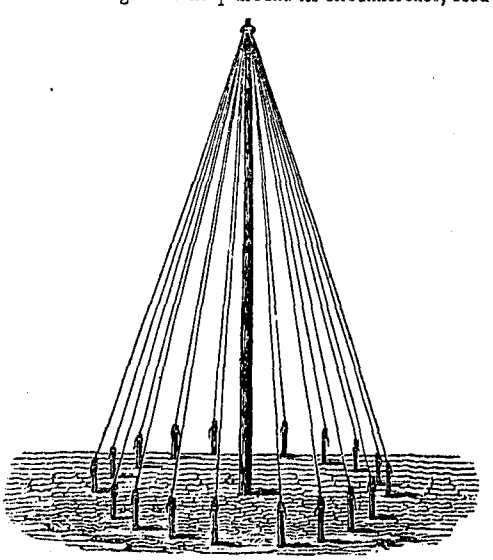
Balsam. *Impatiens Balsamina.* This plant has been grown time out of mind, in all sorts of gardens, having been the regular and stedfast companion of the bachelor's button, morning glory, and four o'clock, in plats of ground adorned by none others. Its common names are various, but are fast giving way to the one heading it in this article. It commonly attains no excellence, and only seems to be cultivated as a matter of course, and because the seed is easily obtained and easily grown. The blossoms are generally single, and not over plenty; growing among a great profusion of leaves which hide them from view. They are also of a palish pink color, not over beautiful to look at. This is the style in which we had always observed them until last season. What was our astonishment, then, on seeing some,—sown reluctantly, to please others,—putting forth an incredible number of the most beautiful blossoms, double and tri-double, of all colors, blue, purple, pink, cherry-red, white, and many others of all these hues mottled in the most delicate and fascinating manner—the blossoms of the size of a dollar, and full as roses; and growing about the stems so as to form columns of flowers of many inches in length.

The balsam has been brought to this perfection by continued and stimulating culture. It is recommended to start them in pots, but this is not necessary. They may be sown the first reliable weather in May, in this latitude, in warm borders made rich to any desirable degree. They will blossom in June, and retain their flowers till late in autumn. To secure these large double blossoms, the seed should be kept from two to five years before it is sown. To all growers of flowers, however humble your efforts, we would say, never rest till you secure this in its perfection.

Pink. The species and varieties of this are so numerous, that we shall not attempt to treat upon them in detail at present. They are all, however, more or less worthy of culture, and may be grown in plats, beds, or borders, to suit fancy.

The Morning Glory. The morning glory is so well known, as to make description presumptuous. There are, however, two or three species, and more varieties. The common mode of growing them is to plant the seed under the window, and train them up the sides of the house. The effect is pleasing, especially when the house happens to be of rough logs, though it is doubted if those yielding fragrancy as well as bloom might not be substituted to advantage near windows. There are, however, various nooks, corners and unsightly places about every dwelling, which may be covered by this strong growing vine.

There is also another mode of growing this, as well as other annual climbers, which might be introduced to great advantage. It is to form a circular bed, and fasten down a barrel or hogshead hoop around its circumference, secu-



ring it to the earth by hooked pins driven into the ground. In the centre of the bed fix a stout stake of any desired height; then fasten strings or small wires from this hoop to the top of the stake, forming a cone, as represented in the cut. The vines will cover the whole of this, and present a beautiful figure of mingled green leaves and flowers.

Rabbits. The Gardener's Chronicle, (Endland,) says that soot mixed with milk and applied to trees with a brush, will prevent the ravages of rabbits. This is easy of application, and will not injure the trees.

Hot Beds. The time for making hot beds has arrived. Full directions are contained in our last volume, February and March Nos.

EDUCATIONAL DEPARTMENT.

THE SCHOOL LAW IN CASS COUNTY.

We ask the attenion of those who think that nothing can be done in the way of a school system, to the subjoined letter. We are heartily glad to know that some counties are earnestly following up the provisions of the new law. When this is done steadily, light will come out of darkness and order out of chaos.

The author will accept our thanks for the invitation contained in his note, and it will be complied with when practicable.

MESSRS. EDITORS: Knowing the deep interest you take in the subject of education, and especially the valuable services of one of the editors in preparing the present school law, I take the liberty of sending an account of our progress under it. We have a common school of grades, in Virginia, commenced in July, conducted by two teachers, in separate departments, with eighty scholars, in which "a thorough course of instruction in the English branches of education, in mathematics, in the Latin, Greek, and French languages, and in the ornamental branches," are ably taught. We have a third department in the same building, forty feet by thirty, all secured by a lease for ten years, liberally granted by the County Commissioners' Court for a nominal amount and approved by the people, which will be fitted for use when the number of scholars justifies the employment of additional teachers. Our text books have been selected as near as practicable in accordance with the recommendations of the Teachers' Convention. This school district and Beardstown, the county seat of Cass and an important and rapidly increasing commercial point on the Illinois River, oted in May last the highest rate of taxation under the law. Every district in October elected directors, and every township in January elected trustees in accordancce with the law. The "Cass County Common School Association organized temporarily in September, but permanently in December, with its regular quarterly meetings—at each of which the subject of common school education is discussed, sometimes by able advocates from abroad when so fortunate as to procure their aid, at other times by the people themselves at home, has already enlisted public attention, and if persevered in must ultimately extend its influence beyond the sphere of its original projectors. I send you the Beardstown Gazette, containing the proceedings of the regular organization of the "Association," which you will please publish entire, or abbreviate at discretion if too lengthy for your limited space. P.

Cass county, Ill. Jan. 1846.

After reading the above letter, the reader will ask no apology for our insertion of the proceedings of the meeting alluded to. It may be presumed, that in many cases, nothing is done to secure the objects of the law, simply because its friends have no very clear idea of the best mode of setting about it. The resolutions below set forth to some extent the objects sought, and point out the way of reaching them. We ask attention to the resolution relating to a superintendant.

COMMON SCHOOL CONVENTION IN CASS CO.

Pursuant to adjournment, the Common School Convention met at Virginia on the 13th of December at 11 o'clock, A. M. After some time spent in registering the names of members, the following persons were severally and unanimously elected officers of the association for the ensuing year, viz: M H L Schooley, president; A Job, H E Dummer, F Arenz, J Ward, O B Nance, A Cunningham, vice presidents; John Loomis, corresponding secretary; N B Thompson, recording secretary; A Naylor, treasurer.

After which Hon T M Killpatrick addressed the association at some length, showing the improvements proposed by the late school law, the immense advantages that would inevitably result to the people and to the State by the general and uniform adoption of the common school system, the absolute and indispensable necessity of taxation, to the furtherance of this great and glorious cause, and the vast importance of common school education in general.

Francis Arenz Esq addressed the association in a short and truly practical speech; proving to a demonstration that more action on the part of the great mass of the people was particularly necessary; that whenever they can be brought to see and feel the immense power education exerts over their intellectual, moral, and physical condition, then, and not till then, will they have good schools. In conclusion he submitted the following resolutions, for the candid and deliberate consideration of the association:

Resolved, That a committee of three be appointed, whose duty it shall be to obtain information and report to the next meeting—

1. What is the number of children over five and under fifteen years of age in this county.

2. How many schools have been kept in this county during the last year; what number of children attend school, and, on an average, how many days or months.

3. What is the amount of school funds in each township, derived from the sale of the 16th section.

4. In what townships remain the school lands unsold, and from what causes.

5. What is the amount received by this county from the State under the new census; and

Resolved, That the said committee inquire of the State Superintendant of Common Schools, what books he recommends to be used in common schools.

Mr. John Loomis, in behalf of the select committee previously appointed to draft a series of resolutions expressive of the wish of the association, submitted the following, which were read, and after some discussion, adopted:

Resolved, That the object of this association is to raise the standard of common school education in every district in the county.

Resolved, That education is designed to develope and improve the moral, intellectual, and physical condition of man, and that the teacher who overlooks either is not discharging his whole duty.

Resolved, That as the basis of human happiness, and the perpetuity of our political and civil institutions, no subject can be regarded as more important than common school education; and therefore it appeals alike to every profession and occupation for their individual support and co-operation.

Resolved, That "liberty and the pursuit of happiness" is the birthright of every American citizen; and that education alone secures the former and increases the latter; and whoever, from partisan or other motives, retards the progress of general education, is opposed to the very genius of our free institutions.

Resolved, That, to be more highly appreciated, it is necessary that the subject of education be agitated, until the mind of every parent and child is fully aroused to its importance; and therefore we would recommend district and township associations as auxiliaries.

Resolved, That we deem it expedient that parents co-operate with teachers in their labors.

Resolved, That a committee of four be appointed (the President of this association being chairman) to prepare

an address on the subject of education, to the people of this county, for the purpose of eliciting a deeper interest in this matter, as soon as the necessary statistical and other information can be obtained, from reliable sources;—and

Resolved, That every friend of the cause of common school education in this county be respectfully invited to become members of this association.

The committee appointed to prepare the address were H E Dummer, F Arenz, J Epler, and O B Nance, Esqs. We shall hope to see a copy of it when published, for it may be laid down as a rule that what is wanted in one county is wanted in all.

On motion of M W Delahay Esq the following resolution was adopted:

Resolved, That this association would respectfully recommend that the legislature of this State at its next session would so change the present school law as to make a superintendant for the State, whose duty it shall be to travel and lecture upon the subject of education throughout the State, and report the condition of all the schools within her borders; and we also recommend that he be paid a sufficient salary for his services from the State.

SCHOOL BOOKS.

Messrs. Editors: So little attention is paid to a uniform system of school books among our western schools, that a few remarks on this subject may not be deemed out of place. In some schools scarcely two books can be found alike; the consequence is that the classes are as numerous as the books are various—taking up extra time of the teacher without any corresponding benefit. On the other hand, a few schools are found continually changing their books, at the diction of every new teacher who may wish to use his particular favorites: some weeks are lost in getting the *hang* of the new books, and in nine cases out of ten they exchange for the worse. It is of great importance to the rising generation that the books which are put into their hands, and which will have an important bearing on their future usefulness, should be unexceptionable in a moral point of view, and that all subjects should be treated with proper dignity, instead of that mawkish nonsense which is too often met with in school books.

All are aware that some teachers succeed better than others, with the same apparent effort, in enlightening the minds of children. So with authors; some will rivet the attention and instruct, while others render the subject dry and uninteresting. It is not a matter of so small importance as it might seem at first sight, what books are used in schools. We want something useful and entertaining, that when a child is taught to read, his mind may be at the same time stored with useful knowledge.

Among the great number and variety of our school books I will take the liberty to mention a few which in my opinion are not second to any others: Webster's Pictorial Elementary Spelling Book; Webster's Speller and Definer, intended as a *First Class* spelling book; Grigg & Elliott's series of Readers is an extensive collection of useful works on morals, correct history, and almost every branch of Natural History, embracing Geology and Mineralogy. These works are by different authors and published by Grigg & Elliott, Philadelphia, 1845. They are intended not only for schools, but for the instruction of older persons; and to the sons of farmers they are invaluable.

Bullion's and Kirkham's Grammars maintain their high reputation, and are perhaps the best in use. Morse's New Geography. Harper & Brothers, New York, 1845, is an excellent work; its neatness of execution, and cheapness, must soon place it in every school and family in the republic. Among the Arithmetics, many rank high, but none more so than Davis's System of Mathematics. These works can all be had of the Messrs. Burley, and probably at the other bookstores in Chicago.

It would be a great relief to the booksellers, could they know what books would be most in requisition for our common schools; they would then be able to lay in a sufficient stock of the right kind, which would enable them to sell at considerably reduced prices; instead of keeping their shelves filled up with all kinds of trash, to catch the popular whim.

Illinois, January, 1846. Mr. Hardup.

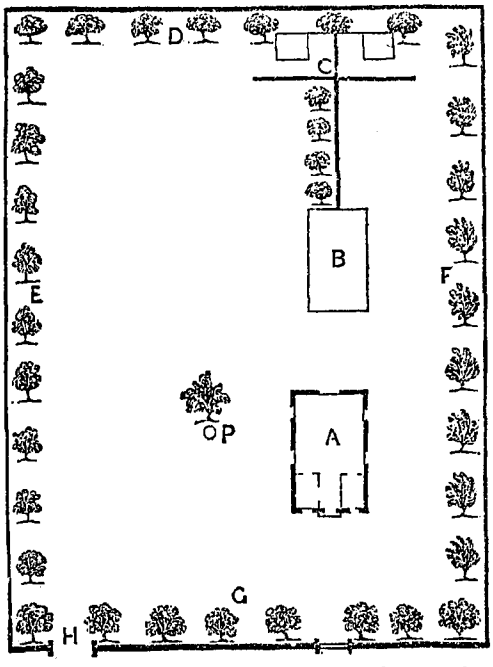
SITUATION OF SCHOOL HOUSES.

Among the many mistakes made in providing for the education of children, there is no one more common than that fallen into at the very threshhold of the business, viz: the miserable character and situation of the place where that education is to be carried on. The building called the school house, in which most of our adult population spent their early years, is soon described; for its aspect and character are yet vivid in the recollection of any one whose young ideas did their shooting in it. It was a little wooden, weather-beaten looking shanty, with two or three ominous windows, and plenty of rattling clapboards; and altogether so loosely constructed that most persons would adjudge its walls to have been for the purpose of keeping the cold *in*, instead of *out*. At any rate, this was their common office. Taste and comfort feeling themselves equally defied in its construction, took their leave of it from the very first, and were never known to visit it afterwards.

Its situation was in keeping with its architecture. This was either in the street, or on the corner made by two streets, or on some piece of ground which was selected because it was good for nothing else, and therefore cost nothing. Here, under the full blaze of the sun in summer, and exposed to the full fury of bitter winds in winter, stood the school house where the mind of the nation was formed. Until within a few years, no part of the country furnished any thing more than a few exceptions to this general picture. Within that time, however, the discovery has been made, that education does not consist in mere "learning to read, write, parse and cipher," but that it respects the whole individual, and consists in the developement of all his faculties. Consequent upon this discovery, were several others—one of which was, that a set of circumstances, connected with education, every one of which should offend taste, and thus link that education with unpleasant associations through life, were not the best calculated to secure its objects, inasmuch as a taste formed in childhood has its influence upon the intellectual and moral character for good or for evil through life.

Hence, in some parts of the country, much attention has been bestowed for a few years on the subject of school house architecture, the situation of school houses, and the scenery about them.

A moment's reflection will convince any well-informed mind, that this is beginning at the right place, viz: at the beginning. Instead of thrusting the school house into the street, or into the corners of noisy and dusty thoroughfares, it is now proposed to give it a pleasant situation, with a fair area of ground surrounding, embellished with shade trees, and provided with a pump and necessary out-buildings. The cut accompanying is taken from the "School and School Master," and is substantially that



which should be followed in the erection of every school house. The grounds, as here laid down, are 8 rods in front by 10 rods in depth, and are surrounded by rows of trees; of which it is proposed that the front row shall be elm, the right maple, the left bass, and the rear one beech—though the kinds are a matter of taste, to be regulated by situation.

The front is marked in the cut by G, of which H is the wagon gateway; A is the schoolhouse; B the wood house; C, a screen in front of rear building; and P the pump.

A consideration, not yet mentioned, but which should never be overlooked in the erection of any building designed for the education of youth, is regarded in the above arrangement; and that is, the provision of ample play grounds. Children universally love play; and it is as necessary for them as the food they eat. It is their physical education; and provision for it should no more be neglected than the books in which their studies indoors are to be pursued. A dusty street is no place for children to play. The smaller ones will be continually exposed to danger, and the larger ones tempted to stray off in search of roguery, and will in consequence learn bad habits, which in after years they will not unlearn. If their play grounds are made ample, dry and pleasant, all these dangers will be avoided; and the teacher will always know where to find his pupils at the beginning of school, while their sports in the intervals of school will be conducted under his eye.

In our new States and Territories, the erection of school houses is and will be going on for several years to a great extent. Now, while land is plenty and cheap, any desired provision treated of in this article can easily be made.

Will not all those interested turn their attention to this matter, and consider whether some such plan as is here laid down is not worth the cost necessary to secure it. Even though the first building erected may be of logs, it is no reason why it should not have a pleasant situation, and ample room surrounding it.

EDUCATIONAL PROGRESS. It cannot have escaped the observation of any discerning and interested person, that there is a decided onward movement in the western States in regard to common schools. The evidences of this are every where—in the various associations of teachers, and the friends of schools, in all parts of the country; in Wisconsin, Indiana, Illinois and Iowa; and the greatly increased attention to the cause in the newspapers, or a part of them. These things are so numerous and frequent, that they give unmistakeable indication of a general waking up in the matter. We notice also that many persons in our acquaintance, who, two years since regarded the subject with indifference or dislike, are now becoming active friends of progress. The demands of a rising family may have called their attention to it; for nothing sooner enlists one's sympathies than such a condition.

But whatever may be the particular causes at work, the effect is no less gratifying. The western States are now in a condition in relation to schools which they will never again occupy. The great majority of their adult inhabitants are young persons, with young families to be educated. If the opportunity of doing this properly is now neglected it will never return, and posterity must reap the fruits of that neglect. Let this fact stimulate all to act while the time of acting has not passed forever.

SPIRIT OF THE AGRICULTURAL PRESS.

Potato Rot. From a convention at the State House in Boston, Mass., we gain but a single fact worth remembering in relation to this disease. This is, that the Lady Fingers, and long reds are scarcely subject to the disease at all, while the Neshanocks are invariably rotted. The fact is the same at the West, as far as we have heard.

Who has the potato called the "Irish Grey?" Have they rotted?—we should judge not; and by the way they are a good potato—good yielders—good keepers, weigh well and cook well. On many accounts they are preferable to any of which we know. The only objection we ever heard to them was, that they are yellow instead of white, when cut; and some suppose such a potato cannot be good—a theory which, in this instance at least, does not hold.

Farming on twenty-five acres. A correspondent of the New England Farmer states that at the age of 60 years he came into the possession of a farm of 25 acres, which he had no intention of tilling himself, as he had spent 40 years of his life in another calling, but that not being able to rent it for 4 per rent on the cost, in consequence of its having been reduced under the old system of farming, he was induced to undertake it. Having taken the New England Farmer for his chart, he embarked.

"I divided my land, devoted to rotation crops, into six

fields, of about 3½ acres each: a new field was taken up every year, and first planted with corn, then with potatoes, and sown with winter rye in the fall after the potato harvest, and seeded down, remaining in grass three years before the rotation comes round. This course gives me one field to corn, one to potatoes, and one to rye, each year, and the other three to grass. I have, in addition, 2 acres of reclaimed bog, which is not plowed, and 1½ acre for raising root crops and garden vegetables, planted every year; the whole making about 25 acres, which, with 2 or 3 acres of salt marsh, and a small piece of woodland, constitute my farm.

The first lesson I took in my new calling, was to plow no more than could be *well manured*, and to have *help* enough to do every thing *in season*. This has not been lost sight of. My first crops were pretty fair, and have been gradually increasing from year to year, so that the same land which seven years ago would not rent for 4 per cent., has yielded more than 20, the past season, after paying all the expense of cultivation. My last crops were estimated at $900, and after deducting the cost of labor, board, manure, seeds, farming tools, taxes, &c., it leaves a balance of more than $550 for rent land. Have sold over $600 worth, and the balance is laid in for my own consumption, which is estimated at the same price as that sold. I could give a copy of the account in detail if required.

It is no exaggeration in saying, *that I am more than a thousand dollars better off for the information I have derived from agricultural papers during the last seven years*, in my small way of farming. From that source I have learned the best methods of composting manures, and the kinds best adapted to distinct soils; the best rotation of crops, and the selection of seeds, and the method of cultivating each kind; also, how to reclaim bogs, of which I had two acres of no value, but which since that time have produced six tons of good hay annually. All this and much more I have gleaned from the experience of others, communicated through the medium of the *press*. But still, I am not so much of a "book farmer," as to believe one half that is published is of any benefit to ordinary farmers, like myself. I have tried *some* experiments recommended in your paper, that proved a real disadvantage. Yet I am fully of the opinion, that every farmer who can *read*, ought to take an agricultural paper; for by selecting such advice as will apply to his particular soils and crops, he can treasure up something, in the course of the year, that will be worth more than the cost of the paper."

THE FARMER'S CALLING.

The readers of agricultural papers have, within a few years past, seen much discussion concerning the respectability of the farmer's calling—the dignity of labor—the best mode of attaching the young to an agricultural life—and kindred topics. This is proof of the fact that the idea involved in these discussions is an important one. It was a fact, occasioning pain and regret to every well-wisher to his country, a few years since, that young men of enterprise and ambition were leaving the occupation of their fathers—an occupation, too, in which that very enterprise and ambition had been founded and by which it had been nurtured—for the uncertain emoluments of what are called the liberal professions; or for the dwarfing, toilsome labors of the counting room. Nor is the remedy for these evils yet so far applied but that there are at least ten lawyers where one is needed, and the other pursuits alluded to are overstocked in about the same ratio. This difference however now exists—that when a professional man discovers his inability to make a living by his profession; or the clerk becomes tired of his desk, he is ashamed to turn his attention to the farm, and go forth into the fields for employment and livelihood. Still the question, now as ever, is asked—What shall be done to elevate the farmer's calling, in the sentiments of the mass of the nation, as its true importance demands?

The true answer has been again and again given; and there is no other true answer. The farmer must be educated: that is—his calling must be made not a mere work of the hands, but a work of the head also. Young men of mind and ambition can never be made to esteem that calling honorable in which the intellect has no scope for exercise—but in which the man becomes a mere machine, drudging about from day to day—whether that calling be pursued on the ocean, on the land, or within brick walls. It is as natural for men to think as to act; indeed, all action is the product of ideas: and the only difference is, that in one case it is the product of the man's own ideas, and in the other, of those of somebody else. What is needed is, that a man's action shall in all cases become the product of *his own ideas*. To effect this, it will not be necessary that each man originate every thought upon which he acts: the thoughts of others are made our own by thoroughly understanding them.

It is not peculiar to the farmer's calling that the sons often despise the pursuit of their parents. Physicians' sons in many instances take to any thing sooner than medicine. The sons of clergymen often become any thing but the exponents of the doctrine of their father. And yet there are instances in which the sons of physicians and clergymen have followed up their parents' calling to the third and fourth generations. The same thing on both sides exists in the case of farmers. *The sons will honor and esteem that calling which the father makes honorable in their eyes.* And here lies the truth which ought to be understood and exemplified. The reason why so many sons bred on a farm, run away to the barren wastes of legal life and elsewhere to pursuits as unprofitable, is, because the one in which they were educated possesses no honor in their eyes. Farmers do not make enough of their calling. A pursuit gains importance in the eyes of the young as much—and often more—by its accessories as by its essential merits. If the farmer would attach his children to his farm, let him *educate* them on it. Let him have books on his shelves which treat of matters pertaining to his profession: and if experiments—philosophical, chemical, or other—can be instituted, so as to illustrate any of the pursuits of agricultural life, the child will gain a higher opinion of it than can ever be given him in any other manner. The fault on this score has been radical. The books of the farmer's library have been of history, travels, biography, and every thing else but those matters relating to his business. His conversation—if he is a man at all devoted to literary pursuits—has been of other things. The child imbibes all these things as if through the very pores of his skin, and grows up with a thorough contempt for the simple style of life in which he was bred; and goes abroad to give scope to his ideas in some other pursuit.

The radical remedy for all this lies with each man. Cause the children to feel that agriculture is as worthy a pursuit as any other, and there will be no desire to escape from its duties.

DISCOVERY OF VALUABLE MINES.

BY A. A. HILLIARD.

MESSRS. EDITORS: I commenced farming in this State in 1835, and for several years followed the common practice—building a log stable, and when filled with manure so that the horses could not stand in it, remove it to another place—relying on the common report that our lands did not nor never would need manure. Numerous experiments which I have tried during the last four years, have convinced me that this is a mistaken idea. There is no soil that will better repay the labor and expense of manuring than the rich black clayey soil of our prairies. A good coat of manure will materially benefit crops of all kinds for five years, and I know not how much longer. I think it is owing to the clayey substance that the strength of the manure is all retained until it is taken up by the roots of the plants, instead of leaching away as it does through the gravely soil of New England.

It is a very common thing in traveling through this State to see large mines of the best manure lying in waste heaps about almost every farmer's premises; and not unfrequently a ravine running through the yard to carry it off, where it is lost to every body forever. Could the owners see in one pile the silver and gold that annually runs off in this way, they would willingly forego the inconvenience of a little mud in milking the cows.

My experience and observation have fully convinced me that there is a great oversight in Illinois farmers in trying to cultivate too much land for their force. I will give you the result of one experiment I made last season. During the fine weather we had last winter, I hauled out from my stables and yards 200 loads of manure on ten acres, and in the spring spread and plowed it in deep; I planted it with corn and tended it properly. I harvested seventy five bushels per acre, as near as I could guess without shelling and measuring accurately. On the same ground were growing 1200 young fruit trees, which more than doubled their wood last summer, which is good evidence that they too felt the effects of the manure. As every tree took the place of one hill of corn, the 1200 hills more would have made my crop of corn near 80 bushels per acre—double the quantity I usually get from the same ground. I sowed this field in wheat last fall, and never had, at this season of the year, a better prospect of thirty bushels of wheat per acre.

Brighton, Macoupin co. Ill. Jan. 1846.

FENCING THE PRAIRIES.

BY H. KENNICUT.

MESSRS. EDITORS: As a subscriber to the Prairie Farmer, I have derived great and continued advantage from its perusal, particularly from the communications of many of your correspondents, themselves practical farmers, and treating of subjects and pursuits in which I am engaged or feel a lively interest. Now sir, for some time previous to your February number I thought I had perceived a falling off in the amount of original matter in your still very interesting journal; and in casting about for the probable cause, it has struck me that the blame, if any, was as much with myself as with any of your other subscribers. I have therefore come to the conclusion that I owe it to those whose labors have afforded me so much satisfaction, to make known to my brother farmers the result of my experience and observation on several subjects of interest to the prairie farmer: not that I have any thing new to impart, but for the purpose of adding my testimony to that of those who have preceded me on the same subjects. I propose to give the results of my experience on the following subjects: Fencing, Prairie Breaking, Plowing, Manuring, Wool Growing—including sheep driving and their after management, and perhaps Wheat Growing on the Prairies, and its Profits. And to begin—

Fencing. My farm is situated 22 miles from Chicago, and 2 to 3 from timber. During the last two years I have built about six miles of fence, comprising almost every description in use in the northern part of this State. I would here premise, that common fencing rails cost me, delivered upon the farm, about $25 per .1000; that I have tried post-and-3-bar fence, to guard against cattle and horses—cost 22 or 23 cts. per rod—found it inefficient and defective; it was not intended to guard against hogs and sheep, and in the end proved of little service as a protection against cattle—for my own and neighbors' calves soon learned to work their way through or under it, and never forgot the habit as they grew older—for I have known them at the age of two years to work themselves under a rail only two feet from the ground, generally breaking or displacing it, and thus preparing the way for the whole herd to follow. To obviate this objection, I next built some two miles of post-and-bar fence, using four bars in place of three—cost about 25 cts. per rod. I also expected this fence to afford sufficient protection against sheep. It has thus far answered a good purpose as against cattle, but is a failure as against sheep. For as soon as the latter became a little dissatisfied with their pasture, a lamb or small sheep would find its way under or between the bars, being moved thereto by curiosity or the spirit of discovery; and this would always end after a time in the whole flock finding their way after them; and before the season ended they had become such adepts in this species of burglary, that they would force themselves through holes where the smallest shoat would not venture—and indeed at this time no post-and-bar fence will stop them.

I next tried half a mile or so of board fence—built entirely of sawed stuff—posts seven feet long, five to six inches square at bottom and two to five or six at top; bars three to four inches wide, one to one and a quarter thick, sixteen and a half feet long; four bars high: put on with stout tenpenny nails; lumber brought from mill six miles distant—cost, delivered on the ground, $8 to $10 per M. Fence when built looked pretty; cost 32 cts. per rod; afforded a better protection against small stock than the before-mentioned 4-bar fence, from the fact that the bars being put on perfectly even, there was no one space greater than another to encourage them to attempt it. But as feed became scarce in the fall, my own and neighbors' cattle soon learned to tear off the top boards and force an entrance. This fence cost nearly 20 per cent. more than the post-and-4-rails, and was no better. Still I am of opinion that where timber is

scarce and has to be hauled from a distance—say from 5 to 10 miles, and where lumber can be procured at the same distance at a cost of $10 per M., and by substituting split posts for sawed ones—the split ones are cheaper and more durable—and by using a stout bar 1½ inch thick for the top bar, that this mode of fencing will be found to answer an excellent purpose. I have also, during the past 12 years tried various experiments with ditch and sod fence; but have never succeeded, on dry or high ground. Either the sod did not grow, or the sides of the bank and ditch would crumble from frost or drouth; or the capping be destroyed by the prairie fires, and in the end the whole would prove worthless. But I have found it to answer a better purpose wherever the ground was moist or needed draining; and it is now a part of my system of fencing, to build sod and ditch fence through all wet ground. The ditch should be dug four feet wide at the surface, one foot wide at bottom, and two and a half feet in depth; sod cut diamond fashion, laid up at least two feet high, and ten to twelve inches from edge of ditch. The whole should then be finished by laying a rail upon blocks, as for worm fence, staking, and putting on rider; throwing a broken rail or other piece of timber across the ditch every few rods, to keep out cattle. Such a fence is good against anything. I have lately built and have contracted for and am engaged in making, about a mile of this fence, to answer the double purpose of a fence and drain, at a cost of 28 to 30 cts. per rod. I pay 18 cts. and board for ditch and embankment, use my poorest rails for capping. Cost as above.

My last experiment in fencing—but not the last I have to speak of—is a piece of about a fourth of a mile of ladder fence. Of this, for ordinary fencing, I have but a poor opinion, as I do not believe it to be durable, and it has cost me a third more than any other that I have tried: I would however remark of this fence, that the bars through which the rounds or pickets were inserted, were all of split timber; they should be of sawed stuff. 1½ by 4 inches and of any length, and the lower part of the round or picket inserted, as near square as convenient, to prevent rot. The greater part of this fence was put up worm fashion, but was no better than that which was built on a straight line; it required as much or more bracing, and cost one third more. Its general use for small enclosures, liable to be frequently removed, will be found very convenient, as it is easily taken apart by withdrawing a round, and is light of carriage. I have also, like all who have done much fencing on the prairies, tried divers temporary experiments as a protection against the encroachments of the large stock—such as rails set upon crotches, with stakes and rider; stakes driven into the ground, fastened together with pins, and two or more rails inserted between the pins. They all answer a good purpose—for wasting time and patience, making unruly cattle, and short crops.

I now come to a description of that kind of fence which, after much experience and observation I am prepared to recommend to the prairie farmer whose relative situation, as regards timber, approximates to my own, as the cheapest, most durable and efficient, when connected with a good sod and ditch fence through wet ground, of any in use upon the prairies. I speak of a regular picket fence; and I speak "by the mark"—for during the past season I have built two to three miles of this fence, and find it a most perfect protection against all kinds of stock, from the smallest to the largest. And a pasture for sheep, of 160 acres, fenced in with 4½ feet pickets, has proved a perfect protection against wolves; for in two instances in which these *varmints* found their way into the enclosure, by passing through a small piece of post-and-bar fence near my house, they were chaced down with horses and killed, being unable to make their way through or over the pickets. I would also observe, *en passant*, that the general use of this kind of fence on our prairies would nearly obviate all difficulty arising from a scarcity of timber; for there would be a saving of about one half, both in timber and carriage. The cost to me thus far has been 27 cts. per rod. My pickets were furnished by contract, at a cost of about $4 per M. delivered upon the ground. But I would observe that pickets of the dimensions used. 4½ feet long, and of an average width exceeding 3 inches, cannot be afforded on the ground for less than $5 per M. But I am now engaged in getting out timber, to continue the building of this kind of fence, and by a saving in material, using short posts and narrow pickets—2 to 3 inches wide and 4 feet to 4 feet 3 inches in length, it will not cost me over 27 cts. per rod, as above. The items of the expense were about as follows:

Pickets, 25 to the rod,	10 cts
Short stout 6d. nails, bot. by the cwt.	2
Rails and posts, using small rails,	9
Cost of fitting and setting posts,	3
Putting in bars, sharpening and nailing on pickets,	3
	27

Should any question these estimates, it must be borne in mind that the farmer does or should get out his timber and upon the ground, in the winter, when it is done easily and cheaply; that the proper time for building this fence is immediately after the frost leaves the ground, or during a part of the month of March and the whole of April and May, when, on dry ground, you can bore two post holes while you can one later in the season; when a good stout hand can be hired for $10 a month, who will set—with post auger—30 posts per day, which with board, costs the farmer about 60 cts per day: that nearly all of our Yankee boys understand the use of rough tools, and that a common hand of the description can be had at this season of the year at $10 per month, who will fit the rails, sharpen the pickets, and nail on 500 per day, or 20 rods; cost as above.

I will now end this tiresome communication, with a description of what I have found to be the best mode of building this fence, combining cheapness with efficiency and durability. Cut your posts, from black walnut, white, burr, or swamp oak, 5½ feet long, and split them as near as may be, 5 or 6 inches square; hollow out with an axe the top end of the post, to the depth of an inch, for the top rail to rest in; cut with saw and axe a gain into the side of the post, of an inch or more in depth to help support bottom rails, which should be nailed on about ten inches from the ground—use stout 12d nails to keep your rails to their places; in general

the pickets will hold the top rails to their places. Set your posts in the ground 27 or 28 inches, digging the first 10 or 12 inches with a spade, the balance of the depth with post auger. Lean your posts a very little to the south and west, from which direction come the winds and storms which cant or rack over our fences; also be careful to place one of the broadest sides of your post from the wind, and finish by stamping down the earth firmly around the post with an instrument made for the purpose. It would undoubtedly promote their durability to season or char by burning the bottom of your posts before setting; the charring should extend a little above the surface of the ground, for it is at the surface that the post first decays.

Use rails 10 feet in length and of half the size commonly in use for worm fence; by the way, the best you can use are small straight rails, culled from an old worm fence, where they are of inferior value, and which have already taken their shape, which they will retain. For ordinary fencing, use pickets from 4 to 4 feet 2 inches in length, and from 2 to 3 inches in width; they will answer a good purpose, nailed on 5 or 6 inches apart; when you come to a post, nail on a broken picket, to raise it as high as the rest of the fence. Use short stout 6d. nails: I oil them before using, as recommended in a previous number of the Prairie Farmer.

And now Mr. Editor, I conclude by expressing the hope that you and I will live to see the time when much of the expense of fencing the prairies will be done away with, by some legislative action—at least restraining swine from running at large.

Wheeling, Cook co. Feb. 1846.

We are sincerely obliged for this communication. It tells the story in a straight forward manner—not forgetting to put in the *particulars*—and is in fact precisely the article we wanted.

THE WHEAT FLY.

In our last month's paper we acknowledged the receipt of a pamphlet descriptive of this insect, from its author, Dr. Asa Fitch, of Salem, N. York.

This pamphlet is the product of some years' devotion to the subject—during which time the author has been favorably situated to carry forward his researches—the region of country about him having been the theatre of the insects' operations, from a part of which its depredations have banished the growing of wheat altogether.

The insect is the one commonly called in New England the Wevil; but that name is an entire misnomer; it being altogether of another and a distinct genus, having no affinity with the wevil tribe. It is sometimes also confounded with the Hessian fly; but although belonging to the same genus with that insect, it is of another species, and carries on its depredations in an entirely different manner.

It is well also to premise that there are several varieties of the wheat fly, so nearly resembling each other, that none but a close observer would have discovered the difference. The generic name of this fly is *Cecidomyia*, including also the Hessian fly. The names given by Dr. Fitch to the varieties of the tribe under consideration are, the clear-winged wheat fly, *cecidomyia tritici of Kirby*; the spotted-winged wheat-fly; the *cecidomyia thoracica*, and *cicidomyia tergata*—four in all. The clear and spotted winged flies are considered by him as two distinct species.

The wheat fly committed great ravages in England and Scotland, for many years previous to its introduction into the United States—where it was known under various names as 'fly wevil,' 'yellows,' 'yellow mildew,' etc. Its first appearance in the United States seems to have been in western Vermont in 1820; from which point it gradually spread over that State, N. Hampshire, Maine, and westward along the Mohawk valley. It is only last season that its first appearance has been observed in the Genesee wheat country. Its history in the different places visited by it is about the same. At first the destruction of it is extremely limited, but increases rapidly until about the third year, when its ravages are at their height; from which time their numbers gradually decline, till it ceases to be formidable.

This insect is one of the smallest of all the living motes of which the naked eye is able to take notice. Its body is less than one tenth of an inch in length, or about .07 of an inch. Its color is a bright orange, both in the fly and larva state. The period of its fly state extends from the fore part of June until the latter part of August, during which time it may be found in a variety of situations, sometimes entering houses, and dancing along the panes of glass, or among the grass of pastures, or along the margin of streams, where it dances with the other species of the *tipuledæ*. During the day it is inactive, or lurks about in the shade; but at evening, and particularly the evenings succeeding the hot summer days, it becomes very active. At such times, if the wheat field in blossom be visited with a lantern, they will be found in myriads hovering about the grain with their wings extended, and moving up and down the ears, as if to select the most favorable spot to deposit their eggs. When this is found, the fly alights, and pierces with its ovipositor the husks of the grain, till it reaches the germ, where it deposits from six to ten eggs. Several insects will often select the same kernel, so that thirty or forty eggs will be hatched upon it. The eggs hatch, in about a week, a soft white worm, which soon changes its color to that of a bright orange. Its food is the juice destined for the growing grain; and when many of the larvæ feed upon the same kernel, they deprive it of nourishment to such a degree, that it withers, and is rendered worthless.

A portion of the larvæ having attained their growth, leave the wheat before harvesting, and descend to the earth, where they bury themselves to the depth of half an inch, while another portion remain in the heads, and are carried into the barn, to take their chance for life and future propagation. It is often found in great numbers in the screenings of the fanning mill, which in such cases should be burned or given to swine. If thrown into the barn yard, they are buried in the chaff and manure, where they complete their transformation, and come forth for future mischief.

Small and comparatively insignificant as this insect is, it has numerous and inveterate enemies, which seem intended by Providence as the antagonist and corrective pro-

vision against its ravages. One of these is the common yellow bird, *Fringilla tristis.* This bird hovers about the field infested by the fly, and alighting upon the wheat head, tears open the husks which conceal the larva, devours them by thousands. Persons ignorant of the facts in the case, suppose the bird to be in search of the wheat, and endeavor to destroy it.

Of the common modes recommended for destroying the fly, such as smokes, odor of skunks, sowing of lime, &c., the Dr. does not appear to have a very high opinion. Late sowing he thinks efficacious.

As this insect has not yet made its appearance in the Western wheat fields, and may not for years, and we hope never—we do not think it worth while to pursue the subject further; but would remark that Dr. Fitch has done a valuable service to the public in the publication of this pamphlet, for which he will doubtless receive their best thanks.

CATALOGUE OF PLANTS

Growing spontaneously in the State of Illinois. the principal part near Augusta, Huncock county.

BY S. B. MEAD.

Kuhnia eupatorioides L (P T H, false boneset.
Eupatorium purpureum L(T M, trumpet weed, purple thoroughwort, joe-pye
" alissimum L (B
" *s ssilifolium* L (B
" perfoliatum L (W P Bts M boneset, thorough wort
" serotinum, Mx (Bts P
" ageritoides L (B
Conoclinium cœlestinum D C (18 Bts
Aster cericeus N (P O
" levis L (P O
" turbinellus Lind (T B
" azureus Lind (P O
" shortii Hook (Bts Bks O
" undulatus L (T
" cordifolius L (T
" sagittifolius Willd (T
" ericoides L (P
" multiflorus Ait P (Wd
" *dumosus* L (W P
" tradescanti L (W P
" fragilis Willd (W P
" mixer Ait (T
" simplex Willd (Bks
" tenuifolius L (Bts
" conspicuus Nees (B
" oblongifolius (N (T H O
" novæ angliæ
Achillea millifolium L (P M yarrow, milfoil
§ Leucanthemum vulgare, L (M Wd 4
§ Tanacetum vulgare L (M tansy
Artemisia caudata Mx (S P H B 4 5
" biennis Willd
" frigida ? Ph (S H 5 B
Gnaphalium polycephalum M(R M sweet scented life everlasting
Antennaria dioica ? Gaertn (P
" plantaginifolia Hook
Erechtites hieracifolia Raf (P T
Cacalia reniformis M (Bts
" atriplicifolia L (T orache caraway
" tuberosa N (W P
Senecio aureus L (W P M rag wort, false valerian
§ Centaurea Americana N (O
" § cyaneus L blue bottle
Circium discolor Spreng (P Wd
" altissimum Spreng (T tall thistle
" virginianum ? Mx (T
" nutium Mx (P Wd
" pumilum Spreng (P Wd
§ Lappa major Gaertn (M
Cynthia Virginica Don (P O dwarf dandelion
Hieracium scabrum Mx (T
" longipilum T & G (P
" gronovii L (T vein leaf, hawk weed
Prenathes serpentaria Ph (B M
Nabalus racemosus Hook (P M ?
" asper T & G (P
" crepidineus D C (T
Troximon cuspidatum Ph (P O
Taraxicum dens-leonis Desf (M T
Lactuca elongata M (P T M wild lettuce
" ludoviciana D C (P
Mulgedium acuminatum D C (B
" floridanum D C (T
Sonchus asper Vill (P
Lobelia cardinalis L (Pds O cardinal flower
" inflata L (T M 19 wild tobacco
" siphiletica L (T O
" claytoniana Mx (P
" leptostachya D C (P T
Campanula amplexicaulis Mx (T clasping bell flower
" americana L (B O
" aparinoides Ph (Bts
Diospyrus virginiana L (Bts Bks fr persimmon, seeded plum
Fraxinus acuminata Lam (T white ash
" quadrangulata W (Bts blue ash
§ Ligustrum vulgara L (20
Apocynum androsæmifolium L(P M dog-bane
" cannabinum L (T P Indian hemp
Amsonia latifolia Ph (Bts O 8 10
Asclepias syriaca L (P T common milk weed, swallow wort
" phytolœoides Ph (T M ? 14
" purpurascens ? L (P
" incarnata L (W P T M
" *obtusifolia* Mx (P M ?
" cordata ? Walt (P
" quadrifolia Jacq (T
" verticillata L (P T H dwarf milkweed
" tuberosa L (P M O butterfly weed, colic root, pleurisy root, white root
Acerates viridiflora Ell green milkweed
" longifolia Mx
Enslenia albida N (Bks
Gentiana saponaria L (W P M soap gentian
" *ochroleuca* Willd (B M marsh gentian
" quinqueflora L (B M
" rubricaulis S Z & Ktg (P C
Sabbatia angularis Ph (B O M American centaury
Spigelia marylandica L (T M O 15 pink root
§ *Martynia proboscidea* L unicorn plant
Phlox paniculata ? Mx (P Bts O smooth stem lichnidia
" pyramadalis ? S (Bts O
" aristata Mx (P O
" reptans ? Mx (T O
" *glaberrima* L (W P O 4
" acuminata ? Ph (Bts O
Polemonium reptans L T O Greek valerian
Convolvulus sepium L (W P T O
" spithmeus L (B H O dwarf morning glory
" *panduratus* L (B O M mechoacan, wild potato vine, man of the earth
" macrorhizos ? Mx (Bts
" § purpureus Ph (O common morning glory
§ Ipomea coccinea Mx
" *nil* Mx *morning glory*
" lacanosa
Cuscuta vulgigave, Engelm
" coryli Engelm
Lepidanche compositarum Emgelm
Lithospermum arvense L (S P stein crout, stone seed. wheat thief
" angustifolium ? Mx (S P 5
Batschia canescens Mx (P B O puccoon, false bugloss
Onosmodium strigosum D C (W P T
Myosotis inflexa Engelm (T H
Pulmonaria virginica L (T O
Echinospermum lappula Lehm (Bks
" virginianum Lehm (T
Hydrophyllum virginicum L (T burr flower
" appendiculatum Mx (Bts
Ellisia ambigua N (Bts T
Lycopus sinuatus Ell (B
" virginicus L (W P T Bks M bugle weed
§ Mentha viridis L (M spear mint
" borealis Mx (Bks horse mint
Isanthus ceruleus Mx (Bks P H blue gentian, false pennyroyal
Monarda fistulosa L (B M O
" ciliosa T & G (T
" punctata L (S B H O
Pycnanthemum linifolium Ph (P M Virginia thyme
" *pylosum* N (T B M
§ Thymus serpyllum L mother of thyme
Hedeoma pulegioides (Pers (T M penny royal
§ Melissa officinalis L (R M balm
Prunella vulgaris L (P I heal all, self heal
Scutellaria galericulata L (W T scull cap
" lateriflora L (Bts mad dog scull cap, hood wort
" parvula Mx (P B
" nervosa Ph (Bts 3
" cordifolia M (T O
Lophanthes nepetoides Benth (T Bts giant hyssop
" scrophulariifolius Benth (T R
§ Nepeta cataria L (R N catmint, catnip
" § glechoma Benth (M
Dracocephalum virginianum W (P O dragon head
" denticulatum W (Bts O 8

(To be continued.)

REVIEW OF ALBANY CULTIVATOR FOR JANUARY.

BY E. S. L. RICHARDSON.

MESSRS. EDITORS: The Cultivator, Albany, N. Y., monthly, 32 pp., $1 per year—No. 1 of new series, vol. 3d, has been received, and contains the usual variety. Among the contents of this number I find the following articles: "Mr. Donaldson's Prize Cow, with a beautiful steel engraving. This cow, it is said, "has given in June, when kept on grass only, 38½ quarts of milk, and that from the milk given by her in two days 6½ pounds of butter were made, being at the rate of 22¾ pounds per week." She is said to be a native cow.

"*Agriculture in Switzerland.*" This is quite interesting. The following extract is in part a tit-bit for the friends of the non-enclosure system. "Fences, except in the neighborhood of the larger towns, rarely occur, and division of land is marked by stakes, or by a mere furrow, and sometimes even by less distinguishable bounds. Perfect agreement appears to exist among neighbors in respect to property, and I have seen in the mountains overhanging Lake Geneva, peasant men and women gathering crops of rowen in a dozen different parties from the same field, where there was no apparent line of division, yet putting their rakes back to back without a word of dispute. Nor was the crop, though limited in individual cases to a spot of only a few rods square, without its value; since every blade was collected with the most scrupulous care, and carried off the field in blankets on their backs."

"*Importance of Neatness in Farming.*" Some very good remarks which will answer very well for this region: "We have somewhere heard the remark that with the good farmer, every thing gives way to his business—that utility is all, and appearance nothing—hence you are not to expect neatness about his dwelling, his door yard being cut up into mud by the farm wagon and the manure cart, and the contiguity of barns, pig-pens and kitchen, such as convenience, and not freedom from the peculiar odors of hog-yard and rich manure heap may dictate. Now to speak bluntly, this is all nonsense. It so happens, that in farming, neatness and thrift almost invariably go together. The same love of order which prompts the farmer to clear his yard of broken barrels, old hoops, fragments of boards and sticks of wood, and whatever else defaces and defiles his premises, also prompts him to have a place for every thing and every thing in its place, (the western rule is no place for any thing, &c.) which is calculated to bear upon real and substantial profit. Horses and cattle are often neglected in cleanliness. We have actually known some who did not clean the manure from the horse-stable for months, allowing it gradually to thicken under foot with the accumulating litter, till a foot in thickness, and reasoning doubtless as the boy did who combed his hair once a month, and was astonished that such torture and trouble from the operation could be endured daily by other people."

"*Experiments with Guano.*" "On 3 pieces of land, each being one fortieth of an acre. In the drills of the first, 5 lbs of guano in the raw state, was scattered evenly through the drills, and planted with potatoes, which yielded at the rate of 215 bush. per acre. In the drills of the second, 7½ lbs. of guano in the same manner yielded at the rate of 207½ bush. per acre. In the third piece, 10 lbs. of guano in the same manner yielded at the rate of 212 bush. per acre. Adjoining the above, another one-fortieth was measured and divided into three parts, each 1-120th part of an acre. In the first, poudrette was put in the drill as above, at the rate of $20 per acre, (cost 12s per barrel) which yielded at the rate of 142½ bush. per acre. In the second, poudrette at the rate of $40, scattered as above, yielded at the rate of 180 bush. per acre. In the third, poudrette at the rate of $80, as before, yielded at the rate of 155 bush. per acre. Adjoining the above, another one-fortieth of an acre was measured, and the drills well filled with a mixture of horse, hog-pen, and cow-yard manure, in about the quantity that farmers generally use (very definite indeed.) The last yielded at the rate of 135 bush. per acre." It will be noticed that the increase of quantity was not in proportion to the increase of guano or poudrette, 5 lbs. of guano producing more than 10 lbs. of guano—10 lbs. producing but little more than 7½ lbs. of guano—and $40 worth of poudrette producing more than $80 worth of poudrette did—which produced very little more than $20 worth did.

"*Rural Architecture*, with plans of Elmwood Cottage, Rochester." This is a beautiful house, calculated rather for a residence in or near a large city, than for western farmers; its cost about $2500, being too much for our farmers at present. It is a general fault of the plans of farm buildings which we find in agricultural works, that they are for gentlemen farmers who have a plenty of money to begin with, and not for the million, who have very little money.

The next article is Mr. Quincy's address at the annual exhibition of the N. Y. State Agricultural Society. This address should be read by all farmers, (cannot you find room for some extracts? I suppose you would think it too long to be given entire).

Bristol, Kendall co. Ill., Feb. 1846.

HANCOCK CO.—NO CORRESPONDENTS.

BY L PRENTISS.

MESSRS. EDITORS: Your extract from Coleman's work, and a certain brother's communication on "Fry-Fry-Frying," were worth to me the price of half a year's subscription. Please say to my brother on *frying* that my boy of *six* remarked that Mr. —— must be mistaken, as mother says "that the Lord send the cooks as well as food." My own opinion is that the Lord is favorable to an *occasional Fry*, but a continual, everlasting *Fry*, FRY, FRY, was a suggestion of the devil.

In looking over your list of correspondents, I am grieved to find that you have not a single correspondent, that I could discover, from Hancock co. I have long been a resident of the county, and am well aware we have many intelligent, industrious, and enterprising persons among us, whose ambition aspires to something better and more comfortable than log-cabins, scrub-cattle, and land-pike, to say nothing of corn-dodgers. I see no reason why every one of them should not take an agricultural paper, and inform themselves as regards the improvements

of the day. I believe, however, they all have an apology. You have been informed by our friend Sharp, through the "Warsaw Signal," that this county is infested by a set of beings, whose principle business is to take the property of their neighbors. This is a fact, and may answer as an excuse for our farmers not making greater progress in agriculture. Our farmers find it more profitable to watch their neighbors, to secure what they have already, than to go to any extra expense in making improvements in their breed of horses, cattle, or sheep. I hope you understand my meaning. I expect that spring will come, "grass grow, and water run;" that we shall get rid of our tormentors. The good "old settlers" of our county will awake with more energy, will enlarge their fields, tear down and build up comfortable houses, plant shade trees, enlarge their orchards, subscribe for the Prairie Farmer, and by the latter course learn for one dollar the experience of their neighbors, the improvements in agriculture.

Warsaw, January, 1846.

We hope to hear more from some of these enterprising farmers in Hancock. We have a tolerable list of subscribers there, and they ought surely to be represented in our columns. The irritation alluded to is certainly a clog upon the agricultural prospects of the county, and it is to be hoped that it may be soon allayed.

FENCE.

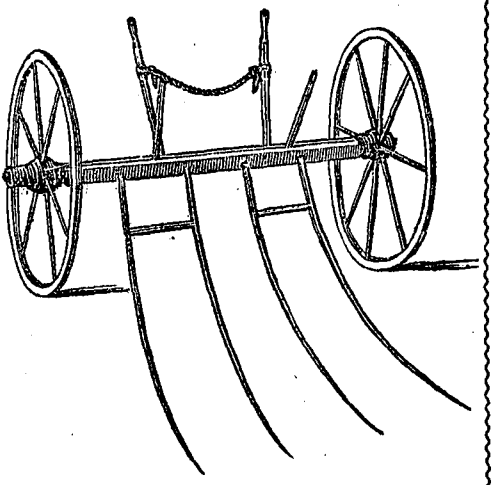
Messrs. Editors: I am not exactly a rail maker, but I sometimes make sod fence, and I had thought I would give you a little of my experience in making this kind of fence. I have made it in several different ways. In the first place I made a large fence; but I very soon found that it would never stop hogs, without rails—besides the grass is very apt to dry out in a drouth. So I came to the conclusion that a low fence, with two rails on top, would be more durable, equally as safe, and far less expensive. Consequently, two years ago we put up half a mile of fence after the plan I will now describe. In the first place I lay off the ditch 2½ feet in width, cut the sod by a line each side, then through the middle by guess. I take out the sods about a foot in width, and lay them on each side of the ditch. I cut the sod with such a slant that in going down two feet, it will only be the width of the spade in the bottom of the ditch. I then lay off the bank four feet in width. Commencing one foot from the ditch I set up a row of sods on each side—then fill it with earth—then one row more on the outside, and fill it up, and the bank is done. I then lay a rail on the outer edge of the bank, (but I think it would be better to put a sod or a block of wood on first, to raise the rail a little,) then with a long stake in the ditch, and a short one driven into the bank, and a rail put into them, you have a fence that can be built for 30 cents per rod, where the rails are not more than six miles distant, and one that will stop all kinds of stock. If any one can tell how to make a better fence, with less expense, I would like to have them describe their plan. J. B.

Bunker Hill, February, 1846.

A GRAIN RAKE.

BY M. L. DUNLAP.

Messrs. Editors: Enclosed is a drawing of a wheat rake, for harvesting the small grains. It is most decidedly a labor-saving machine. I raked some thirty acres of wheat and oats the past season with the machine of which this is a drawing, and I am satisfied that one fourth to one third of the expense of raking and binding is saved by the use of this implement—to say nothing of the wear and tear of hands in taking the grain out of the stubble. With this rake the grain is taken up in a cleaner and neater manner than with the common hand rake by ordinary hands.



I do not pretend to say who was the inventor of it; but certain it is that its present perfection is due principally to Mr. Korthauer, a neighbor of mine, who has spent considerable time in its improvement. We tried several in the commencement of harvest, each with some new modification; but were at last brought to the conclusion that no further alterations were necessary. Harvest was then commenced in earnest, and it was mere boys' play to keep at the heels of a good cradler, with one of Mr. Gray's No. 1 cradles. Mr. Korthauer is manufacturing them at $2.50 each. I am credibly informed that Mr. C. M. Gray of Chicago intends to enter extensively into their manufacture.

No farmer can see one of these implements without being favorably impressed with their usefulness.

Cazenovia, Cook co. Feb. 1846.

Smoked Meat. The great trouble is to preserve smoked meat through the summer from flies. One plan is to make the last fire of red or cayenne peppers. Luke Relyea, Mr. Johnson's farmer, says his plan is, to select bright clean straw, cut up fine, and pack away the hams in dry tight casks with this—an alternate layer of straw and hams, and cover all up. The straw absorbs all the external juice or moisture, and prevents the flies from troubling it.

The Westphalia plan of smoking hams is as follows: A room in the garret; fire in the cellar; smoke gathered in an inverted tunnel and led to the smoke room by a small pipe: by the time it gets there all the heaviest part of the pyroligneous acid

has condensed, and the smoke become cool. Nothing touches the hams but a pure, light, cool smoke, which is allowed to pass off by a number of small apertures, about as fast as it is supplied.—*New York Farmer and Mechanic.*

CATTLE SHOW AND FAIR OF THE UNION AGRICULTURAL SOCIETY,

To be held at Chicago, on the 7th & 8th of October next.

PREMIUMS.

HORSES.

First Division—Stallions over 4 years old. 1st premium, cup, worth $6. 2d, Stable Economy. 3d, diploma in mahogany frame.

Second Division—Stallions between 2 and 4 years old. 1st premium, Stable Economy. 2d, 7th vol Prairie Farmer. 3d, diploma in mahogany frame.

Third Division—Brood Mares. 1st premium, cup, $6 2d Stable Economy 3d, diploma in mahogany frame

Fourth Division—Working Horses 1st premium, Youatt's Horse 2d, diploma in mahogany frame

Fifth Division—Colts under 2 years old 1st premium, Prairie Farmer 2d, diploma in mahogany frame.

In awarding the premiums on Horses, reference will be had to size, action and endurance, such as are necessary for the horse of all work.

CATTLE

First Division—Bulls over 3 years old 1st premium, cup, $4 2d, Youatt's Cattle 3d, diploma in mahog fr

Second Division—Bulls under 3 years old 1st premium, Youatt's Cattle 2d, 7th vol Prairie Farmer 3d, diploma in mahogany frame

Third Division—Cows over 3 years old 1st premium, cup, $4 2d, Youatt's Cattle 3d, diploma in mahog fr

Fourth Division—2 year old Heifers 1st premium, Prairie Farmer 2d, diploma in mahogany frame

Fifth Division—Year old Heifers 1st premium, Prairie Farmer 2d, diploma in mahogany frame

Sixth Division—Calves 1st premium, diploma in mahogany frame 2d, diploma

Seventh Division—Working Oxen. 1st premium, cup, $4 2d, Youatt's Cattle

Eighth Division—Fat Cattle—Fat ox, cow or steer 1st premium, Youatt's Cattle and Prairie Farmer 2d, diploma in mahogany frame

Beauty of form, with the properties which indicate milking qualities, or a disposition to take on flesh on the best parts, will govern the committee on Cattle, rather than size alone, or present condition.

SHEEP

First Division—Fine wool Bucks 1st premium, cup, $6 2d, Morrell's Shepherd and Blacklock 3d, diploma in mahogany frame

Second Division—Middle wool Bucks 1st premium, Morrell's Shepherd and Prairie Farmer 2d, Blacklock 3d, diploma in mahogany frame

Third Division Long wool Sheep—1st premium, Morrell's Shepherd 2d. Blacklock 3d, diploma in mahogany frame

Fourth Division—Pen of 3 Ewes of fine, middle and long Wool—each kind three premiums, the same as the same grades.

Fifth Division—Fat Sheep of any kind 1st premium, Morrell's Shepherd 2d, diploma in mahogany frame

The term fine wool will include the Saxon and Spanish varieties of Merinos, and some of their crosses; "Middle wool," the South Down, Cheviot, Native, &c., and "Long wool," Lincoln, Leicester Cotswold, and all varieties which afford combing wool.

SWINE

First Division—Boars 1st premium, cup, $4 2d, diploma

Second Division—Breeding Sows 1st premium, cup, $4 2d, diploma

Third Division—Litter of Pigs, not less than 4 1st premium, Prairie Farmer 2d diploma

Size and present condition will *not* be regarded, in awarding premiums on swine, so much as those qualities which promise the best returns from a given amount of feed, in growing and fattening.

FOWLS

Best pair of Turkeys, Bement's Poulterer
do do Geese do do
do do Ducks do do
do do Dorking Fowls do
do do Bucks county do do
do do Poland do do
do do any other breed or grade, same prem

BUTTER

1st premium, 50 lbs in a firkin, jar or tub, made in May or June, cup, $6 2d Youatt's Cattle 3d, Prairie Farm

Table Butter, 20 lbs 1st premium, silver spoon worth $2,50—2d, PrairieFarmer 3d, diploma

CHEESE

50 lbs 1st premium, cup, $6 2d, Youatt's Cattle 3d, diploma

FRUIT

The greatest variety of Table Apples, raised west of Indiana and Lake Michigan, Downing's Fruits
Best 12 Table Pears, Downing's do
do 12 Winter Pears, Downing's do
do 12 Peaches, Downing do
do 24 Plums, Downing's do
do 12 Quinces, Downing's do
do ½ doz bunches Grapes, Downing's do
¼ bush cultivated Cranberries, Downing's do

VEGETABLES

Discretionary Premiums will be awarded on Potatoes, Carrots, Beets, Onions, Turnips, Tomatoes, Squashes, Pumpkins, &c.

MAPLE SUGAR

20 lbs 1st premium, Prairie Farmer 2d, diploma

FARM IMPLEMENTS.

Breaking Plow 1st premium, cup, $6 2d, Johnston's Cyclopedia of Agriculture

Stirring Plow 1st premium, cup, $6 2d, Johnston's Cyclopedia of Agriculture 3d, Prairie Farmer and dipl

Corn Plow 1st premium, Prairie Farmer and diploma 2d, diploma

Harrows for old land 1st premium, Cyclopedia of Agriculture 2d, diploma

Best Harrow for new land, diploma

For the best Cultivator, diploma

Horse Power, Thresher and Cleaner 1st premium, cup, $6 2d, cup, $4 3d, diploma

For the best Horse Rake, diploma

Fanning Mill 1st premium, cup, $4 2d, one vol N. York Farmer and Mechanic 3d, diploma

Best Straw Cutter, diploma

Best Corn and Cob Crusher, diploma

Best Corn Sheller, diploma

Harvesting Machine 1st premium, cup, $6 2d, dipl

Best Grain Cradle, diploma

Best Grain Rake, diploma

Best Drill Barrow, diploma

Best Wheel Barrow, diploma

SILK

Half bushel Cocoons 1st premium, silver spoon, $2,50 2d, diploma

Manufactured Silk 1st premium, silver spoon, $2,50 2d, Diploma

HOUSEHOLD MANUFACTURES.

10 yards Flannel 1st premium, Prairie Farmer 2d, diploma

10 yards Woolen Cloth 1st premium, Prairie Farmer 2d, diploma

Best 15 yards Wool Carpet, Prairie Farmer

10 yards Linen 1st premium, Prairie Farmer 2d, diploma
Best 10 yards Linen Diaper, Prairie Farmer
Hearth Rug 1st premium, Prairie Farmer 2d, dipl
Best 10 yds Kersey, Prairie Farmer
Best 15 yds Rag Carpet, Prairie Farmer
Best 10 yds tow cloth, Prairie Farmer
Best ½ lb Linen Thread, diploma
Knit Stockings 1st premium, Downing's Fruits 2d, diploma

LEATHER

Best 3 sides Upper Leather, diploma
Best 3 sides Sole Leather, diploma
Best 3 sides Harness Leather. diploma
Best 3 sides Bridle Leather, diploma
Best ½ dozen Calf Skins, diploma

LEATHER GOODS.

Best pair Fine Boots, cup, $4
Best pair Kip Boots, Prairie Farmer and diploma
Best pair Coarse Boots, Prairie Farmer and diploma
Best pair Ladies' Winter Boots, vol N Y Farmer & Mechanic
Best pair Ladies' Walking Shoes, diploma
Best draft Double Harness, N Y Farmer & Mechanic and diploma
Best Carriage Double Harness, N Y Farmer & Mechanic and diploma
Best Single Harness, diploma
Best Bridle, diploma
Saddle, diploma

IRON WORK

Best specimen of Castings, without filing, varnish, or paint, not less than 15 lbs, cup, $4
Best ½ doz Pitchforks, diploma
Best ½ doz Dungforks, diploma
Best ½ doz Hoes, diploma

WAGONS AND CARRIAGES

Best two horse Wagon, with iron axle, without paint, cup
Best two horse Wagon, with wood axel, painted, cup
Best one horse Wagon, N Y Farmer & Mechanic
Best Buggy, cup
Best Sleigh, diploma

CABINET WARE

Best Sofa, diploma
Best Mahogany Bureau and Book Case, cup
Best Cherry or Black Walnut Bureau, N Y Farmer & Mechanic
Best Mahogany Table, diploma
Best Cherry Table, diploma
Best set fine Parlor Chairs, cup
Best set Windsor Chairs, N Y Farmer & Mechanic
Best set Kitchen Chairs, diploma
Best Bedstead, N Y Farmer & Mechanic
Best 300 lights Sash, diploma

MISCELLANEOUS MACHINES

Best Morticing Machine, diploma
Best specimen machine-planed Siding and Flooring, diploma
Best specimen Turning, diploma
Best specimen Stone or Earthen Ware, diploma
Best large spinning Wheel, diploma
Best small do do diploma
Best specimen Ornamental Painting, N Y Farmer & Mechanic

COOPERS' ARTICLES

For the best Pork Barrel, diploma
For the best Beef do diploma
For the best Washtub, diploma
For the best Pail, diploma
For the best Flour Barrel, diploma

ENGRAVING

For the best Wood Engraving, diploma

GUNSMITHS

For the best Shot Gun, diploma
For the best Rifle, diploma

HATS AND CAPS

For the best Fur Hat, diploma
Fur the best Cloth Cap, diploma

For the best specimen of Lock Work, diploma

OIL, SOAP AND CANDLES

For the best specimen Linseed Oil, diploma
For the best specimen Rape Oil, diploma
For the best specimen Lard Oil, cup
For the best specimen Sunflower Oil, diploma
For the best specimen Stearin Candles, diploma
For the best specimen Tallow mould Candles
For the best specimen Bar Soap, diploma

A premium of a cup worth twenty dollars will be given for an Essay, adjudged worthy, on the subject of Grasses for Western Culture. Also discretionary premiums for Essays on other subjects connected with farm culture and management.

Discretionary premiums will also be awarded on animals, products, or articles of manufacture, not embraced in the above list, in the discretion of the several committees.

The *number* of premiums offered has been extended as much as possible, so as to cover a great variety of articles, and the amount of the premiums has, as a corresponding necessity, been placed low, so as to meet the ability of the Society.

A larger proportion of the diplomas have been awarded to manufactured than to farm articles, for the reason that it is worth more to the manufacturer than to the farmer.

The list of premiums on field crops was published in the August number of the Prairie Farmer for 1845, and will be republished after the meeting of the Executive Committee in May.

MEETING OF THE U. A. SOCIETY.

In accordance with previous notice, the Society met at the office of the Prairie Farmer, in Chicago, Feb. 4th, 1846, at 2 o'clock P. M. The meeting was called to order by the President, LEWIS ELLSWORTH, Esq. The Society then proceeded to the election of officers. Upon counting the votes it was found that the following named persons were unanimously elected officers of the Society for the ensuing year:

President,
E. H. MULFORD, Esq., of Cook Co.

Vice Presidents,
J. B. TURNER, of Cook county.
C. R. PARMLEE, of Dupage "
P. Y. BLISS, of Kane "
L. B. JUDSON, of Kendall "
J. A. GOODING, of Will "

Treasurer—CHARLES M. GREY, of Cook.
Recording Secretary—M. L. DUNLAP, of Cook.
Corresponding Secretary—J. A. WIGHT, of Cook.

Executive Committee,
JOHN GAGE, of Cook.
F. H. HASTINGS, of Cook.
L. ELLSWORTH, of Du Page.
S. JOHNSTON, of Kane.
ROBT. STRONG, of Will.
S. GOODRICH, of "

The Treasurer and Secretaries were appointed a committee to make out a list of Premiums to be awarded at the Cattle Show and Fair to be held in Chicago, Oct. 7th and 7th, 1846.

Adjourned without day.

M. L. DUNLAP,
Rec. Secretary U. A. S.

FIRE PLACES *vs.* STOVES.

BY DR. JAMES WEED.

MESSRS. EDITORS: The December number of vol. iii. of the Prairie Farmer contains an article taken from the Albany Cultivator, by J. W. Smith, in which he indulges in an extacy of recommendations on Orr's Air Tight Stove. In a note appended to the article you inquire if there are any offsets to the advantages enumerated.

In a subsequent number of the Cultivator, number 11 vol. xi., an article appeared, signed M. D. Codding, which should have been transferred to your columns. Mr. Codding speaks our sentiments with regard to the whole family of stoves; and of the 500 contrivances in the shape of stoves which Mr. Smith alludes to, we think the air tight is the *abomination of abominations*. Every body is aware of the peculiar disagreeableness arising from stove heat, which is generally attributed to a dryness of the atmosphere, and hence water is usually kept upon a stove to counteract this effect, which it does in a measure, but not wholly. We have long been of the opinion that this peculiar oppressiveness was justly attributable to some *electrical* influence; and Mr. Codding shows how the electrical equilibrium is disturbed in a room by the presence of heated iron. In addition to these objections, which apply to stoves in general, the *principle* of the air tight outrages reason, and is directly at war with health. It is a well known fact that if an ordinary stove pipe is carried through several apartments of a house before it enters the chimney, the last room will be greatly warmed by the heat which escapes from this last portion of the pipe. This clearly shows that a large proportion of the heat produced by the fuel in the stove actually escapes at the chimney, being carried out by the current of air which constantly passes through the stove and pipe. The air tight only differs from the common stove, by being so constructed that when the fire is once lighted it can be so completely closed as to prevent the the draft altogether, admitting just barely a sufficiency of air to support a slow combustion. Now this is like a two-edged sword; it operates in two ways to produce *economy of fuel*. When the air of the room is warm, it is not permitted to escape through the stove, and as it is not disposed to escape rapidly at any other part, the cold and fresh air from without gains no admittance by the crevices of the doors and windows; and of course if once heated and not changed by a free circulation, it will remain warm a long time; and as there is no current of air through the stove, of course *all* the heat the wood is capable of producing is gradually disseminated through the room.

But what is the effect upon the inmates of an apartment thus warmed? Besides the constantly enervating influence of the high temperatures which are usually kept up, they are continually suffering for the want of thorough ventilation. The air, from being repeatedly inhaled, becomes deprived of its due proportion of oxygen, and surcharged with carbonic acid and other refuse materials of respiration. These deleterious influences thus act directly upon the lungs, and through them upon the whole system. The doctrines of Liebig represent the body of an animal as a kind of air tight, in which the carbon of the food consumed constitutes the fuel, the oxygen of the air respired supports the combustion, and animal heat is thus produced. In support of this theory, it seems that when the atmosphere is cold, it is correspondingly more dense; and the chest being a constant capacity, more oxygen is inhaled, the appetite is increased, and the additional quantum of food taken supplies the carbon necessary to combine with the oxygen to increase the amount of animal heat which is requisite to place the animal, in relation to the surrounding temperature. It becomes persons to beware that the iron air tight does not interfere with the animal air tight, so as to deprive it of the amount of oxygen necessary to sustain the heat of the body in some relation to the season of the year and the degree of cold to which we are subject. This theory explains the reason why persons who have become accustomed to warm rooms are so poorly able to endure the cold when they go out. Inhaling in heated rooms a less amount of oxygen than in cool ones, no increased demand for food is occasioned, the source of animal heat is diminished, and when they encounter the cold atmosphere the system is not prepared for the exigency, and they are soon chilled; besides, there is now in the cold air which is inhaled a surplus of oxygen, which, there not being a corresponding amount of carbon in the circulation, with which to combine, acts chemically upon the structure of the lungs, inducing colds, inflammations, &c.

When compared with the rationale of the old fashioned fire place, it seems difficult to account for the rage for stoves, except that the advantages, comforts, and *economy* of the fire place have not been fully and justly appreciated. One prominent cause for the prejudice against the modern fire place is the fact that they are not usually constructed large enough to admit of a sufficiency of wood to warm the apartment for which they are intended, in very cold weather. But, says one, they burn too much wood already. Is such a person willing to deny himself the occasional luxury of a roast turkey, a beefsteak, or of animal food altogether, because he can *live* on vegetables much cheaper? Is he willing to deny himself the use of tea, coffee, sugar, and other luxuries, on the score of economy? We regard the open fire as one of the greatest luxuries of life, and for which we are willing to pay as we do for others of far less importance. What has become of the "social hearth," the "cheerful fireside?" It is true friendship still endures, and we meet as warm a reception from our friends as did our ancestors—but in apartments warmed by a cheerless, dark, gloomy hot iron; if it has been neglected until the room has become cool, we find little comfort in drawing near to it, and if our friends have gradually inured themselves to a degree of heat which would better become a "fire king," we have to endure it also, or leave the room.

Let us contrast with this the sociability of the fire place. If the fire is low, we draw near and place our feet to it; and with the feet warm and the head cool we are soon comfortable; and as the merry embers and the curling flame increase their potent influence, we take the liberty to admire the monster, now our servant, at a greater distance. And with the heated and respired atmosphere of the room constantly rushing towards the fire and passing in front of it up the chimney, while the

heat of the fire is continually radiating back into every part of the room, pure, unchanged, just as it is elimenated by the chemical laws of nature, we feel a lightness of spirit and a vivacity of intellect very conducive to social intercourse; and the person who cannot be sociable in an agreeable company under such external influences must, we think, be deficient in social feelings or possessed of a temperament not very susceptible to external impressions.

With regard to the economy of stoves, we have always been disposed to question it. In the first place, a stove usually costs more than a fire place; they are often broken, and require repairing; but the great offset to the saving in fuel is in physicians' bills and impaired health.

Bloomington, Iowa, Jan. 1846.

VETERINARY DEPARTMENT.

BOTS AGAIN.

BY DR. M. W. PHILIPS.

Messrs. Editors: Your last number of vol. 5 I have just been reading, and find in the Veterinary Department an article from the Boston Cultivator, with your remarks thereon—the subject, "Bots in Horses."

I have been an owner of horses for many years, and have unfortunately never been rich enough to dispense with my personal attention to these animals. I am, "by authoriry" of the University of Penn., an M. D., and unfortunately never had enough practice to enable me to sit at my table and write prescriptions. Besides all this, I was born of practical parents, and think I am practical, somewhat.

I will not ridicule any man's notions; nor in saying what I think, do I wish to insist that I am right only, and that all others are wrong; but in giving my opinions, I wish to use language that will express them without offence to any, and yet to be firm.

I can see no benefit to accrue to the horse or child by such a parasite as the worm, nor do I conceive that either is ever injured whilst in a state of health. The animal becoming diseased, these insects act as irritants, and produce evils frequently irreparable—and are thus called a disease of *bots*, or worms, as the case may be. I have not had a case of *bots* among my stock, save in one mule, for 6 years, and that one is quite subject to it. I have never had a case, except in 3 mules and two or three horses. They were generally advanced in years, and were always greedy feeders.

One of the worst cases I ever saw, where the bots had eaten through the stomach, was in a mule. But let me tell you the case. A pushing planter, not living out of this State, had to buy corn; he had no foddor, either shucks or hay, for his mules. He bought corn from a flat boat—it was badly damaged. Some of this corn was turned into a hollow log in a lot, and some 20 or 30 work mules were turned in, after having ploughed *hard* all day. The next morning one mule was dead. "He died of the bots." I denied it, and insisted he died of—bad treatment. He was opened; bots had cut through the stomach, and it was pretty well filled with corn, coarsely ground, and nearly as dry as if it had come from the mill. No wonder the bots cut out; they were hurrying off to get a drink, and to search for better quarters.

I have seen many horses "with the bots," and have cured many of the colic, with an ounce of good laudanum. I have seen soap suds, molasses, fish brine, strong brine, and all that, fail; and I have seen laudanum fail, but only in two cases. One case I had, of a fine, high bred mare. I had stopped all night at a half breed Indian's in this State, who keeps a carriage and charges high. He had no fodder. I used every precaution not to let my mare get too much corn, and especially when warm; but next morning, in less than an hour after starting, she was in agonies. I led and drove for 2 or 3 miles to a stage stand, kept by an old acquaintance. I could not command laudanum—the stage drivers knew all about it—fish brine, strong soap suds, soot, &c., was given, but to no good. I got on for a few miles further, and there emptied down her an ounce vial full of laudanum. In one hour she was well, and I rode "on my way rejoicing."

I could repeat other cases, but why do it? our brethren of the plow handles will not yield up their preconceived opinions.

As to wiping off the egg of the fly, "it is all in my eye and Betty Martin." Can any living man carry with him, into the field, with his carriage, buggy, &c. &c., a pot of hot water and a cloth? No sir, whether it be Clater, or Johnston, or any other big name, it matters not; we must think for ourselves, pay a proper regard to authors' sayings—but not believe that any man is beyond error. Look at the thing fairly, and excepting with horses in a stable, it cannot be done. It is sheer theory to talk of it, and is to be classed with the notions of teachers who teach at their desk. Let them go to the field, to the road, to the chase, they will see how unavailing.

If the experience of myself and my father for now over forty years can bear on the subject, I would say, feed regularly; feed liberally with *sound* grain and provender; salt freely; water regularly; don't feed when the horse is heated; and don't over-work. You need not have hot water or a towel, nor fish brine, nor chicken fixings; for you will seldom need ang thing of the kind—sometimes soot and laudanum, which any old woman knows is good for the colic, will be needed, and if used in time this is all.

I had a few years since "a case of bots," in one of my carriage horses, and a noble fine horse he was. I tried many remedies, aimed at the relief of the cholic, but all were unavailing. He was opened—no bots at all; but near half a gallon o venous blood, very dark, was around the kidneys. I could also bring up other cases where death ensued on the symptoms attending "the bots," and not a bot was seen.

My opinion is that there is no such disease as "the bots." I think horses that eat greedily—not fed regularly—over-worked, &c. &c., are disposed to the colic, some cases of which cause the animal to swell, others do not; and that according to the violence of the attack, or the peculiar symptoms, do doctors and other persons give it the name of "the bots."

Sage tea, soot tea, and laudanum, will generall

cure either, if used in time; of the two first there is *no danger*—*of the latter*, an ounce every two hours until relieved will not injure. I have given one ounce at once, and in half an hour I have given half an ounce more, which was sufficient.

I wish you to clearly understand that I am not a *practicing physician*. I have been—and am now as much of an overseer as if I were receiving wages—at least I give all the attention to some 250 acres that is received. I may err, but if I do, it is an error from attention to business, not from my desk.

Log Hall, Mississippi, January, 1846.

We welcome Dr. Philips to our columns, and hope this will not be the last time we shall hear from him. So far as we are concerned, he will have full liberty to cut as he pleases—we have a great fund of good nature, and we shall assuredly give more heed to his suggestions than to men of whom we know less.

To those of our readers who are not acquainted with Dr. P. we would remark, that he is a highly successful planter in Mississippi, and for a long time well known as a correspondent of the Albany Cultivator. He was also, for some years, one of the editors of the South Western Farmer, a journal deserving of a good support, but which the farmers of Mississippi, to their shame, suffered to die.

☞ We learn that a large number of cattle have died during the past winter in cornfields in Du Page co. On dissection, the third stomach is found filled with dry wadded matter.

METEOROLOGICAL RECORD.

Lat. 41° 45′ *N.; Lon.* 87° 35′ *W.; from Jan.* 22 *to Feb.* 18. *By* GEO. F. WILSON, *Principal of Chicago Academy, for Chicago Mechanics' Institute.*

Day of the month.	Height of Barometer in inches and hundredths				External Thermometer.					Clearness of the sky.				Wind, its force and course from.				Rain—Quantity in inches.	Remarks.
	Sun-rise.	9 o'cl A.M.	3 o'cl P.M.	9 o'cl P.M.	Sunrise	9 A. M.	3 P. M.	9 P. M.	daily mean	Sunrise	9 A. M.	3 P. M.	9 P. M.	Sun rise.	9o'c A M	3o'c P M	9o'cl P M		
Jan. 22	28.55	28.50	28.48	28.60	32	35	38	26	32.00	2	8	9	10	N2	N2	N2	N2		
23	28.90	28.82	28.94	28.50	04	11	29	21	16.25	10	10	10	9	W2	SW2	S2	SW2		
24	28.60	28.63	28.50	28.09	31	38	44	32	28.50	9	·	7	6	SW2	SW2	SW2	SW2		
25	27.96	27.95	28.00	28.05	44	45	40	40	43.75	8	5	4	3	SW2	SW2	SW2	SW2		
26	27.90	27.90	28.00	27.95	36	40	44	36	39.00	3	2	3	0	SW2	SW2	SW2	NE3		
27	28.10	28.10	28.09	28.10	40	42	38	37	39.25	3	0	9	4	NW2	NW2	NW2	NW2		
28	28.10	28.10	28.10	27.96	31	35	38	10	36.00	10	10	2	0	NW2	NW2	SW2	SW2		
29	28.14	28.09	27.90	27.50	37	42	48	16	43.25	0	0	0	0	S2	S2	SE2	SE3		
30	28.12	28.10	28.05	28.09	34	46	49	37	1.50	0	0	0	0	S2	S2	SE2	2	1.01	Rain
31	28.09	28.10	28.07	28.12	32	37	41	32	35.50	3	0	0	3	SW2	SW2	W2	NW2		
Feb. 1	28.19	28.12	28.13	28.11	32	37	40	30	34.75	8	8	4	9	SW2	SW3	SW3	W2		
2	28.24	28.19	28.15	28.13	30	37	40	34	35.25	9	9	6	8	SE2	SE2	SE2	SW2		
3	28.30	28.25	28.20	28.30	33	36	38	32	34.75	0	7	8	10	SW2	SW2	SW2	SW2		
4	28.30	28.30	28.27	28.30	32	39	43	31	36.25	9	9	8	7	SW4	SW2	SW2	SW2		
5	28.50	28.44	28.42	28.50	32	36	44	32	36.00	10	9	10	10	SW2	S3	S2	S2		
6	28.30	28.26	28.25	28.30	32	39	46	34	35.50	10	10	10	10	SW2	SW2	S2	SE1		
7	28.34	28.30	28.29	28.33	31	38	46	37	36.00	9	8	7	5	SW2	W1	W2	SW2		
8	28.42	28.45	28.44	28.42	36	40	47	38	40.25	9	8	5	4	SW2	W2	NW2	NW2		
9	28.46	28.44	28.47	28.29	34	37	41	31	35.75	8	0	7	3	SW2	SW2	SW2	SW2		
10	28.29	28.26	28.25	28.27	30	39	48	33	37.50	10	9	7	9	W2	W2	W2	W2		
11	28.30	28.25	28.30	28.16	31	35	44	32	35.25	10	10	10	10	SW2	SW2	SW2	SW2		
12	28.20	28.15	28.14	28.09	32	36	42	32	35.50	3	0	0	2	S2	SE2	SE2	SE2	.15	Snow
13	28.07	28.09	28.06	28.45	32	34	40	31	40.75	9	9	10	10	SW2	SW2	SW2	SW2		
14	28.46	28.45	28.40	28.49	32	36	38	30	33.25	8	0	0	0	NE2	NE3	NE4	NE4	.27	Snow
15	28.50	28.48	28.46	28.27	21	32	36	31	30.00	3	7	8	10	SW2	SW2	SW2	SW2		
16	28.30	28.29	28.24	28.65	32	33	37	37	34.75	9	7	8	10	NW2	NW2	W2	W2		
17	28.70	28.69	28.58	28.36	16	29	34	29	29.50	9	9	10	10	SW2	SW2	SW2	SW2		
18	28.64	28.60	28.57	28.50	18	22	36	31	26.75	10	10	10	9	NW2	N 2	W2	NE2		
Means	28.28	28.30	28.27	28.25					36.02									1.43	

Monthly mean of Barometer, 28.27. Monthly mean of Thermometer, 36.02. N. B. The cistern of the Barometer is placed 36 feet above the surface of Lake Michigan. The external Thermometer has a northern exposure, and is out of the reach of the direct rays of the sun. In the column headed "Clearness of the sky," 0 represents entire cloudiness—10 entire clearness. The figures 1 2 3 4 5 6 denote the force of the wind, 2 denoting a gentle breeze, 4 a strong wind, 6 a violent gale, &c.

EDITOR'S TABLE.

Our Last Month's Mistake. One year since we took occasion to "snigger" somewhat at the miscellaneous condition of pages, exhibited in the March number of our esteemed cotemporary, the Albany Cultivator; but we little thought the same calamity was so soon to fall upon us. We suppose that by this time, however, at least ten thousand persons have stared with no little astonishment on a similar, or indeed somewhat worse, exhibition of *higgledy piggledyism*, as made in the February number of the Prairie Farmer.

The mistake alluded to was the result of the change of form. Our former imposing stone being found too small, one half the new form had to be made up at a time; and one of these halves was turned the wrong side to the other, and the whole edition thus worked off, before it was discovered.

We cannot forbear to thank our subscribers most heartily for the philosophic manner in which they have borne themselves in the matter. We expected a great amount of dudgeon to be spilled on our heads; but though doubtless there has been some complaining unknown to us, we have been spared all the wrath hitherto. Verily our opinion of the good sense and kindness of our subscribers improves monthly.

If any hard thoughts should yet dwell in any breast, it is hoped that the reception of this number, which contains some good things at least, will wipe out all but the memory of them.

"Description of Farnum's Patent Hydraulic Apparatus, for Raising Water; also Descriptions of the Engines, Fountains, &c." A goodly pamphlet of 80 pages, containing descriptions of pumps, illustrated by cuts, showing how water may be supplied for all sorts of purposes by horse, water, or wind power. Those who have deep wells, inconvenient springs, or who wish fountains in their gardens, would do well to look into this pamphlet.

That Essay on Grasses. A gentleman in Boone county pledges $5 to be added to the premium for an essay on grasses, proposed by Mr. Shillaber in the December Prairie Farmer. We have now pledged, $10. This sum will hardly command the requisite efforts. If there are others who feel interest sufficient to do any thing in the matter, there is room.

☞ S. B. Mead Esq. of Augusta, Hancock co. asks "Is there no other botanist in this State? Perhaps you may have some beginners in Chicago; if so, and they can find any rare plant, so as to give me a good specimen not embraced in my catalogue, I will make return of others growing here." We have a few specimens not in that catalogue, and can obtain some others next season, when we shall be happy to send them. Mr. Samuel Brooks of this city, and Mr. Wm. E. Dunbar of Rockford, Winnebago county, are accomplished botanists; and the latter gentleman has a large collection, made in this State.

Club Subscribers. Some of the gentlemen acting as agents of the Prairie Farmer seem not to be aware that when a club is once formed at a particular post office, other subscribers can afterwards have the paper at the club rates. Such is the fact, however. By complying with the terms, any number of new subscriptions will be received at the same rate with the others, though they be sent singly.

Wheat Selling—the boot on t'other leg. That the wheat buyer is not the only man who can "come it" a little, is shown by the following story, told us a few evenings since. A farmer with a load of wheat to sell was bantering with the agent of a purchasing house in this city, not long since, but objected to selling to this said agent, for fear he would cheat him in the weight. The agent protested his honesty, and agreed to leave the matter to Mr. B., another farmer whose wheat he had just bought, but whose load was not yet weighed; at the same time asking B. how many bushels he had. Farmer B., who was a bit of a wag, replied that he had 44 bushels (his true load, by the way, was 36 bushels,) as would be found on weighing it. It was emptied into the weighing box, and according to the said agent's report did weigh exactly 44 bushels! Farmer B. of course vouched for his honesty; but whether the agent took that 8 bushels out of some other loads that day, is not stated. Probably he did not.

☞ We are indebted to Hon. Sidney Breese, for public documents.

Prince's Catalogue of esculent vegetables and other seeds is received.

☞ Communications are on hand from John Beal, F K Phœnix, John Slater, John Hockings, Thos Affleck, Alex McDonald, Joseph Vial, "Ben E Vento," Amos Stevens, Russell Cheney, J Roby, "Young Farmer," D Wheeler, C D Fox, Isaac Julian, G A Grist, Wm Abernathy and E H Starkweather. Some of them were intended for this number, but crowded out.

Exchange Papers. The Indiana Farmer and Gardener has changed its name and now comes to us as the Western Farmer and Gardener. Edited by H W Beecher and E J Hooper, and is published at Indianapolis. It has lost none of its spirit, and we read it with more pleasure than any other exchange paper. By the way, the publishers forgot us till the third number Can we have the first two?

The Southern Planter reaches us about once in two months, and the Southern Cultivator about once in a quarter. They seem to be plainly directed when they do come.

Farmers' Library. At the commencement of this publication it was announced that an exchange would be accorded to all the agricultural papers desiring it. We received thereupon the July, August, and October numbers; which were noticed, one of them at considerable length, by us. Since then, none others have reached us. We suppose it to be the result of oversight, or that the intention to send has been changed. Will the editor inform us definitely?

An Illinois Crop. Happening in at the seed store of J. W. Hooker, 152 Lake street, to-day, we saw a very fine article of clover seed; which, to the amount of 60 bushels, had just been sold there by Mr. John O'Brien, of Tazewell county, Ill.

☞ From E. S. L. Richardson Esq. we have received two numbers of the Salem Observer, containing a Prize Essay on "The Duties of Parents in relation to Schools," by Edwin Jocelyn, Principal of the Saltonstall School, Salem, Mass. We have not found time yet for its perusal, but will attend to it in season.

Penny Magazine, Part 16, From W. W. Barlow, like its predecessors, is full of good things. It is worthy of a place in every library, or on shelves where there is no library.

"The Albion, Or British Colonial and Foreign Weekly Gazette: New York." The motto chosen by this paper we suppose is intended to express its character: *"Calum, non animum, mutant, qui trans mare currunt,"* or, for the benefit of vernacular ears, Those who cross the seas, change their sky, but not their mind. It is English literature, English taste, and English opinions, transferred to American soil. It is a weekly journal, consisting of 12 immense quarto pages, filled with Tales, Poetry, Foreign News, and Criticism. It is conducted with great dignity, taste, and ability—and to the British emigrant must be a rare treasure. The American, too, though he may not fully sympathise with its foreign tone, will find, as a compensation, a dignified exhibition of English feeling and opinion—and a choice journal of literature, equally adapted to the tastes of men of all nations.

☞ Several editorial articles—including one on Bommer's manure, prepared by request—notices of books, &c. are crowded out of this number.

Guadeloupe Merinos. We have received several samples of the wool of these sheep, described in the communication of Mr. Sawyer, in another column—together with certificates to the purity of the breed as there set forth—which can be examined by any interested in the matter. The wool of "King Philip" is very pretty. He sheared last season 10¼ lbs. washed wool. He weighs 157 lbs.

A Mistake. Some of the notices of the Prairie Farmer, given by the gentlemanly editors of the country press, speak of our work as containing 40 pages. This is eight too many. Eight pages are allowed for the index at the beginning of the volume.

Alpaccas. We see it stated that a company has been formed in Kentucky for the importation of Alpaccas; also that Mr. Swain, a member of the American Agricultural Association, has sent for some of them. They are said to be plenty in Peru, South America; and no reason is known why they may not be added to the list of our domestic animals. The animals cost in Peru from three to five dollars per head, and can be imported for 15 dollars. Mr. J. B. Turner, of this city, is about importing some also.

B. T. of Elgin. Hodge's Catalogue is not for sale here. It may be had by writing to Mr. Hodge, without any further cost than paying postage on the letter. By the way, we have not received this catalogue for three years. Will Mr. H. send us his last?

A letter from G. F. Magoun, Esq., of Platteville, Wiscousin, remarks:

"Perhaps it may gratify you as a friend of Education, to know that the enterprise here is succeeding beyond the expectations of its warmest friends. The institution is in 3 departments, Classical, High English and Primary—embracing in them all 115 pupils, 18 in the Classical department, 26 in the Primary. There are others not included above, who attend the exercises in French and Drawing. We have about $550 worth of apparatus and library, and a valuable bell, presented by friends at the east, which are unfortunately wintering at Detroit. A boarding establishment is to be put up when the spring opens. I hope, in my vocation, to do something in the way of lecturing on Popular Education in the Territory. I am persuaded that *the great want* of Illinois is a State Seperintendent, who shall lecture through the whole State. We shall have one in Wisconsin first."

Sample Wheat. Mr. H. M. Lyman, of Du Page co., has left with us a sample of red chaff bald spring wheat. The yield of it the last season was 37 bushels per acre.

☞ The editor of the Freeman at Prairieville will accept our thanks for his kind words and kind efforts.

Liberal Bequest. Oliver Smith, Esq., a wealthy gentleman lately deceased at Hatfield, Mass., bequeathed $200,000 to the town of Northampton for the establisment of an Agricultutal School, to be available when a like sum is contributed to unite with it.

A Wind Mill. A friend in Knoxville asks us on behalf of several persons for a diagram of the best plan for a wind mill. The request does not state the amount of power wanted. Will some one conversant with such matters give us a plan? If not, we will do the best we can.

Some birds have a great deal of humor in them, particularly the raven. One that belonged to me was the most mischievous and amusing creature I ever met with. He would get into the flower garden, go to the beds where the gardener had sowed a great variety of seeds, and placed sticks in the ground with labels, and amuse himself with pulling up every stick, and laying them in heaps of ten or twelve in the path. This used to irritate the old gardener very much, who would drive him away. The raven knew that he ought not to do it, or he would not have done it. He would soon return to his mischief, and when the gardener—(the old man could not run very fast)—would again attempt to drive him away, the raven would keep just clear of the rake or hoe in his hand, dancing before him, and singing as plain as a raven could—"Tol de rol de rol! tol de rol de rol!"—accompanied with all kinds of mimicking gestures.—*New Monthly Magazine.*

Constituents of Milk. M. Dumas observes that the milk of herbiverous animals always contains four orders of substances which form part of their food, viz: the albuminous represented by the caseum, the fatty substances represented by butter, the saccharine portion of their food represented by the sugar of milk, and, finally, the salts of different kinds which exist in all the tissues of these animals. In the milk of carnivorous animals, there is no sugar, and there are only the albuminous, fatty and saline substances which form the general constituents of meat. If, however, bread be added to the food of these animals the sugar of milk will be found, although not in large quantities. M. Dumas states that his investigations have enabled him to arrive at a perfect analysis of milk.—*Ath.*

Corn. Never cut your corns: it is dangerous. To remove them when they become hard, soak them in warm water, and with a small pumice-stone, rasp down the corn. Try it, and you will never use a knife afterwards.—*Selected.*

Iowa Wheat. The Bloomington (Iowa) Herald declares that a quantity of wheat weighing 71 lbs. to the bushel was recently purchased in that place. The editor challenges any part of the Territory to produce heavier grain.

Peach Trees. The Sangamo Journal says that many peach orchards in that section of the State have been killed during the late pleasant weather.

Galvanism. The Maine Farmer suggests in allusion to the numerous failures in promoting vegetation by electricity, that the past was not a good year for galvanism.

A Sheep Partnership Project. Henry Ancrum Esq. writes us from Ashley, Pike co. Missouri, proposing a partnership somewhat as follows: He will find the land, care, and attention—the absent partner or partners finding the sheep; these to be breeding ewes, to the amount of $1000 or $1500, or upwards. All the wool and all the male lambs are to be sold to pay principal and interest—the latter computed at a fair rate—reserving bucks enough for the use of the flock—until the whole capital is paid, when the account is to be closed. We have made some inquiry but find no one who speaks favorably of it. Mr. A. will see the cause of our delay.

Mr. Lathrop's Bee Palace. It is stated that the sections of the hive are covered on the top with slats 1½ inch wide and ⅝ inch apart. Are not these slats to be put upon the bottom of the sections also? else will not the bees fasten their comb to both sides of them, so as to impede the taking of the sections apart?

Barns. A subscriber from Grundy county being with us a few evenings since, gave a somewhat humorous account of the mode of building barns in his neighborhood. One man built a barn 68 by 24 feet, with the floor running through it the shortest way—thus leaving the bays, for mowing, 24 feet square, and requiring two men to do the mowing. Others build 100 feet by 40 with a floor running longthwise. Will not some one send us a good plan of a barn, with a root cellar attached?

Our Office. Persons from the country sometimes complain that they find it difficult to discover our office. If it will help them any—we may observe that we are on the south side of Lake street, No. 171. They will find all the odd numbers on this side of the street, and will only waste their labor in looking on the other.

☞ A person pointed out a man who had a profusion of rings on his finger, to a cooper. "Ah, master," said the artizan, "it is a sure sign of weakness when so many hoops are used."

☞ Cork, if sunk 200 feet in the ocean, will not rise, on account of the pressure of the water.

Cherokee Rose. Several capsules of the seed of this rose, kindly forwarded us by Col. Alexander McDonald, of Eufaula, Alabama, have reached us in safety. We will give them a chance and report progress. We are greatly obliged for them. We would invite attention to what is said of them and the Osage Orange in Mr. Affleck's letter in another column. We have a quantity of plants of the latter, grown from seed furnished us by C. H. Larrabee Esq. of this city. They stood out, where they grew, unharmed, though only of one season's growth, during the cold of December; but we took them up and buried them a few days since, for fear of harm from extremes of weather yet to be apprehended.

Hussey's Reaper. W. F. Tompkins Esq. of Janesville, Wisconsin, sends us certificates of the success of this machine on his farm the past season: these certificates say that it cut for nine binders. Mr. T. cut 200 acres in twelve days and a half, using two spans of horses alternately.

Speaking of reapers reminds us that Mr. C. M. Gray, the well known cradle maker in this city, is getting up a reaper of his own, which we are induced to believe will compete with any yet invented. He will have it completed in a few days from this time.

☞ Will Mr. E. Harkness send us a copy of his Catalogue. We have either never received one, or mislaid it.

Fruit. It is cheering to see so much interest manifested in fruit growing. More than half the communications received during the past month have more or less to say about it. E. S. L. Richardson Esq. of Bristol, Kendall county, writes as follows: "My brother and myself have about 80 varieties of apples, 22 of cherries, 50 of pears, 22 of plums, &c. some of which we received from Mr. Hodge, of Buffalo; these were in better order than any received by us before."

☞ We have but one copy of Skinner's Youatt. It is not to be had in town at present. The Western Farmer and Gardener has now entered upon its 6th volume.

NOTICES OF BOOKS.

Northwestern Journal of the Medical and Physical Sciences. The prospectus of a work to be published in this city, with the above title, has been laid on our table. It is to be edited by Dr. M. L. Knapp, who is known to many of the readers of this journal as a very ready and pleasant writer. We have no doubt that he will get up a work which will be worthy of the patronage of the profession.

The North American Review. With the present January number the North American Review commences its sixty-first volume; this being the thirty-first year of its existence. It has consequently long since become identified with the history of the country, having witnessed and survived the rise and fall of a hecatomb of reviews and magazines. During this time it has maintained the even tenor of its way—always able—and has probably done more to give character to American literature abroad than all the other reviews ever published in this country. Indeed we are informed, though we are not certain of its truth—that it has more subscribers abroad than at home. The contents of the number before us, (the October—the January has absconded,) are 'Peter the Great,' 'Military Affairs of the Nation,' 'Mills' System of Logic,' 'Brougham's Lives,' 'Horace Walpole's Letters,' 'Borden's Survey of Massachusetts,' 'British critics,' and 'Lyell's Travels in N. America.'

New York Business Directory. Mr. John Doggett has sent us a prospectus of a work of the above kind, which is to be got up for 1846–1847, and of which 5000 copies are to be printed.

The Teeth. We find on our table a little pamphlet on the subject of Teeth, best modes of treatment, &c., by Dr. A. Gibbs of this city. The subject is an important one, and should be understood by those who have any teeth to preserve.

"The School and School Master, A Manual for the use of Teachers, Employers, Trustees, Inspectors, &c. of Common Schools; In Two Parts. Part I. by Alonzo Potter D. D. of New York; Part II. by George Emerson A. M. *of Massachusetts."* A copy of this celebrated book has been presented us by one of its authors, Mr. Emerson. To say that we are grateful for this work would convey but a faint idea of the pleasure felt in its reception.

The subjects discussed in the first volume are: What is Education: What Education is most needed by the American People; The Importance of Education to the Individual and to Society; School Houses; Manners; Morals; Instruction; Attendance; Female Teachers; Union or High Schools; Organization in Cities; Class Books; Teachers.

The second volume discusses a great variety of topics in connection with practical school teaching. Among them are: Qualities of a Teacher, Mental and Moral; Health, Exercise, Sleep, Diet, Studies; Duties of Teacher; The School, its Organization and Instruction; Reading, Spelling, &c.; and the School House, its Position, Size, Arrangement, Warming, and Ventilation.

The work is one which not only every teacher but every parent should read.

"A Cyclopædia of 6000 *Practical Receipts,* and Collateral Information in the Arts, Manufactures, and Trades, including Medicine, Pharmacy, and Domestic Economy: Designed as a compendious Book of Reference for the Manufacturer, Tradesman, Amateur, and Heads of Families. By Arnold James Cooley, Practical Chemist. Illustrated with Numerous Engravings. New York: D. Appleton & Company, 200 Broadway." The title of this book is the best indication of its contents that can be given. From the survey we have made of its pages we are of opinion that too much is not therein claimed for it. The compilation and arrangement appears to have fallen into competent and careful hands, and a part of the matter is claimed as original by the editor. To artisans of all sorts it must be a book of great value; while to the dairyman and housekeeper it can hardly be less useful.

LIST OF JOURNALS,

Literary, Agricultural, and Scientific, exchanging with the Prairie Farmer.

Name of Journal.	*Price*	*Place of publication.*	*How often published.*
Albion,	$6	New York,	Weekly.
American Quarterly Jour. of Agriculture and Science,	3	Albany, N. Y.	Quarterly.
American Jour. of Science and Art, (Silliman's)	5	New Haven, Conn.	Once in two months.
American Review, (whig)	5	New York,	Monthly.
Blackwood's Magazine,	3	New York,†	Monthly.
Democratic Review,	3	New York,	Monthly.
Eclectic Magazine,	6	New York,	Monthly.
Edinburgh Review,	3	New York,†	Monthly.
European Agriculture,	5	Boston (in 10 parts)	Irregularly.
Farmers' Monthly Library,	5	New York,	Monthly.
Hunt's Merchant's Magaz.	5	New York,	Monthly.
Knickerbocker,	5	New York,	Monthly.
Littell's Living Age,	6	Boston,	Weekly.
London Quarterly Review,	3	New York,†	Weekly.
North American Review,	5	Boston,	Quarterly.
Penny Magazine,	6	New York,‡	Irregularly.
Popular Lectures on Science and Art, (Lardner's)	*	New York,	Irregularly.
Railroad Journal,	5	New York,	Weekly.
Spirit of the Times,	5	New York,	Weekly.
Westminster Review,	3	New York,†	Monthly.

* Published in Parts, at 25 cts. each. † Republished.
‡ In 24 Parts, at 25 cts. each.

These publications are all—each in its particular line—the best of which we have any knowledge, either in the United States or in the old world. Many of them are too well known to require more than the mention of their names. Others, though not as well known, are equally excellent. Samples may be seen at our office; and subscriptions paid us will be cheerfully forwarded.

CHICAGO PRICES.

Corrected, Feb. 19, 1346.

WHOLESALE.

PROVISIONS.		$ cts..	$ cts.
Beef	℔ 100	2 50. @	3 50
do. Mess	℔ bbl	5 50. @	6 00
Pork	℔ 100	3 00. @	3 50
do. Mess	℔ bbl	@	12 00
Lard	℔ ℔	7 @	....
Butter	do	10. @	...12½
Cheese	do	6. @	9
BREAD STUFFS.			
Flour, superfine	℔ bbl	4 00. @	4 50
do. fine	do	3 75. @	4 00
do buckwheat	℔ 100	1 25. @.	
Corn meal	℔ bush	28. @	...32
GRAIN.			
Wheat, winter,	℔ bush	75. @	...77
do. spring,	℔ bush	65. @	...67
Oats	do	20.. @	...23
Corn, shelled	do	28. @	...
SUNDRIES.			
Hides, dried	℔ ℔	@	7
do. green	do	@	3
Feathers	do	31. @	...33
Beans	℔ bush	75. @	...87
Potatoes	do	20. @	...
Onions	do	44. @	...50
Wood	℔ cord	2 25. @	3 50
Eggs	℔ doz	3. @	...10
Flax seed	℔ bush	85. @	...90
Turkeys	each	50. @	...75
Geese		31. @	...37
Chickens		10. @	...12½
Barrels		62½ @	...75

RETAIL.

GRASS AND FIELD SEEDS.			
Timothy	℔ bush	@	1 50
Blue Grass	do		2 00
Red Top	do	@	2 00
Red Clover	℔ ℔	@	.12½
White do	℔ ℔		1 00
SUNDRIES.			
Salt	℔ bbl	1 75. @	.
White Fish	do	@	.6 50
Mackinaw Trout,	do	@	.6 50
Mackerel	½ bbl No. 2	7 00. @	.7 50
Dried Apples	℔ bush	1 75. @	.2 00
Lard Oil	℔ gall	87½ @	.1 00
LUMBER.			
Boards, 1st quality	℔ M	14	@15
do. 2d quality	do	9	@12
Scantling and joist	do	9	@10
Flooring and siding	do	10	@15
Lath	do	@	.2 50
do. board	do	6	@.7 00
Shingles	do	1 75. @	.2 50
Sash—8 by 10	℔ light	2½ @	3
Square timber	℔ ft	6. @	...10

At New York, under date of Feb. 4th, Flour stood at $5 53 a 5 56¼ for Michigan and Genesee. The exports from 1st to 31st January were 69,613 bbls. Wheat is in moderate demand at $1 12½

Of Pork, mess brought $11 62½ a 11 75, and $9 75 a 9 93¾.

At St. Louis under date of Jan. 9, Flour, city mills, was selling at $4 75 a 5. Country, $4 12½ to 4 50.

Lead in pigs was selling at $3 72 a 3 75, and in bars at $4 50. Pork, mess, brought $10 00, and prime, $9 00.

CONTENTS OF THE PRESENT NUMBER.

THE PRAIRIE FARMER,

Devoted to Western Agriculture, Mechanics, and Education. Published monthly at Chicago, Illinois, by John S. Wright, containing 32 very large octavo pages, besides a colored cover with advertisements. Terms, $1 per annum, 6 copies for $5, 13 copies for $10, 40 copies for $30, 70 copies for $50, 103 copies for $70, in advance. All communications must be sent free of postage. John S. Wright and J. Ambrose Wight, Editors. Vol. 6, 1846.

REASONS FOR TAKING IT.

1. It is one of the largest and cheapest agricultural papers published in the United States. Specimen Nos. sent to those requesting them.

2. It is not published for the whole country, but for the especial benefit of western farmers.

3. A large amount of the matter is supplied by correspondents, more than three hundred in number, from all parts of the West; as a body unsurpassed in ability and practical knowledge, by those of any other agricultural paper. 4. It is illustrated with an abundance of well executed engravings; is well printed on good paper; and each number accompanied by a cover to keep it clean.

5. A full and complete Index is sent at the end of the year, making a volume of about 400 pages, invaluable as a work of reference.

6. The information contained either under the head of "Veterinary Department," or "Household Affairs," or "Orchard and Garden," is worth several times the cost of the paper.

7. It contains Chicago Prices Current, with the latest intelligence of New York and other markets.

8. Common Schools are too much neglected in the West, and two or three pages are occupied with disseminating the most important information concerning them.

9. It is permanently established, and as a western paper should receive the undivided support of Western farmers, particularly as

10. It is pronounced by those who have taken it from the commencement, and by the public press generally, the best agricultural paper for western farmers, that is published.

PRAIRIE FARMER.

DEVOTED TO WESTERN AGRICULTURE, MECHANICS, AND EDUCATION.

Vol. VI. CHICAGO, APRIL, 1846. No. 4.

EDITED BY
JOHN S. WRIGHT AND J. AMBROSE WIGHT.
OFFICE, 171 LAKE STREET, CHICAGO, ILL.

COLMAN'S EUROPEAN AGRICULTURE.

Part 5 of this work has just reached us from the publisher. The author, in this number, without any preliminary observations of any sort, proceeds at once to the description of matters in hand, beginning where he left off in the Fourth Part.

After a good-natured hit at the self-esteem of his trans-Atlantic friends, he proceeds to discuss the matter of soils. He advances some views in opposition to the theory so much insisted on by Liebig, viz: "That plants receive a large proportion of their food through their leaves, from the atmosphere;" and instances an analogy which strikes us as very sensible. Animals receive the great part of their nutriment through their mouths instead of their lungs; and as the leaves of plants are their lungs, it is fair to reason that their food is not, to any considerable extent, received through them. It is possible to push an analogy too far, and facts are numerous which look to the support of Liebig's doctrine. But is it not possible that the atmosphere may be the vehicle of nutriment to the roots of plants to such an extent as to reconcile all difficulties?

Upon the subject of the analysis of soils Mr. Colman has some sensible observations, and quotes an eminent chemist [Boussingault] who says in effect that the mechanical analysis of soils is of much more importance to the farmer than the chemical; and that "a simple washing, which shows the relations between the sand and clay tells of itself much more that is important to us than an elaborate chemical analysis." This lets out a truth which we have all along suspected.

It is generally said that lime is necessary to grow wheat; and the common supposition is that where lime is not present in some shape, wheat cannot be grown. Mr. C. quotes Von Thaer, who says that the richest land he ever analyzed was taken from the marshes of the Oder, and contained 19¾ parts in 100 of humus, 70 of clay, a little sand, and an imperceptible quantity of lime. M. Boussingault also says that beautiful crops of wheat are grown in the neighborhood of Lisle, without lime. A large tract of land lying on the left bank of the Volga, celebrated for producing wheat and pasturage, exhibits the following analysis:

"Organic matter,	6 95 (containing 2.45 per cent. of azote.)
Silica,	71.56
Alumina,	11.40
Oxide of iron,	5.62
Lime,	0.80
Magnesia,	1.22
Alkaline chlorides,	1.21
Phosphoric acid,	a trace.
Loss,	1.24"

Mr. Colman entirely dissents from the opinion that chemistry and electricity are destined to solve all the secrets of vegetable and animal life, the opinion of some to the contrary notwithstanding.

The wonderful invention of Liebig, announced sometime since, of manures fitted to all soils and to each crop, is hit off with a little masked raillery by our author. Liebig's direction is to use stable manure in connection with his mineral ones, because temperature, want of rain, &c. may oppose the bringing of the mineral fertilizers into action. The use of the stable manure is considered by Mr. C. very safe advice. On the whole, this discovery or invention of Liebig is considered no very great affair.

Variety of Soils. Under this head Mr. Colman has some remarks which we extract:

"For all practical purposes, soils may be ranked under five different heads—sandy, clayey, calcareous, peaty, and loamy. I purposely avoid all scientific distinctions, and use such terms as even the commonest farmer will understand. A sandy soil is that in which sand abounds; clayey, in which clay; calcareous, in which lime in some form prevails; peaty, in which peat; loamy, in which a rich loam abounds. These soils are sometimes found so combined, that it might be difficult to designate their character by any one of these general terms. In some places they are found in almost a pure state. In general, where there is found in a soil 80 per cent. of sand, it must be pronounced a sandy soil; and so the clay, the peat, or the lime; but it is not always easy to class a soil which is of a mixed character, and say what kind of element predominates. By sight and feeling, however, practical men are able to form an opinion of a soil upon which it may be safe to act. Besides the principal elements, to which I have referred, there is often found some mineral ingredient which may seriously affect the character of the soil, and the degree of the presence of which can only be determined by scientific examination. Iron, copper, or mineral coal, is in general sufficiently indicated to the eye, or shows itself in the water which percolates the soil. The different forms, too, in which lime presents itself in the soil, whether as chalk, or gypsum, or magnesian limestone, are all to be considered in determining the character of a soil."

"*Wetness of a Soil.* Wet soils, or soils a considerable part of the time under water, produce a coarse herbage of little value to stock—in many cases scarcely sufficient to support life, and rendering scarcely any nourishment. The manure of animals fed upon the produce of such soils is comparatively worthless. It has been found, likewise, by repeated experiments, that water allowed to remain upon land for any length of time is injurious to vegetation, when the rapid transition of water over the land might be highly beneficial."

"Moisture and wetness are to be carefully distinguished. A soil consisting almost wholly of sand possesses no retentive powers; and though of all other soils the most absorbent, yet the water passes through it as through a sieve. Clay, on the other hand, is extremely retentive of water, often to the prejudice of the vegetation which grows upon it."

WORKING OXEN.

BY A. CHURCHILL.

Messrs. Editors: I wish to draw the attention of farmers to the subject of improving *working oxen*. We certainly raise some fine steers, but can exhibit but *few working oxen*. The reason I conceive to be this: farmers do not appreciate the difference in their value. It is well known that some oxen will perform nearly as much labor as horses, while others fall far behind them. The difference in amount of labor should form a great item in their value.

If one yoke of oxen can plough but one acre in a day while another can two, it would seem that the oxen which could do double work should be worth double price, and why not? It saves half in men's labor, half in feed, half in tools, besides the extra pleasure of working with a good team, which is no small item.

Let us try the subject by figures. Say we give eighty dollars for a yoke of oxen six years old, which can plough two acres per day, $80 00
And hire a hand six months to drive them, at $11 per month, 66 00
They plough or perform other labor to the amount of 130 days, at $1 per day, 130 00
Deduct for use of tools, 15 00

One yoke at forty,		$40 00
Hire of hand		66 00
Labor performed,		65 00
Tools,		1 000
We have earned with the $80 oxen,		$130 000
Deduct extra cost of oxen,	$40 00	
Hand to drive,	66 00	
Tools,	25 00 —	121 00
Leaving in favor of good oxen,		$ 9 06
Then one yoke at $40, which perform labor with hired hand to the amount of		$65 00
Deduct hire of hand,	$66 00	
Tools,	10 00 —	76 00
		65 00
Leaving the cheap oxen in debt,		$11 00

It appears, then, that we gain more than the extra price of the good oxen in one year, and the oxen are good for from four to six years more, saving about fifty dollars each year, or in five years two hundred and fifty, while we lose by the poor oxen eleven dollars, and to perform the same amount of labor with another equally poor yoke, we lose by the amount of keep, hire of hand, board, and tools, say $100 00
Making one hundred and eleven, which for five years would be 555 00
Add the $250 gained by good oxen, 250 00
Making the difference in the value of two such yoke of oxen of EIGHT HUNDRED AND FIFTY DOLLARS.

If farmers would consult their true interest, they would ask and give something like the true value of oxen for their working qualities, and graduate the price down to what they are worth to fatten. By taking this course the best steers would be tried for work—if found good, kept—if not, sold for beef.

Many of the best steers are spoiled while young, by over-work. This happens frequently by working them with old oxen, which know how to shirk, leaving the steers to perform more than their share.

Cattle should never be loaded to their full strength till six years old, nor horses till eight—then horses will be good to twenty-five, and oxen to fourteen.

Avon, Kane co., March, 1846.

SUNDRY COMMENTS.

BY THOS. AFFLECK.

Messrs. Editors: I have received the October and December numbers of the Prairie Farmer this *morning*—the first I have seen since the change of name from that of Union Agriculturist. I have just arisen from their perusal, regretting that they do not contain the promised 32 pages each. See to it that you send them regularly, or you may expect a blowing up for each dilatory number. You may expect to be largely borrowed from, for the columns of the *Times*, with the view of affording our readers in the prairies of Texas reading matter of interest to them.

Permit me to contribute my mite of information, in return for the pleasure afforded me.

October number. Almost any active intelligent little dog can be taught to drive sheep—so that they are also gentle tempered, is all that is necessary. These qualities are admirably combined in the Scotch colley; but no one need be without a good sheep dog who will take the pains to teach an intelligent cur, many of whom can be as readily taught to manage sheep as the true sheep dog.

Corn after turnips. I suspect you will find that where wheat has been grown after turnips, in a regular rotation, the turnips were manured in the drill, and fed off *on the ground* to sheep—an excellent preparation for wheat.

Oats. I am inclined to think that our invaluable Egyptian (winter) oats would do well in the southern half of Illinois and Missouri. We sow them in September, or even August, and have a better pasture all winter than from rye, and a noble crop of oats next season—weighing, it is stated by those who have tried them—which I have not, though I do not *think them* over-rated—40 lbs. per bushel. They are white, large, and plump—as much so, on comparison, as the imported Imperial oats I brought with me this fall from New York. They were brought direct from Egypt to this neighborhood a number of years ago, and have been grown, though not extensively, ever since. I am now sowing 50 bushels—late; but better late than never, you know. Circumstances prevented their *being put in sooner*; and though I have missed the pasturage, I shall have quite as heavy a yield of grain.

I perceive you figure the trenching plow that was exhibited at Utica this fall. The principle is a good one, but must be better carried out. It certainly is not original in this instance. The first plow must be such as Ruggles & Co.'s *Sward C.* (the best sod plow I ever saw) and the second like their capital one horse tending plow, No. 15. Being both on one beam, the hindmost one holds the sod plow to its work whilst turning a thin sod. Trench plowing would resuscitate most of your partially worn lands for a time. Your remarks on the subject *I have proven correct.*

Cisterns. I use rain water altogether, from two circular cisterns, each, I think, 18 feet in diameter and 15 in depth, altogether under ground, and formed of a solid wall of water cement, arched at top with brick, and costing nearly $100 each. These keep me fully supplied—cooking, washing, bath-house, garden, stock much of the time, &c.—and my family is not a small one. We find here that *three fourths of whatever sickness* may exist on a plantation whilst springs or wells are used, disappears when cisterns are formed, and rain water alone used. On one of ours there were nearly as many grown negroes buried in 7 or 8 years as now belong to the place; and *not one* has died within the last 5 years, during which time rain water alone has been used. There are abundance of as clear and beautiful cold springs on the place as I ever saw in any country. I have suffered my full share of sickness in your Indiana and Illinois *prairie country*, and feel authorized to state that the formation of large cisterns and the exclusive use of rain water would *very greatly* lessen the sickness all through that country. *Filtration* is perfectly unnecessary, if reasonable care is used in filling the cisterns.

Delinquent subscribers to such a paper as the Prairie Farmer! *Publish* 'em by all means.

December number. So, my old friend and neighbor, Mr. Curtis, of Edgar county, is still pushing ahead with his nursery. He deserves success, and will, and I have no doubt has, attained it. I suspect he has done more towards stocking Illinois, Indiana, Missouri, Iowa, and Wisconsin with fine fruit than any other man or half dozen men.

Hedging. Mr. McDonald is mistaken in supposing that the Cherokee or non-d script rose will stand the winters of Illinois. It might possibly *exist* in the extreme southern portion—it does but little more in the latitude of Nashville. If tried at all it had best be from seed, of which it produces an abundance, and which can be forwarded to you, or rooted plants either, if you desire it, and will give me the address of an agent in St. Louis to whom they could be sent. The Osage orange may do better. Here it quickly becomes a large tree. Wm. Huff Esq. of Cincinnati writes me recently—and he has more experience in the matter than any other of my acquaintance—"The more experience I have, the more I am satisfied that there is no plant that will compare with the Osage orange (*Maclura*) for live fences." You would do well to communicate with him on the subject—the more so as he has (or *had*) a large farm in Edgar county, Ill.

But why not resort to the native varieties of the hawthorn? There is one, common all through Illinois, growing in sheltered creek bottoms, that does admirably; it has numerous long and strong sharp thorns, and bears the shears, an indispensable quality in a hedging plant. The leaf of this variety is oval, almost like that of the crab apple, though smaller. By the way, there is no better hedging plant than this same crab apple. It was stated some time ago, if I mistake not in Hovey's Magazine of Horticulture, that the prairie rose, from which Feast has produced so many beautiful hybrids, forms as good hedges in the latitude of Illinois as the Cherokee does with us—or something to this effect. Sufficient encouragement was held out to induce any one desirous of hedging, to give it a full trial. Before half a dozen years roll round, all of this country will be fenced in with the Cherokee rose. It forms an absolutely impassable barrier to man or beast.

Although all my life aware that *pisé buildings*—buildings of *dry* loam rammed hard between movable walls of two-inch plank—were equal, if not superior, to those of well-burnt brick; and that even in our own country pisé houses are standing, entirely uninjured, after 30 to 50 years' exposure to the weather; yet I have never tried them, nor seen any built until very recently. An extensive planter in this county has just finished a very large negro-quarter of pisé, forming a neat village of as substantial and comfortable buildings as I ever saw. They are *much better* than buildings of unburnt brick, besides being more quickly and easily built. Those I have mentioned were put up entirely by common field negroes. All the timber used is in the roof, doors, and windows, and door and window frames. The floor may be also of plank. The chimney should be of good brick; but a brick foundation is perfectly unnecessary. I shall shortly publish a long article in the Commercial Times, descriptive of the process. However, as it is no new discovery, you may already have laid the subject before your readers in the back volumes. If you have not, you should do so. You will find it treated of, at length, in many European agricultural works, and in the early volumes of the American Farmer and Southern Agriculturist.

Ingleside, Adams co. Miss. Jan. 1846.

BUCKWHEAT. FRUIT.

BY E. H. STARKWEATHER.

Messrs. Editors: Some ten years since there was coming into notice in the north part of the State of Vermont, where I then resided, a very superior kind of buckwheat, there called Indian buckwheat. As I was not *then so much engaged in agriculture* as I am now, I did not interest myself sufficiently about it to be able to tell from whence the seed was obtained, or how it derived its name. I think, however, it was procured in Canada. Its superiority to the ordinary kind was manifest in two particulars, to wit: In a more abundant yield, and affording superior flour. It was sown earlier, as it required a longer time to mature than the ordinary kind.

I left that country in 1837, and have seen *none* of that variety since, although I have made diligent search in this region. We sow considerable buckwheat here, but it is an uncertain crop: the heat of the sun frequently blights a portion of the blossoms, so they do not fill. In looking over the New Genesee Farmer for 1840, I find it there asserted that this Indian buckwheat "is not injured by the heat of summer, like the other kind." If this be so, it is the very thing we much want.

Has this kind found its way into Illinois? and if so, what success has attended its cultivation? and where can the seed be obtained? are questions which I hope you Messrs. Editors or some of your correspondents will be able to answer.

I rejoice to see from every quarter favorable indications relative to fruit culture. We are not entirely inactive in this region, and indeed we should

be unpardonable if we were; for in my opinion, *taking all things into account*, we have as good a country for fruit, as well as many other things, as lies "beneath the circuit of the sun." Several among us are endeavoring to introduce improved varieties of fruit; at the head of whom is my old friend, Thomas C. Ferris, who is as it were compassing sea and land to effect this desirable object.

Mr. Harkness is requested to explain how he protects grape vines from frost by trees. Does the vine ascend the tree? or is it in some other way? What was the name of the grape forwarded by Mr. Harkness to the editors of the Prairie Farmer which proved *so acceptable*? I have sought for it in the letter of Mr. H. to the editors, and also in their acknowledgment of the receipt of the fruit, and can find the name in neither.

Cumberland co. Feb. 1846.

SPRING WHEAT.

MESSRS. EDITORS: In the fall of 1844, in the month of November, I plowed 20 acres of winter wheat stubble. The preceding crop had a good share of chess, and I had in view the destruction of that by late fall plowing; and I succeeded in doing it, with the exception of a little on the ridges, between the dead furrows. On the 27th and 28th of March following, I sowed 28 bushels of spring wheat—perfectly clean seed, soaked in brine and rolled in ashes. I finished dragging about one third of it on the 28th, and the remainder had been dragged but once. At night and a part of the day following we had a heavy rain. When the ground was dry enough, I again commenced cross-dragging; but finding the wheat considerably sprouted, and all covered, I stopped dragging. In the course of the season I saw no difference in the appearance; but the time of harvest told it. There was smut in abundance on all of it, but decidedly the most on that dragged but once and that dragged after sprouting. Will some of your correspondents point out my error in the management?

Elgin, Feb. 1846. YOUNG FARMER.

It strikes us as an error to sow spring wheat on winter wheat stubble. We once did the same thing, and harvested smut in abundance. It is a rule in good husbandry not to follow one wheat crop with another.

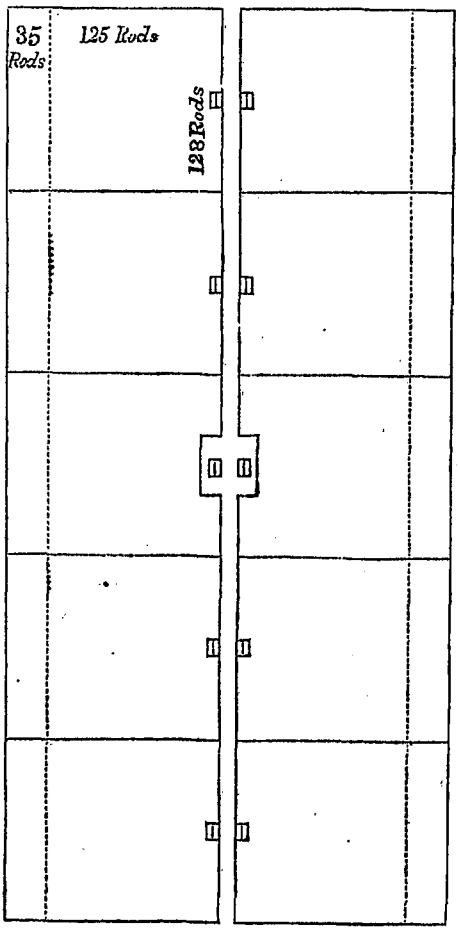
LOCUST TIMBER.

BY A. STEVENS.

MESSRS. EDITORS: In a late number of the Prairie Farmer I was pleased with the calculations and remarks of your Tazewell county correspondent on "Growing Locust Timber." As the non-enclusure project seems to have been abandoned, (and I think with great propriety,) it certainly is important for us to cast about for the best materials necessary to extend our present farms, and to bring into useful requisition the vast and fertile prairies which are destined yet to add immensely to the agricultural wealth of this State. Shall "sod fence" be that material? It may be when gopher hills will stand at a much steeper angle than 45 degrees. Shall it be "hedge?" Aye; when you have found the thorn adapted to our soil and climate, and have experimented with it and cultivated and nursed it for fifteen or twenty years.

But of the locust enough is already known to prove its cultivation practicable, its growth rapid, and its value certain. Your correspondent shows all this; and the small but beautiful locust groves to be seen in Peoria and Adams counties, reared within the last ten years, present conclusive evidence that that writer's calculations are not mere speculations. All will admit that something ought to be done to increase the amount of fencing timber in Illinois. No forest timber seems so well adapted to our soil and climate as the black locust; and the sooner we begin in earnest to cultivate it, the better.

Allow me, at the hazard of being considered visionary, to present you the plan of a small prairie colony, with an estimate of the value of 280 acres of locust trees in twelve years from planting the seed. And as I think your correspondent has set his trees too far apart to secure for them a long smooth body, I shall assume six feet apart as the most profitable distance for them to stand when young. Should they need thinning out as they increase in size, there will be no waste, as they can be used for fuel. The following cut represents the plan of the settlement, embracing two sections, or



1280 acres. Suppose they are divided by a road 4 rods wide passing through the centre lengthwise, and laid off into ten equal lots of 128 acres each, five lots on each side of the road, with a reservation of ten acres in the centre, for a school house, church,

&c. The first thing to be done after entering the land would be to break up say 140 acres on each side of the section, and plant it with locust seed—thus giving to each farm or lot 28 acres of woodland. These farms, though small, are as large as one half the farms in New England, where most of your readers know true happiness may be found—and where the farmers are more ambitious to have *good crops* than extensive fields. 28 acres of timber land for each farm will be amply sufficient for its support, and leave a large surplus to enclose the prairie not embraced in the colony settlement. This may be shown by the following estimate of the amount and value of 280 acres of timber in twelve years.

Planted six feet apart each way there would be 1225 trees to the acre, or 34,300 on 28 acres. In twelve years they would be large enough to quarter, and allowing but one cut to a tree we shall have on 28 acres, 137,200 rails. On 280 acres we have the incredible number of 1,372,000. These would be sufficient to fence each of the ten farms of the colony into fields of 32 acres and leave 1,254,240 rails to be sold or left standing for fuel, or to enclose farms on the adjacent prairie. Indeed the surplus would fence more than 160 farms into fields of 32 acres each. But allowing only one tree in ten to attain the proper size to quarter, you still have enough to fence two sections as before, and have more than 19,000 rails left.

Some however may say the expense of this project will overbalance the profits. Let us see. If you have half the estimated number of rails on 280 acres, there will be 686,000; worth say $1 50 per 100 in the tree, - - - - - $10,290 00

Cost of 1280 acres prairie, at 1 25,	$1,600	
Breaking 280 acres, 1 50	420	
Locust seed, - - - - -	15	
Laying off and planting, -	125	
Cultivation for two years $2 per acre,	560	
Interest on $2,720 for 12 years,	1,958	$4,678 00
Clear profit,		$5,612 00

This estimate, I candidly believe, may and will be more than realized by those who shall undertake and with patient perseverance pursue this project. There may be unforeseen expenses attending it, and there are also advantages not specified above, to meet such expense. A crop or two of corn can be raised the first two years between the rows of locust trees, to say nothing of the greatly enhanced value of the prairie all around.

These views will doubtless be considered as mere fancy sketches; but there *might* thus be established a delightful little colony, with all the social, literary, and religious privileges of a village. There the desert *might* blossom as a rose, and the fruitful soil be made to present convincing testimony that the broad prairies of Illinois were not made in vain.

Albany, Ill. Feb. 1846.

SPAYING—IN THE SIDE.

BY B. C. HORD.

Messrs. Editors: Your article on spaying heifers pleases me exactly, as about two thirds of the beef we buy in market in the summer and fall is that of full-grown cows which have proven worthless milkers. Now if you can induce the farmers to spay them, it will add greatly to the quantity and quality of the beef.

I spay all my heifers that do not have the appearance of making good milkers. But I cannot recommend your plan of spaying in the side. I hang mine up and spay in the belly; and they have all done well. I last fall spayed three or four spring calves, and among the rest one that had been on rich pasture all day, on which the operation was very difficult. I bursted both the ovaries in getting them out, and supposing the case a desperate one, I cut off the whole end of the uterus—horns, ovaries and all; and to my surprise the next evening it was apparently well, and as playful as a kitten.

I have learned to my cost that spaying any thing in the side is not the best plan. I last spring had a pen of very handsome shoats to spay, and a neighbor of mine persuaded me to let him spay them in the side, it was "so much safer." I consented, and he did the job so neatly that you would have thought him a "regular built" surgeon—but the pigs all died; and I had the satisfaction to know that he afterwards spayed his own in the belly, and they all lived.

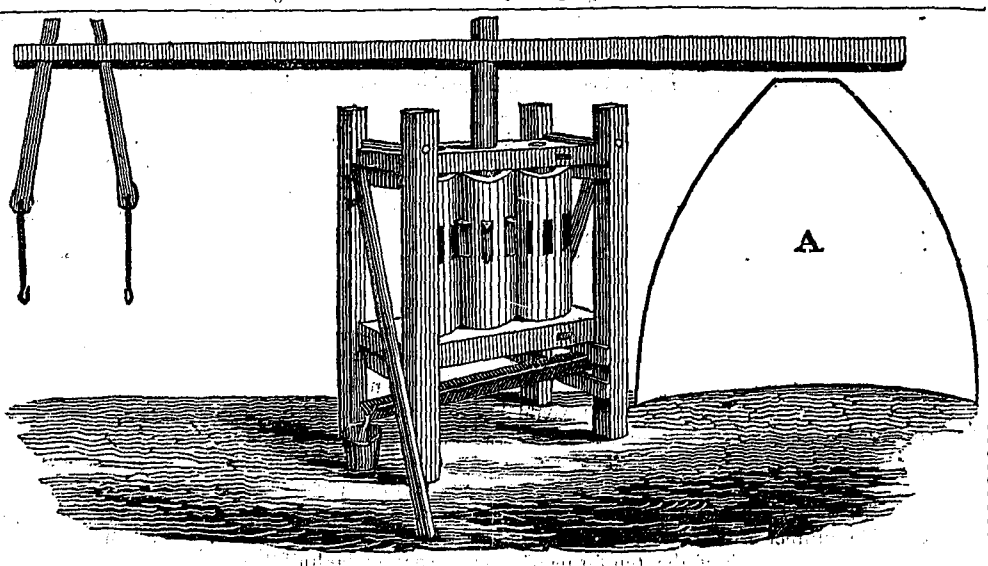
The great error in spaying generally is that the wound is sewed up a little too closely. Leave room for the blood and matter to escape, (which it will do much more readily through the belly than through the side,) and there is little danger, if the operator has sufficient skill to cut up a hog or a beef decently.

Monmouth, Feb. 1846.

CORN STALK SUGAR.

BY JOHN BEAL.

Messrs. Editors: The interest you have sometimes expressed in my experiments in making sugar from the juice of corn stalks has induced me to send you a sample of the sugar made the past season. You will probably have perceived in the December number of the Albany Cultivator that 688 lbs. of chrystalizable syrup was made from an acre of ground. You will also perceive by a communication from me in the January number of the same paper that I regard the growth and manufacture of this article as simple, easy, and attainable by any farmer. And I believe it is quite as profitable as any thing else cultivated, as I have endeavored to show in a communication to the Commissioner of Patents, which will appear in the appendix to his next Report. I am also enabled through the kindness of Mr. Josiah Warner of this place, to furnish you with a plate for printing, representing a drawing of the mill made use of by me for pressing the stalks. It is after the manner of a method invented and patented by him for stereotyping or taking fac similes of original drawings, engravings, &c. It at once affords an illustration of the machine and a specimen of the art. This mill is amply described at page 148 of the Report of the Commissioner of Patents for 1843. For any description you may wish to give of it, or the processes, I must refer you to that Report. The full size and shape of the cogs, as they stand out from the roller, is given in the drawing, A; the distance between them is the same as the thickness thereof. The mortice holes in the side rollers have perpendicular sides. The



main posts, which are planted firmly in the ground, are a sufficient distance apart to admit of the rollers and the frame work that supports and confines them to stand altogether within them; this gives room for the trough underneath, which catches the whole of the juice; the edge of this trough can be seen as it rests on a block underneath, with the juice running out at the end into a bucket. Every thing else will be found sufficiently explained in the Report above referred to.

I am well satisfied with the result of these experiments except the drainage. The crystalization I think you will admit is good. Shortly after it is made, and by the time it is grained, the cold weather sets in, and it becomes one adhesive, gummy mass, and it is very difficult to get the molasses separated from the sugar. I intend to try a different method another year, by putting it into tapering vessels having false bottoms pierced with small holes, and holding not more than 6 or 7 gallons. Some that was treated in this way the past season, did exceedingly well.

New Harmony, Ia. Jan. 1846.

TAN BARK A DISINFECTING AGENT.

BY JOHN BEAL.

MESSRS. EDITORS: I suppose in your rich prairie soil the subject of manures has as yet received but little attention; indeed in the whole of the great West there seems to be a general apathy on this subject, and every one seems to think that the virgin fertility of the soil will continue forever, until the diminution of his crops convinces him to the contrary: at least, such is the case here, with but few exceptions. And I suppose there are exceptions every where. For the benefit of those who form those exceptions, I will communicate a discovery that I deem of some importance in this matter; and to all who are desirous that their out-houses, stables, &c. should be divested of unpleasant odors, it is a matter of importance. I have found that by mixing night soil with one half or two thirds of spent tan bark, in three or four weeks it loses its unpleasant odor and the bark is brought somewhat into the condition of rotten wood—with, I should suppose, the whole of the ammonia and other salts absorbed, to be given out for the future use of plants.

Now let every one apply it as he thinks proper. Keep a pile of tan bark near your necessary, and throw in a shovel full pretty frequently, and you will find your visits less unpleasant than usual; and if you should at any time find it necessary or useful to clean it out, you will find that operation much less offensive.

Cover all your stable and hog-pen floors two or three inches thick; and if they are earth floors you will find they will not tramp into mud holes. Throw the whole out occasionally and renew it, and you will find them less disagreeable, your dung pile increased, and what is of more value, all the ammonia preserved as future food for plants.

New Harmony, Ia. Jan. 1846.

The use of charcoal for the purpose above indicated we can recommend from trial. There is no reason why an out-house should be any more offensive to the olfactories than a parlor.—ED.

OHIO AND ILLINOIS.

BY C. D. FOX.

MESSRS. EDITORS: Ohio seems hardly to be within hailing distance of Illinois; yet I trust that the necessity of the case will be considered a sufficient apology for thus troubling you with an introduction to the farming community of your State. Two years ago I resolved to make that my future residence; and concluding that although a man may be somewhat acquainted with the common method of farming in northern Ohio, and yet wholly ignorant of the proper course to be pursued in prairie farming; and furthermore, as I was unwilling and *unable* to throw away my first two or three years' labor in experiments, when *practical knowledge*, based upon the experience of practical men, could be obtained at a trifling expense, I resolved forthwith to devote a portion of my leisure hours to that object, and accordingly became a subscriber to your paper—the value of which, permit me to say, exceeds my most sanguine expectations. By the way, it seems to me that the most effectual means

for western emigrants, from the eastern or southern States, to become acquainted with the new system of agriculture of the West, and thereby sail clear of the score of mistakes and hair-breadth escapes of a once Timothy but now Mr. Hardup, is to secure the reading of an agricultural journal of the character of the Prairie Farmer.

I made a short tour through the northern part of Illinois and the southern portion of Wisconsin, and I must say that on the whole I was very happily disappointed. Although there are immense tracts of land of an inferior quality, yet there is more of a *superior* quality, more good farms, good farmers, more enterprise, more flourishing cities and villages —in short, more prosperity, than we could reasonably expect.

But with all your superior advantages of a healthy climate, a rich soil easily tilled, permanent market, and rare facilities for constructing thoroughfares; with a community who are bound to be second to none for industry and enterprise, and a state of society which no doubt will ere long be classed with "the land of steady habits" for intelligence and morality, you have some serious disadvantages which are not easily surmounted. The subject of fencing—particularly to a person who, like myself, was raised in a country where timber was an incumbrance, where we were under the necessity of chopping, slashing, smashing, logging, burning, girdling, and destroying by every possible means—is sufficient of itself to be seriously considered.

On this subject I have bestowed much thought since my return, and the result is, *a plan* for constructing a good permanent fence out of your bush-topped scrub oaks, (some of which are in fact higher in the air when chopped down than when standing,) without either hammer, nails, or boards, with the exception of about ten feet of lumber to the rod. But as I have no desire to make a cat's-paw of any man's hand, I shall wait and see how the plan will *work*, before I publish it.

I will close by stating that the winter here has been as favorable as we could ask, though uniformly cold. Perry, Lake co. Ohio, Feb. 1846.

THE COLOR OF HORSES.

BY H. COLE.

Messrs. Editors: There is no one fact that mankind are more ignorant of than this—that the color of a horse is a sure indication of his character. In this article I shall attempt to give a few rules by which a man of common observation can tell the disposition of a horse as soon as he sees him. The first thing to be observed is, the *color* of the animal; the second is the phrenological developements. If his color is a light sorrel, or a chesnut sorrel, his feet, legs, and face white, these are marks of kindness. Then if he is broad and *full* between the eyes, I will warrant him to be a horse of good sense and easily trained to any thing. Such horses will have good treatment; the kinder you treat them the better they will treat you in return. A horse of the above description will never stand the whip if he is well fed.

One thing to be always observed in buying a horse, if you want a gentle one, is, to get one with more or less white about him—the more the better. A spotted one is preferable. We see many horses of this color employed in circuses. Some have supposed that this color was sought for by the owners of these establishments because of its oddity; this is not so; it is because horses of this description are the easiest trained to perform the difficult feats that we see them go through at such places.

Again, if you want a safe horse, avoid one that is dish-faced; he may be gentle—that is, he may not scare—but he will have too much of the go-ahead in him to be safe for every body.

If you want a perfect fool, but a horse of great bottom, get a deep bay, with not a white hair about him; if his face is a little dished, so much the worse. Boys, nor men that have not got good use of themselves, should never have any thing to do with a horse of this kind; they are always tricky and unsafe.

I have been deprived of the use of my limbs for 27 years; in this time I have traveled over a large portion of the western country by land, in my one-horse buggy. In using the kind of horses that I have first described, I have never met with an accident of any kind; I have invariably found them kind and gentle to manage. But in using the deep bays, I have suffered enough by their treachery to kill forty men.

I have written this, Messrs. Editors, for the benefit of those that may be in the same situation with myself, and dependent on the horse for conveyance. A kind and gentle horse, to any such person, is, I might say, every thing.

Millville, Iowa, Feb. 1846.

DISEASE AMONG SHEEP.

BY J. RODY.

Messrs. Editors: I am trying the experiment of keeping sheep in Boone county. My flock consists of about 500; 400 of which are wethers of all ages, and 100 ewes—the most of which are very valuable Merinos, selected from a very large number, as the foundation of my future flock. After a journey of twenty days of careful driving, and being well fed on the route, they reached here the 23d of November, showing no other evidence of their journey than being dusty. They were turned into a a field where was a piece of early sown rye, and some wheat. Here they remained ten or twelve days. They were then taken up and confined to their fold, a piece of between one and two acres of clean dry land, descending to the edge of a swale and a corner of the fence run off so as to take in a little stream formed from a spring a few rods off. Here at first they were not so well sheltered as I could have wished. Stacks, fences, and sheds furnished protection from the winds, though not from two very severe rain storms; these, however, were warm while they continued, and cleared off mild. They were well fed with hay and straw, and half a gill of corn each, per day, with salt, sulphur, and ashes always by them; and were soon supplied with ample and warm sheds. Soon after this, say about the last of December, one, two, three, one after another (all ewes) were taken sick and died. One we examined after death, but could not discover the cause. Soon four more ewes were taken in the same manner, and died. To-day I was called to see another. I found a fine, large, yearling ewe, standing and chewing her cud in a perfectly quies-

cent state. I could not discover any evidence of disease, but a kind of stupor. Her eyes appeared natural; she did not show any signs of pain, or disposition to lie down. I cut off one ear—it bled freely and of good color. Gave her a little gruel; soon after about two table spoonfuls of melted lard, with a little spirits turpentine. Saw her again in the afternoon; no change except a little more stupefied, and she had ceased to ruminate. I then discovered that her bowels were free. At evening found her *blind*—no other change. Attempted to bleed her—could not succeed, not knowing how. Put some spirits turpentine on *the top of* her head; this seemed to cause pain; she moved her head in various ways, and walked; tried to rub her head, but seemingly as if only in part conscious of what she wished to do, or of the manner of doing it. Also gave her a little raw salt pork. At about seven o'clock she seemed crazy—running and staggering about, senseless. 9 o'clock; she is quietly eating hay, and so I will leave her for the night. This was last Friday, the 20th of February.

24th. She has been slowly recovering; her eyesight has returned, and I think she will recover.

I have another in the hospital—a very strong, hearty ewe—dropt her lamb prematurely, and the third day afterward showed symptoms of illness. She and most of the others have seemed to be troubled in the region of the kidneys and their connections. I gave this some saltpetre, (nitre,) a teaspoonful, and some rosin, in some gruel; they have afforded her some relief, but she is not well.

Can you or will any one else enlighten us in this matter—as to the cause and the remedy? I do not find any disease described, the symptoms of which correspond with these cases. The "American Shepherd" by Morrell, describes one with some corresponding symptoms, but suggests no remedy except the very moral one of getting them on to some one else's hands. But as this is not always convenient, and might perplex a conscientious man, I would prefer to know what that man ought to do after he had got a parcel of sick sheep on his hands.

Can the disease be accounted for on the supposition that the ewes have received some injury in their delicate situation? Can it be caused by the operation of sulphur while in that peculiar situation? I am entirely at loss, for most of the lambs which have been dropt are strong and hearty, as well as their respective mamas.

The two continue about the same; occasionally they will eat and move—then they become stupid. There is this difference in the two cases: one never seems to lie down; the other does—flat on her belly, her head and neck stretched out and resting on the under jaw.

The only apparent symptom is *stupor*.

I have since writing the above learned that a sheep may be bled, as is sometimes a horse, by running a slender knife blade through the upper part of the nostrils.

If any one is in doubt as to sheep requiring water, let him look at mine, and see with what avidity those rush to it when let out, who have it not constantly by them.

Boon county, Feb. 1846.

ORCHARD AND GARDEN.

THE GARDEN.

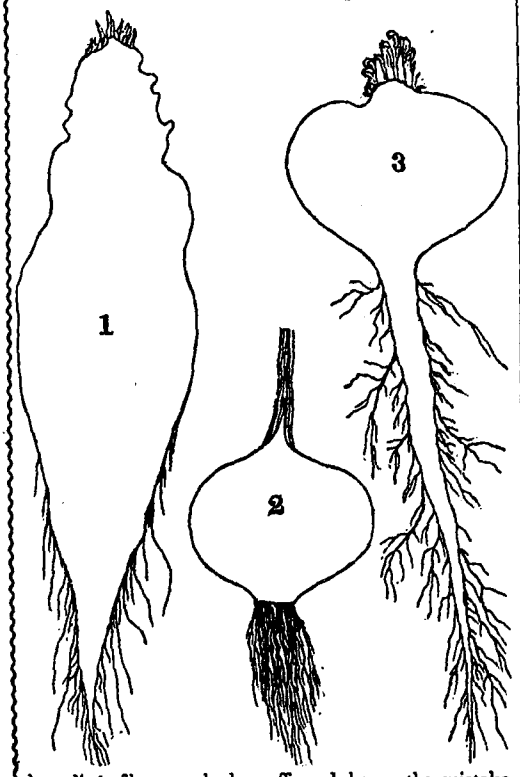
"And thou hast long, long sunny days;
Smiles sweeter than thy frowns are stern."

So sung the first of American poets, of this beautiful March weather, the time when birds begin to sing, and buds to swell, and grass to grow green.

One of the first uses which every householder will be called on to make of it, will be, to put his garden in shape for production; and after the frost is fairly out of the earth and the ground reasonably dry, he can hardly be too soon in beginning. If however his soil be clay or a stiff loam, let him be careful of putting in the plow too soon, otherwise he may find his garden turned into brick, which he will in vain endeavor to pulverize during the season.

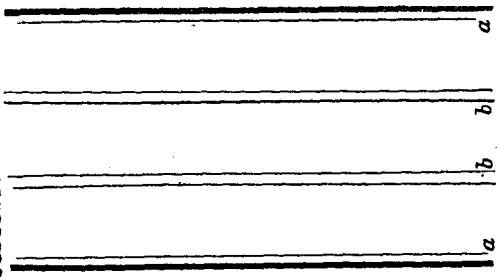
The mention of the plow however brings us to the consideration of the subject of plowing a garden; and this brings us to another with which it stands intimately connected, viz: the shape and style in which a garden is to be laid out. Our present mode of gardening, so far as it is reduced to system, has been derived from our English neighbors, with whom the very mention of a plow in a garden is the rankest heresy. The only implement used by them for deep stirring is the spade. Consequent on this practice, wherever it prevails, and where it does not but where the idea of it governs, gardens are laid out into squares and other figures, with whose outlines the plow would play rank Vandalism. Shall we continue this mode merely because we have begun it, or because in a country where labor is cheap and land dear, it is practical? We do not hesitate to say No. The great majority of farmers have neither time nor inclination to spade up a large garden; nor is there in our opinion any sense in it whatever. Those who follow gardening for a business, or as amateurs, can use the spade to their hearts' content. The farmer must adopt a more summary mode of despatching his work. Still it must not be supposed that plowing as ordinarily done will answer the purpose of the spade. The advantages of the latter implement are, 1st, that it can be used without injury to such plants and shrubs as must not be disturbed; 2d, that it pulverizes the earth deeply; and 3d, that it accomplishes this thoroughly. To secure the first of these objects the ground must be properly laid out; and to secure the two latter, the plowing must be repeated, and the implement put down to its fullest depth. A great many people plow as if they were afraid of breaking through the earth and disturbing the Chinese. This kind of carefulness will not do in a garden. The earth can be pulverized with a plow to one foot in depth, and nothing less should be accepted. There is not perhaps a vegetable grown in a garden but that requires deep pulverization. Many people have never taken the trouble to think but that the ball called a turnip or an onion is the whole root of the plant; and suppose the same thing true of what is called a beet, carrot, or parsnip. This is no where near the truth. The turnip, for instance, is only a ball or reservoir of feculent matter, laid up for future use, and is itself fed by little fibrous roots running from its tap root in all directions. These roots stray off to great distances, hunting about through the soil for their food. The

same is true of a beet, or carrot, or any similar plant, as will readily be seen from the cut. In pulling up the root



these little fibres are broken off, and hence the mistake. If the soil is pulverized deeply, the air penetrates deeply, gases are evolved, and food in abundance is supplied: but if a shallow culture only is made use of, these little roots are confined near the surface and little food is supplied to them, and they are continually liable to be dried up by the sun.

The laying out of a garden which is to be plowed is a very simple process, and by no means involves any considerable sacrifice of taste. We will suppose it to be something after the following form. The length is here twice



the breadth. There may be left a border on each side, next the fence, for asparagus, pie-plant, or other roots of the like useful sort, which will not bear disturbing, as at *a a*. Permanent alleys also, as at *b b*, may be left, with their appropriate borders; and as many walks yearly constructed from one to the other as are needed. This arrangement will allow the borders to be untouched by the plow, and if trees or shrubs are desired they may be so placed as to secure the same impunity. Should it be desirable to introduce the cultivator in weeding, the gardener has only to sow his lettuce, beets, tomatoes, onions, and every thing else, in rows, instead of putting them into beds, and there is a fair field for the work; and it yet remains to be shown that a beet will not grow as well in a long row as a short one. We believe a little revolution of people's ideas in this matter would save a great deal of trouble, and induce hundreds to cultivate good gardens, who now deem it so intricate and vexatious a business, that they will not meddle with it.

The first business in the garden is to gather off all old vines, sticks, cabbage stumps, and every thing else that may harbor insects, and burn them. These substances some of them may serve the purposes of manure, but are not fit for the garden unless thrown into a pile and fermented. The manure for the garden should be well decayed, so as to be easily incorporated with the earth. Green manure has no business here; it contains numberless seeds—often insects, and is wholly unfit for the use of the garden. Manure, to be of much use to a plant, requires to be thoroughly incorporated with the earth, so as easily to be solved by the water to be taken up by the fibrous roots. Thrown in shovelsful together about plants it is of very little use to them. We have tried this to our satisfaction. It ferments often, is easily dried, and but a small portion of it is found by the roots.

It is not worth while to be sparing of manure in a garden. The best of our soils will bear it abundantly; but some discretion may be used in applying it. For instance, those parts of the garden where tomatoes are grown, require little or none. Warm sandy or gravely soils without any dressing are the best places for this vegetable. We have often failed either to get tomatoes at all, or got them very late, by enriching the land. The vines grow rapidly, but continue to grow too much, so that a single plant will cover ten feet of earth.

Peas may be planted as soon as the frost is out of the ground. The same is true of tomatoes, onions, and lettuce. A few days later, parsnips and early cabbages may be sown in warm borders. These seeds all vegetate at a low temperature, and will, with the exception of tomatoes, bear a considerable degree of cold. Peas will vegetate at a temperatue of 51°, tomatoes 52°, onions 62°, parsnips 52°, cabbages 54°; and when once up, will bear the weather well enough. Last season we had cabbages buried several days in the snow, while the weather was extremely cold, but they suffered no inconvenience from it.

Great advantage results from soaking garden seeds. Beets will come up in less than half their time, often, from soaking. Two things are here to be guarded against, nevertheless. One of them is, not to soak seeds which are to be put into dry earth; otherwise the moisture is withdrawn from the seed by the dry soil, and the former left in a worse condition for germinating than before. The other precaution is, soak in water varying not far in temperature from that of the earth in which the seeds are to be planted.

FRUIT-DWARFING—ITS ADVANTAGES.

BY G. O. GRIST.

MESSRS. EDITORS: Why don't the people of Illinois use the means to have fruit sooner after being located in the West? If fruit is an object any where, surely it is in the West, or in any

new country like this. Perhaps it is not generally known that fruit can as well be produced the third year from the graft, as to wait five or six years or more, as is generally the case with apples; and six or eight years for pears. Now with a little trouble and care, those that set out fruit trees can, by the following *modus operandi*, have their trees loaded with fruit the third year from the graft or bud.

Select thrifty trees from the nursery, of only one year's growth from the bud or graft; let them be set in close order—say about twelve feet apart; half an acre set in this manner will take about a hundred and eighty five, which at $6.50 per hundred will be about $12. Transplant as usual, and so as to have the branches diverge from one foot to two feet above the ground. Let the stem be two feet long, and one half of its length send out branches. This theory will seem strange to those who have been in the habit of letting their fruit trees diverge from the trunk as high as their heads; but this is the way to produce fruit on very young trees and to have very abundant crops.

The first year after the trees are set out they will not grow much. The second year, about the middle of July, or while the tree is yet in a vigorously growing state, bend all the limbs below a horizontal position and secure them in that position (with wrapping yarn) to the trunk, thus:

A string being tied to the end of every limb and twig, and tied to the main stem, the tree thus tortured sends up sap as usual—but it will not go down to the ends of the limbs to form more wood, but will be concentrated in the limbs and twigs and form fruit buds for the next year. If the buds should burst and grow on any of the limbs, they should be nipped and left an inch long. In after years, if the tree should send up any shoots too high, they should be restrained by bending down as at the first—as they would attract too much of the sap if let alone.

Whatever retards the circulation of the juice, or prevents its forming new wood, or returning to the trunk, induces fruitfulness. It has been recommended by somebody to trim the roots of the trees; but I think this is bad policy, as it robs the tree of part of its nourishment. Let a tree have all the food it can consume—then direct or control its vigor so as to make it produce fruit instead of being a shade tree only.

I will mention some of the advantages of this mode of training. The first is, the tree bears fruit earlier and more abundantly. It is admirably calculated for our open prairies, as the tree is so low as to be in no dang r of being blown down or broken by high winds; and if large fruit is raised it is not so liable to be blown off—and if it is, it is not injured by the fall. It is much easier to gather the fruit. The trees occupy only a quarter of the space they would require if cultivated in the ordinary way. An orchard treated in this manner will produce fruit two or three years sooner than an orchard cultivated in the usual way.

It is recommended to plant trees as young as possible if they are to be treated in the above manner. Head of Crow Creek, Jan. 1846.

INFALLIELE RECIPE

For getting rid of those troublesome things called Fruit Trees.

BY F. K. PHŒNIX.

First in regard to *getting* them; (strange that folks *will* take pains to get such things—why, I've *known* them to pay half a dollar apiece for the nuisances!) Don't be anywise particular to get *thrifty* trees: you will find that those which are 8 or 10 years old, and have been raised among grass and weeds, with plenty of large wounds and scars on, are decidedly the easiest to get rid of—and it may be (though you never thought of it, I presume) they are a cent or two the cheapest. When you come to set them out, put them if possible into some old timothy patch; because you know it is very troublesome to plow and work among young trees: but if you shouldn't happen to have such a patch and *must* plow your ground first, don't plow deeper than three inches; if you do, the roots will all go down out of sight into the cold poor earth, and your fruit (when you get it) will certainly be spoiled thereby. When you set them out don't *waste* any time about it; if possible set some hired man at it—a 'Wegian or Dutchman will do—*your* time is altogether too precious in such a *hurrying* season for a job like that. However, set them as near as you can like a post—that is, deep and strong—the wind will not loosen them so easily. If you shouldn't happen to get your holes quite large enough for the roots, double them up—they've no business to be so long. When you fill up the holes, use your bottom soil altogether—it is handier and packs closer around the roots and bodies, and will keep them steadier. After you have got through setting, if your orchard ground were a timothy patch, well and good; if not, you may sow oats or wheat on, and then *be sure and seed it down*, it saves so much trouble afterward. Besides, if your trees ever happen to have leaves on them they will make excellent food for the grasshoppers after the grass is cut. Don't worry yourself any more about them, especially during the first season after setting. If they ever leave out, and you should happen that way, you might very likely find some ugly worms devouring the foliage, which would certainly be a very disgusting sight, and as for killing them—ugh! horrible!!—don't think of it. In the fall, when the prairie grass gets poor, turn your calves and sheep into your orchard; they will get "an excellent bite" there—and if your trees get some good bites, no matter, it will restrain their too rampant growth, and save pruning. For *extras*, when your friends come to see you, turn their horses in, or a new milk cow; and if they break down half a dozen and run over the rest—why, lay it to the country!

This course infallibly succeeds the second season, if not the first after setting. If, under these circumstances, you are not pleased with your excellent success, I will mention three things as peculiarly well calculated to console you. First, *Darn* the unlucky nurseryman you happened to buy of, with all vehemence, every time you happen to look at the trees. Secondly, Express it as your opinion as often as possible, or (what is still better,) say that you *know* this aint agoin' to be no fruit country, for you've tried it! And thirdly, If any of your neighbors happen to have any fruit, either wild or cultivated, *get as much of it as possible*; don't be at all

particular *how* you do it—only be sure and get it. But says somebody—"Hold on! hold on, Mister! you don't mean me, I hope." Well I do, if that's you—now don't dodge, friend, if you do I'll shoot closer next time. If you don't like your portrait as drawn above, *mend your ways*, and when I shoot again I'll allow at least "three rows of apple trees" for you. Delavan, Wisconsin, Feb. 1846.

TREES—CULTURE—GRAFTING.

BY L. ROBBINS, JR.

MESSRS. EDITORS: The time will shortly be at hand when those farmers that have been dilatory in setting fruit trees, may make a beginning; and it is to be hoped that such will not let the coming spring pass without performing that kindly act they owe to themselves and posterity. 'Tis true that many have no knowledge of the cultivation of fruit trees from their own experience; but by re-perusing the Farmer they will find sufficient instruction for the most ignorant to succeed with perfect certainty. I am no advocate for the cultivation of inferior fruit, nor so great a stickler as some for grafted trees to commence with. I would much rather have a good thrifty seedling tree four or five years old, than a two-year-old grafted tree, as I have no doubt I should succeed in gathering good grafted fruit from the seedling sooner than from the grafted tree. My plan is *without fail* to graft in the top the first two seasons after transplanting, and in such a manner that every tree may on some small portion of its top produce its natural fruit. By so doing many new and valuable varieties might originate which by the common mode of root grafting would never have been known.

The mode of grafting best adapted to small trees and branches is whip grafting, precisely after the plan of root grafting, with the addition of a bandage of thin cloth dipped in some melted grafting wax, about one inch wide and two or three long, put on in such a manner as to entirely exclude the air. Any man or lad that can make a pen, with two hours' practice could perform the operation with success. The operation may be performed any time after the spring frosts, until July; but I prefer to set any time after the tree has commenced its new growth. I have set many grafts in the new growth and while it was but partially matured, with as much success as in the previous year's growth.

The above plan of grafting I consider superior to budding, as it is attended with less trouble, far better success, and with more than double the expedition. The little trouble with which grafts of valuable varieties can now be collected should induce those that have seedling orchards to graft them without delay. And no one should delay setting out an orchard, even if he cannot procure grafted trees. Where is the farmer so destitute of liberality that he will not give a brother a few grafts of some valuable varieties which he might possess? At any rate I have had no difficulty in obtaining varieties that I had not. I would just say to those who have not—Plant an orchard; but just hearken to one thing—don't wait for a pedlar to bring the trees to your door, and don't purchase of one if he should call before you are ready to start for your trees. Better go fifty miles to a nursery and have the care of the trees yourself, than trust to the honesty of a pedlar. A gentleman told me last summer that the fall previous he paid fifty dollars for fruit trees of one of those helpful creatures, (if I mistake not a Baptist preacher,) and that he had better have thrown away two thirds of his money. Many of his neighbors were served in the same way. The trees were injured before they were sold. Henderson, Ill. 2d mo. 1846.

GET GOOD FRUIT.

BY F. H. HASTINGS.

MESSRS. EDITORS: The advantages of obtaining good varieties of fruit for an orchard instead of being content with *natural* fruit, or trees not grafted, have often been urged in agricultural papers; but cannot too often be insisted upon, as many even now-a-days, from mistaken notions of economy, are satisfied with fruit trees of unknown or inferior kinds. The same care and attention are requisite, in order to have thrifty trees, whether the fruit be of the best or the poorest kind; hence it is often remarked "It is as cheap to raise good fruit as poor." The difference in the first cost should not be considered, as no one will think a few shillings expended in purchasing fruit trees, thrown away, when they begin to gather the fruit, if it be of good quality.

It is gratifying to all lovers of good fruit to witness the increasing interest in the eastern States, to raise *good fruit*. Farmers especially are waking up on this subject, and are not only grafting their old trees, which heretofore have borne fruit good for cider only—but are setting out new orchards of the most approved kinds of fruit. They are finding out that no other branch of business pays so well, with so little labor. Great quantities of apples are sent from central and western New York, to the New York and Boston markets, and the demand for them is increasing each year. There were shipped the last fall, from the two forwarding houses in this village, 5,700 barrels of apples, at an average price of 7 shillings per barrel, exclusive of the barrel. Besides this amount, there were a great number of barrels shipped from the canal bank, within the town, making in all probably near 7,000 barrels from this town alone. This is no inconsiderable item in the profits of the farming community. If I mistake not, good winter fruit brought $3 per barrel in Chicago last fall; and there is every prospect that Chicago will be a good market for fruit, for years to come.

From the above facts, and from multitudes of a similar character daily presented to the public, any one can see the wisdom and advantage of western farmers turning their attention immediately to raising *good fruit*.

There are so many books now published, containing lists of valuable fruits and all necessary directions for their cultivation, that it would seem unnecessary to say anything upon this point, did we not too often see orchards neglected and almost ruined, for want of a little care. It is certainly a mistaken idea that trees must take care of themselves, after being set out. But your former volumes contain so many excellent remarks on the cultivation of fruit trees, that I will not now pursue the sub-

ject, believing that those who are raising fruit will take interest enough in the matter to search out and read what is published by those who have experience in the business.

Clinton, New York, Feb. 1846.

TRANSPLANTING OF STRAWBERRIES It has been usual to recommend this to be done in August, with a view of bringing forward the vines so as to produce some fruit the following season. In the moist climate of England—where we suppose this to have originated—and in the eastern States, where long, dry autumns are not so severe as here, this may do well enough. But in a dry climate like ours, we are satisfied from experience that August is not the time. We have succeeded in getting more fruit the first season from those transplanted in April than in the preceding autumn. Strawberries abhor drouth, particularly the more highly cultivated sorts. It is desirable that they should grow at once, from the time of setting out; it being as true of them as of animals, that early stunting affects their after growth unfavorably. Strawberries may be transplanted at any time in the season; but we believe the autumn months the worst of any.

The beds where they are set should be pulverized deeply. Their fibrous roots frequently run several feet; though in taking them up, these are broken off so as to leave the impression that a strawberry has very little root. A good mode of setting them is in rows—the plants about one foot and the rows three feet apart.

SEVERAL MISTAKES TO BE AVOIDED. It has been recommended heretofore to sow radishes in sand—with the averment that they would grow larger, more crisp, and better in flavor, than any others. This need not be tried, for the averment is not true. Radishes love a sandy soil; and a good one may be made by mixing a rich mold—no matter how rich—with sand in equal parts. The manure applied to this mold should be thoroughly rotted—green manure should never be used for radishes—and should be thoroughly mixed.

It has been also recommended to plant cucumbers in ashes; or to put a great quantity of ashes in the hills. This may be left undone. A small quantity—say two quarts of leached ashes—thoroughly mixed with the soil, will aid cucumbers when planted on sandy ground, where ashes have not before been put. But cucumbers, any more than other vegetables do not require pure alkali.

Some people are in haste to plant some vegetables—Lima beans, for instance—long before they can vegetate. This is useless. Lima beans will not grow, with a temperature of 60°, in less than three and often five weeks. In a temperature of 76° they will if soaked vegetate in about seven days. It is then useless to plant them before the earth gets thoroughly warm, which in this latitude will hardly be till sometime in May.

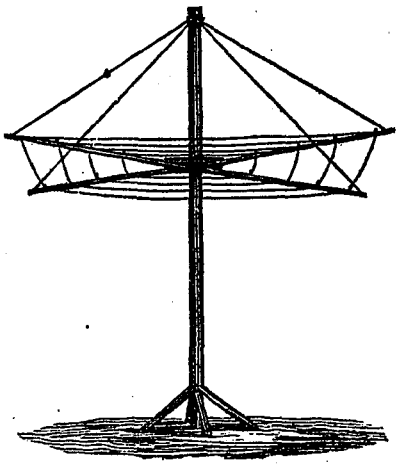
It will be useless to procure a choice kind of squash seed, and plant it near any other vine—such as pumpkin, cucumber, melon, or any other kind of squash. If this be done, the product will be any thing but the choice vegetable expected.

HOUSEHOLD AFFAIRS.

A CLOTHES DRYER.

In a New York paper we noticed a paragraph a little time since, stating that some Yankee had invented an apparatus for drying clothes, which was made by erecting a stout post, and running out from it four arms at right angles to each other, and then boring holes through these arms about eighteen inches apart, through which a rope was to be passed something in the manner of a spider's web.

This idea we have represented in the cut, where we have set up a post intended to be about nine feet high, and



at the height of six feet from the ground, have placed the arms spoken of, which may be nine feet each way from the standard. If a rope passes from the top of the post to the end of each arm, it will strengthen the apparatus. The better way would perhaps be, to have these arms revolve after the fashion of a wind mill. The housewife would then only be obliged to set down her basket of clothes, and turn the machine to her liking. If the arms are 9 feet in length, and the ropes are passed through at intervals of 18 inches, it would give one hundred and thirty feet of rope, which is as much as most families would need. It appears to us that such a concern would possess the advantage of occupying but little room, would give great length of line in a small space—and render the hanging out of linen a comparatively easy process, besides lessening the liability to tearing them in the wind.

Since getting up this article, we have been told that somebody is selling in this city either the machine or the right to make it. If so, it is probably clogged with a patent, as every thing now-a-days is patented, from a wooden jewsharp to a tin cider peg.

"RYE AND INDIAN" BREAD. We have received two recipes on this head, both of which are given:

MESSRS. EDITORS: B.'s communication in Jan. No. of Prairie Farmer on 'Rye and Indian Bread' reminds us of good old New England, which has sent out thousands of her hardy sons to possess this goodly land. Inured to hardships in the cultivation of its sterile soil, they have acquired habits of industry and unbending integrity. May we not expect that

such men will help give character and permanency to our western institutions?

I too, like B., prefer the brown loaf to the best wheat bread that can be made, and feeling anxious he should enjoy rye and Indian bread in the land of his adoption, I herewith subjoin the Vermont receipt. Take six qts of sifted Indian meal—scald it up with boiling water—when sufficiently cold, say the temperature of new milk, mix two qts of rye meal, one gill of yeast—stir the whole well together—put it in a warm place to rise. When it is *riz*, take it out with a spoon into small pans for baking. Be sure the oven wood is ready, so that it may be baked before it is sour. R. CHENEY.

Janesville, Wis., February, 1846.

ANOTHER. Messrs. Editors: In the December number of the Prairie Farmer I noticed a communication from one of your correspondents soliciting a recipe for rye and Indian bread. Now I have never written for a public journal, but being a genuine Yankee from the old Bay State, and of course a lover of the bread alluded to, and believing also that it is more healthy than any other, I cheerfully send you my own simple method of making it, which you can publish if you think advisable. I would first observe that, as rye is not much cultivated in the "far West," I find shorts to be a very good substitute, which almost every family has at their command.

To two parts Indian meal, take one part rye meal or shorts, pour a little boiling water to the Indian meal, enough to moisten it, and directly add the shorts, together with sour milk, (no matter though the milk be very sour,) and saleratus, a table-spoonful of the latter to a gallon of the former—knead it until thoroughly mixed, and as soft as can be possibly taken in the hand to put in pans. The pans should be deep, that the bread be not dried up in baking. Then bake it three hours in a brick oven. For such as have no oven alluded to, a bake-kettle will answer very well, or a stove will do, if the fire is suffered to go partly down after the first heating, and a moderate temperature kept up.

We sometimes prepare a loaf in the evening, put it in an iron vessel, and, when retiring for the night, rake open the fire, and in the hollow space place the vessel, which must be tightly covered—then cover the whole with coals and ashes, and in the morning we have a fine-flavored, hot loaf for breakfast.

I would briefly remark, that formerly I was much opposed to my husband's becoming a subscriber to the Prairie Farmer, on the ground that he was not a farmer, but now consider it one of our family necessaries, and am much interested with its contents generally, particularly those relating to household affairs, and the education of our children. C.

Rock Run, Stephenson co., February, 1846.

BUTTER MAKING.

BY J. VIAL.

MESSRS. EDITORS: When I commenced writing I intended to say something on the subject of making butter; but my attachment to the Prairie Farmer has led me astray. If you will not think me tedious by writing too long an article, I will yet say something on the subject, as it is one of the staple articles of this State, or rather this part of the State, and it is very important that we know how to make the greatest quantity and of the best quality, with the least labor and expense. There is much poor butter made in the country, as we all know, and it sometimes gives a stranger the impression that this country is not good for butter; but at the same time there are many who make it of as good quality as the butter of Orange county, New York, which I believe is called the best that is made in the United States—which shows that the fault is not in the climate or in the grass; but there are many reasons why there is so much of it made of a poor quality, and it is a wonder to me that so many of them make as good as they do. The country is comparatively new, and many of us have not the conveniences that they have in older settled places.

A good dry cellar and pure cold water are indispensably necessary, and we may say too, that ice is very necessary in warm weather to regulate the cream to the right temperature for churning. Then the greatest secret is to work out every particle of the buttermilk—then add nothing to it except a sufficient quantity of salt, (it should be rock salt, ground.) The firkins should be made of white oak, or white ash, free from sap—or which is still better, the wild mulberry. They should be made with two heads, perfectly tight, and smooth inside to hold about seventy-five or eighty pounds, or about ten gallons; and when made of oak or ash should be soaked, say twenty-four hours, with warm water impregnated a little with salt, to take out the acid that remains in the oak or ash. I believe there is none in the mulberry; and as soon as the butter is ready, pack it immediately in the firkins, and fill it as soon as possible to within about an inch and a half of the head; and head it up and fill up the space under the head with brine, through the head—then stop the hole tight with wood of the same kind, and the making is completed. The next thing is to preserve it through the warm weather. I find the best way for preserving it is to take an empty salt barrel, and put three or four inches deep of salt in the bottom—then set the firkins in the barrel on the salt—pack salt in the barrel around the firkins till the barrel is full—then put it away in a cool dry cellar and let it remain there till cold weather, when it will be good and fresh, and fit for any market.

People who have no cellars will find it to their advantage to pack it in salt in this way, as the salt will keep the heat and air in a great measure from the firkins; and it is but little trouble and no expense. If you take a clean barrel, the firkins should of course be clean and new.

Cook co. Illinois, February, 1846.

SPIRIT OF THE AGRICULTURAL PRESS.

Mustard. We find a letter in the True American [Cassius M. Clay's paper] from Messrs. Thornton & Gunsted, mustard manufacturers at Louisville, Kentucky, giving the following directions for the cultivation of this crop. Plant the seed in clean hemp or wheat land, early in the spring, in hills three feet apart each way; three stalks in a hill are sufficient, as it then has plenty of room to head. Keep it clean with a cultivator. It will ripen about the middle of June, and should be cut before it is ripe enough to shatter out, and be placed on a tight floor or sheets, in the sun, to dry. Thus treated it will yield 20 bushels per acre. Four ounces of seed will plant an acre. It should be added that there is much difference in different kinds of mustard; and those who plant it ought to look well to the sort they cultivate.

A bushel of mustard seed weighs about 50 lbs. and the price paid by the above firm in Louisville, after harvest, is about 7 cents the lb. or $3 50 per bushel. They were obliged to import seed to carry on the manufacture the past season. Will not some of our friends in the south of Illinois look to it?

Cutting Timber. Several correspondents of the New England Farmer have got into something of a dispute on the subject of cutting timber; one set of them maintaining that the summer is the best time, and the other set contending sharply for the winter season. The first adduce in support of their doctrine, some bits of experience gathered here and there—and the latter cite Loudon and other great authorities.

It appears to us that both are partly right and partly wrong; and that summer and winter both may be the best seasons for cutting timber. The writers all seem to overlook one thing which undoubtedly has more to do with it than any thing else—and that is, the facility for seasoning rapidly and perfectly. *Timber will undoubtedly last the best which seasons the most perfectly, at whatever season cut;* and that seasoning is likely to be best which is done the most rapidly. The great enemy of thorough seasoning is the acetous fermentation of the sap, which is liable to take place if seasoning be delayed. If this fermentation is allowed, thorough seasoning is next to impossible; and such timber will decay, infallibly. Timber in the summer contains more sap, it is true, than in the winter; and if cut then and placed in unfavorable circumstances is more liable to fermentation; and on the other hand, the facilities for preventing fermentation and securing the seasoning are better than in winter. Let timber, at whatever time cut, be thoroughly dried, and it will last so as to prove either side of this dispute. It may be injured more, for some purposes, in seasoning, at one time, than another; as is shown by the editor of the N. E. Farmer, who cut some bass wood for carriage stuff, when full of sap, and spoiled in it drying.

Farmers' Library. A friend has called our attention to an article in the Genesee Farmer, of which the following is an extract.

"The best works extant, of a general and comprehensive character, are Bousingault's Rural Economy, Johnston's Lectures on Agricultural Chemistry, Von Thaer's Principles of Agriculture, (published in the Farmers' Library, of Greeley & McElrath,) Liebig's Writings, Low's Practical Agriculture, Stephens' Book of the Farm, and Loudon's Encyclopedia of Agriculture and Gardening. On special subjects: Morrell's American Shepherd, Downing's Fruit and Fruit Trees, Dr. Harris' Entomology, Hitchcock's Geology, Bement's Poulterer's Companion, all the Agricultural Periodicals published in this State, The London Farmer's Magazine, and the Transactions of the Highland Agricultural Society, (Scotland.)

Loudon's is an expensive work, although one of sterling value. There are some errors in the Tables of the Analysis of Wheat in Johnston's Chemistry, as copied from Dr. Sprengel, which have misled the editors of the American Quarterly Journal of Agriculture and Science, and some others. These errors we shall take an early opportunity to point out. Notwithstanding a few signal defects, the Lectures of Professor Johnston can be studied with great benefit by every practical tiller of the earth."

We would add that we are glad to see some partiality shown for native works, among our people, within these few years. An American book, on any subject connected with agriculture, is a very late invention. What few works have found their way into use have been translations or importations. The process of importing has not fallen off, by any means, with the revival of agricultural taste, but has largely increased; while at the same time, native works, such as Morrell's Shepherd, Downing's Fruits, &c. have made their appearance and are largely called for. This is cheering.

Gapes in Chickens. A friend informs us that this disease is so common in southern Ohio, that half the chickens hatched die of it. We are not aware that it prevails any where *in our beat*, but are not certain. A writer in the Southern Planter recommends mixing the dough with urine and baking it. In its first stages a teaspoonful of urine will cure it.

VETERINARY DEPARTMENT.

DEATH OF HORSES.

BY R. CHENEY.

MESSRS. EDITORS: Mr. Fletcher, a neighbor of mine, lost a fine young horse last fall, after trying every remedy within the reach of the best judges. Thinking the case rather singular they opened the horse, and found the stoppage occasioned by the collection of dry prairie roots, which it had gathered while feeding on sod wheat. The collection of roots, when I saw it, was some 5 inches in diameter, all interwoven, so as to preclude all possibility of saving the animal.

The prairie roots are washed bare by the rains, and when picked up with the wheat by the horse, his digestive powers have no action upon them. Since learning the above fact, I am informed that six other horses have died under similar circumstances. Four were found dead on and around one large wheat field. We have no doubt but their death was occasioned by prairie roots, as above described. Will those interested in the Prairie Farmer speak out on this subject, if they are acquainted with facts for or against.

Janesville, Wisconsin, Feb. 1846.

DEATH OF HORSES.

BY A. BEACH.

MESSRS. EDITORS: There have been some cases of disease among horses of a mysterious character this winter in this settlement. I had an excellent mare in good health, and in bearing, taken very violently ill, and increasing. After a few minutes of observation, I came to the conclusion it was the bots. I tried faithfully all the medicines usually given to detect them, but to no purpose. The pain constantly increased in violence for about 18 hours, when she died. On examination it was found that the bots had collected in squads of about 20 to the square inch, on the inside of the first stomach, near the connection with the wind pipe, and many of the sharpers had nearly worked through. Whether the bots in this state would have killed the mare, I cannot with certainty now say; but there is another mystery connected with the affair. It was found that the canal connecting the first and second stomach, about a yard from the first, had passed through a rupture in the diaphragm, to the vitals, about two yards, so that nothing could pass through that. The part passed through into the vitals was mortified. Now what caused this rupture? Could it have been made when she tumbled and rolled about, or was it produced by some other cause,

Tyler, Winnebago co. Ill., Feb. 1846.

CATALOGUE OF PLANTS

Growing spontaneously in the State of Illinois. the principal part near Augusta, Hancock county.

BY S. B. MEAD.

§§ Leonurus cardiaca L (R M mother wort
Stachys sylvatica ? N (Bts
" hispida Ph (W P
" cordata ? L (Bts
§ Marrubrium vulgare L (M E horehound
Teucrium canadense L (Bts *wood sage, germander*
§ Solanum dulcamara L (M bitter sweet, woody night shade
" nigrum L (P l Pn deadly nightshade
" carolinense L (R Bks Wd horse nettle
" § cycopersicum L (fr cltd tomato, love-apple
Physalis viscosa L (P yellow henbane, ground cherry
" obscuro ? Mx (P fr ground cherry
" pennsylvanica L (P
" lanceolata Mx (P
§ *Nicandra physaloeides* Pers deadly nightshade ?
§ Nicotiana tabacum L tobacco
§ *Datum stramonium* L (R M Pn *green thorn apple*
" tatula L (R Pn purple thorn apple
§ Lycium barbarium L matrimony vine
Verbascum thapsus L (R T M mullein
Gymnandria Houghtoniana T & G (B 5 13 P 13
Erigeron canadense L (P T M Wd colt's tail, flea bane, pide weed
" divaracatum Mx (P R
" bellidifolium N (T M robert's plantain
" philadelphinum L (P M T
" quercifolium ? Lam (T M ?
" annuum Pers (T M
" *strigosum* M (P M
Diplopappus linarifolius Hook (P
" umbellatus T & G (Bts W P O
Boltonia glastifolia L'Her (W P O false chamomile
Solidago latifolia L (T H broad leaf golden rod
" speciosa N (P T
" rigida L (P T hand leaf golden rod
" neglecta T & G (T
" arguta Ait B sharp notched golden rod
" ulmifolia M (B elm golden rod
" nemoralis Ait (P wooly golden rod
" *missouriensis* N (P
" canadense L (P B
" gigantea Ait (W P T giant golden rod
" lanceolata L (P
" tenuifolia Ph (P pigmy golden rod
Chrysopsis mariana N (S P 5
" villosa N (S P H 4 5 O
§ Inula Helenium L (R M elecampane
Polymnia canadensis L (Bts white leaf cup
Sylphium laciniatum L (P O
" terebinthacum L (B O P
" *integrifolium* Mx (B O
" perfoliatum L (Bts O ragged cup
Parthenium integrum L (P
Ambrosia trifida L (P T Wd great bitter weed
" integrifolia Ph (T
" artemisiafolia L (P Wd
" coronopifolia T & G (P S B
" bidentata Mx (4
Xanthium strumarium Mx (P Wd cloth burr, sea burdock
Heliopsis levis Pers (P T Ox eye
Echinacea purpurea Mœnch (T O
" *angustifolia* D C (P O
Rudbeckia hirta L (P O
" triloba L (T Bts
" subtomentosa Ph (P O
" laciniata L (Bts cone flower, cone dish sunflower
Lepachyspinnata T & G (P O
Helianthus rigidus D C (P O
" occidentalis Rid (P S B 1
" mollis Lam (P T O
" *grosse-dentatus Martens (P O*
" strumosus L T
" *trachelifolius* ? Willd (T
" § tuberosus L jerusalem artichoke
Actinomeris squarrosa N (B O
" pelianthoides N (B O
Corcepsis cristosa Mx (W P O
" tripteris L (P B O tickseed sunflower
" palmata N (P B O
" lenceolata L (S P O 5
" § tinctoria N (O
Bidens frondosa L (P Wd burr marygold, cuckold
" connata M (W P
" *chrysanthemoides* (W P daisy begggar ticks
§ Ximenesia enecloides Cav
Dysodia chrysanthemoides Lagasca
Hymenopappus scabiosaeus L (Hev
Helonium canaliculatum Lam (P M O
Maruta cotula D C (R M
Veronica anagallis L (Bks brook pimpernel, long-leaved brook-lime
" peregrina L (P purslane speedwell
Veronica virginica L (P M
Scrophularia maryladica L (T M Pig wort
" lanceolata Ph (T
Mimulus ringens L (W P monkey flower
" alatus L (W P Pds
Gratcola virginica L (W P Pds creeping hedge hyssop
" Missouriana Bk (W P Pds
" anagalloidea Mx (W P water hedge hyssop
" carolinensis ? Ph (Pds
Landernia dilatata M (W P Pds pimpernel
Chelone glabra L (W P Pds M snakehead
" purpurea (Pds O
Penstemon pubescens Ait (P beard tongue
" levigatum W (T O
" *gracile* N (16
Collinsia verna (Bts O collinsia tall pink
Capraria multafida Mx (W P
Herpestis rotundifolia Mx (Pds
Gerardia purpurea L (W P O
" tenuifolia Vahl (T P
" auriculata Mx (P O
" quercifolia Ph (T O
" pedicularia L (B O louse wort, fox glove
Pedicularis canadensis L (P louse wort
" pallida Ph (Bts W P
Castilleja coccinea Spreng (P O painted cup
" lutea (W P O
Orobanche uniflora ? L (T squaw root, broom rope, cancer root
Verbena spuria ? L (P R
" hastata L (P R vervian, simpler's joy
" articifolia L (P R nettle, leaf vervain
" angustifolia L (P H R pigmy vervain
" bracteosa Mx (P R
" stricta Vent (P R O
Zapania nodiflora Lam (Bts 8 fog fruit
Phryma lepto staetrya L (T lopseed
Justicia americana (Vahl (Pds
Ruellia strepens L (P reed
" *ciliosa* Ph (Bts O
Uricularia setacea ? L (Pds
Dodecatheon media L (P B O false cowslip
Lysimachia ciliata L (B moneyworth
" hybrida Mx (P
" revoluta N (P
" quadriflora ? Sims (w p
" heterophylla ? Mx (w p
Centunculus lanceolatus Mx w p bastard pimpunel
Samolus valorandi L bts brookweed, water pimpunel
Plantago cordata Lam (pds
" major L (p T 1 plantain
" virginica L (H Bks virginica
" § *lanceolata* L rib wort, snake plantain
" ariolata N (p R
" pusilla N (p
§ Amaranthus hybridus L (Wd
" blitum ? L
Oplotheca Floridana (S B Bks 4 5 O
§ ? Chenopodium album L (green pig-weed
" rhombifolium ? M (T p
" anthelminticum L (R M worm seed
" *ambrosioides* L (R M sweet pigweed
" botrys L (S p Bks M 4 oak of jerusalem
Acnida cannabina L (Bks 8 water hemp
§ Blitum capitatum L (O blite indian strawberry
Phytolacca decandra L (R pokeweed, pigeon berry
Polygonum aviculare L (P M knot grass
" erectum L (P
" tenue Mx (S p B slender knot grass
" gracile ? N (Bks 5
" punctatum Ell (pds water pepper, knot weed
" persoonii Engelm (pds
" hydropiper L (pds
" virginionum (L (T
" barbatum ? W (p L
" persicaria L (p M D ladies' thumb, heart spot knot weed, heart's ease
" lapathifolium L (p
" pennsylvanicum L (p knee knot weed
" amphibium L (S p pds mud knot weed
" coccineum U (pds creeping or lake knot wood
" sagittatum L (Bts Fd prickly knot weed, scratch grass
" convolvulus ? L (T B bind knot weed
" scandens L (T B climbing buck wheat
" § orientale L (D prince's feather
" § *Fagopyrum* L (cltd buck wheat
§ Rumex crispus L (p M duck
" § *obtusifolius* L M
" verticillatus ? L (Bts pds
" acetosella L (M field sorrell, sheep sorrell
Alliona nyctaginea Mx (Bks 10 O
Laurus sassafras L (T H M sassafras tree
" benzoin L (Bts 8 M spice bush, fever bush
Comandra umbellata N (p false toad flax
Asarum canadense L (T H M
Acalypha virginica L (p T 19 three seeded mercury
" caroliniana *Walt non Ell (Bts*

Euphorbia hypericifolia D (T H spurge, eye bright
" depressa Tor (P
" prostrata Engelm (P
" corollata W (P T m
" dentata Mx (bks 8 4
" obtusata Ph (bts 10
" pubentissima Mx ? (s b 5
Croton capitatum Mx (s p 4
" ellipticum N (13
" glandulosium Ls (s b 4 5
§ Ricinus communis L (cltd m castor oil plant, palma christi
Urtica pumila L (bts T stingless nettle, rich weed, clear weed
" divaricata ? L (bts d
Bœhmeria cylindracea Willd (bts false nettle
§ Cannabis sativa L (cltd hemp
Humulus lupulus L (b m 1 hop
Morus rubra (t fs red mulberry
" § alba L white mulberry
Saururus cernuus L (pds lizard's tail, breast weeds
Carpinus americana (T horse beam, blue beech
Ostrya virginica Willd (t h
Corylus americana Walt (b fr hazle nut
Quercus imbricaria Mx (b shingle oak, laurel oak
" nigra Willd (b h barren oak, black jack
" tinctoria Bart (t d quercitron oak, black oak
" coccinea Wm (b h scarlet oak, ink ball oak
" falcata ? Mx (b h spanish oak
" rubra L (t red oak
" palustris W (bts pin oak
" obtusiloba Mx (h iron oak, post oak
" macrocarpa Mx (bts overcup oak
" alba L (h white oak
" castanea M (h yellow oak
" bicolor W (b w p swamp white oak
Betula rubra Mx (bks red birch
Salix tristis M (p mourning willow
" discolor Willd (b m bog willow, red root willow, basket willow
" longifolia Willd (bks long leaf willow
" § babylonica L weeping willow
" nigra Willd (bks m brittle joint or black willow
" rigida Willd (b m stiff leaf willow
" § vitellina L (cltd yellow willow
" § forbiana Willd
" § annularis (cltd
§ Populus candicans Ait
" angulata L (bks bts balm of gilead, water poplar, cotton wood
" tremuloides Mx (b m white poplar, American aspen
" § dilatata W lombardy poplar, italian poplar
Platanus occidentalis L (bks m button wood, American plane, false sycamore
Ulmus americana L (t bts m elm, white elm
" fulva Mx (T bks m slippery elm, red elm
Celtis crassifolia W (bts hog berry, hoop ash
Juglans nigra L (bts fr d black walnut
" cinerea L (bts fr m d butternut
Carya sulcata N (bts fr shell bark hickory
" alba N (t fr d shag walnut, shag bark hickory
" tomentosa N (t h white heart hickory
" amara N (b bitternut
" porcina N (b pignut, brown hickory
" olivæformis W (bts fr pecan nut

CLASS II.—GYMNOSPERMÆ.

§ Pinus palustris Lb long-leaved yellow pitch, or brown pine
§ Thuja occidentalis L arbor vitæ, false white cedar
Juniperus virginiana L (h bks m red cedar

CLASS III.—ENDOGENÆ.

Hypoxis erecta L (p o star grass
Sysirinchium mucronatum Mx (p
" bermudianum L (t o
Iris versicolor L (bts m snake lily, blue flag
" n sp ? petalscrested L (bts o
Udora canadensis N (pds ditch moss, little snake weed
Valisneria americana Mx (8 tape grass
Orchis spectabilis L (t o gay orchis
" leucophoea N (p o
Microstylis ophioglossoides N (t h adder mouth
Liparis lillifolia Rich (b h o tway blade
Aplectrum hyemale N (t 17 o pretty root, Adam & Eve
Calopogon pulchellus R Br (bts o 10 grass pink
Spiranthes cernua Rich (p nodding ladies' tresses
" gracilis Bk (t p
" æstivalis Rich ? (bks
Cypripedium candidum M (p m o white ladies' slipper
" pubescens W (t m o yellow ladies' slipper
" spectabile Sw (b m o gay ladies' slipper
Pontederia cordata L (pds pickerel weed
Schollera graminifolia m (pds 5 yellow-eyed water grass
Melanthium virginicum L (p black flower
Veratrum angustifolium b Ph (13 o
" floccosum Chapn (b h
Trillium recurvatum Bk (to o
" erectum L (t m false wake robin
" grandiflorum Salis (h t o
Lilium catesbæi ? Wr (p southern lily
" canadense L (t o nodding lily
Erythronium albidum N (bts o
Alluim canadense L (p bks m meadow garlic
" tricoccum ? Ait (b m three seed leak
Convallaria multiflora L (t giant solomon seal
" stellata
" racemosa L (t h spike solomon seal
Uvularia grandiflora Sm (t
Asparagus officinalis L (cultd asparagus
Cammellina angustifolia Mx (s h b 4 5 o
Tradescantia virginica L (p b o spider wort
Sagittaria sagittifolia Ph (pds narrow head
" latifolia Ph (pds
" heterophylla Ph (pds
" acutifolia Ph (pds
Alisma plantago L (pds water plantain, mad dog weed
Juncus acuminatus Mx (pds
" tenuis Willd (w p
" polycephalus Mx (w d
Smilax rotundifolia D (t horse briar, green briar
" herbacea L (t bohea tea
Dioscorea villosa L (b yam root
Arum draconitium L (bts m green dragon
" tryphyllum L (t h m indian turnip, wild turnip, wake robin
Peltandra virginica Raf (pds m ?
Acorus calamus L (pds bts m sweet flag, caiumus
Typha latifolia L (pds 21 cat tail, reed mace
Sparganium ramosum L (pds 21 burr reed
Potamogeton natans L (pds pond weed
" fluitans ? L (8
" diversifolium Bart (pds
Lemna polyrhiza L (pds water flax reed
" minor L (pds green duck meat

CYPERACFÆ.

Dulichium spathaceum, Pers (pds galingale
Cyperus flavescens L (w p
" diandrus Ton
" strigosus L (w p
" repens Ell (s bts p wd
" mariscoides ? Ell (s h 5
" inflexus M (w p
" acuminatus
" schweinitzii
" kyllingaloides Vahl (s p h 4 5
Eleocharis palustris R Br (w p marsh club rush
" obtusa Schul (w p
" acicularis R Br (pds
" compressa ? Sullevt (w p
Scirpus americanus P (pnds
" debilis Ph (pds
" lacustris L (pds 21
" atrovirens M (w p
" eriophorum Mx (bks w p red cotton grass

Scirpus lineatus Mx (w p
Eriophorum polystachyon L (w p 14 cotton grass
Fimbrystylis spadicea Vahl (w p
Isolepis subsquarrosus ? Schul (pds 5
" capillaris Rœm & Schult (s p
Trychelostylis mucronulata T (w p
Scleria triglomerata Mx (p whip grass
Carex scoparia Schk (pds bks
" muskingumensis Schw (eds bks
" lagopodioides ? Schr (pds bks
" straminea Schr (p straw sedge
" tenera Dew (p t
" festucacea Schr (w p bks
" mirabilis Dep (t
" cristatata Schw (pds bks cockscomb
" stipata M (pds
" hystrix Gray (pds t
" cephalophora M (t
" muhlenbergii Schk (w t bts
" rosea Schk (T
" sparganioides M (bts p t
" multiflora M (w p
" buxbaumii Wahl (bts w p
" cæspitosa Auctm (bts w p 22
" stricta Lam w p pds 22
" crinita Lam rar pallacea (bts 32
" longiostris T (bks t
" intumescens Rudge (pds
" lupulina L (bts pds
" squarrosa L (t pds
" tentactulata M (w p
" bullata Schk (w p pds 22
" ampullacea Gn (pds 22
" lacustris Willd (bts pds
" lanuginosa Mx (w p 22
" pennsylvanica Lam (t
" varia M (p
" Richardsonii R Br (p
" pubescens M (t
" shortii T (bts 22
" virescens M (t h green sedge
" torreyana Dew (p bts
" laxiflora M (t
" blanda Dew (T
" granularis M (w t bts
" undulata Kunze (w p
" medii Dew (p
" tetanica ? Schk (t bts
" anceps M (t

GRAMINÆ.

§ Agrostis vulgaris Sm (cltd
" michauxii Trin (p fd
" scabra Willd (w p t fd
" mexicana L (t fd
" sobolifera W (p fd
" tenuiflora Willd (t fd
" sylvatica T (t h fd
Muhlenbergia erecta Schreb (t false drop seed
Vilfa vaginæflora T & G (p t
" heterolepis Gray (p fd hy
Cinna arundinacea L (w p t indian reed
§ ? Alopecurus geniculatus L (fd floating foxtail
§ Phleum pratense L (cltd timothy, herdsgrass, cat'stail grass.
Phalaris arundinacea L (bts pds
Tripsacum dactyloides L (t bts fd sesame grass
Stipa juncea Ph (p
Panicum crusgalli L (p bts fd
" hispidum M (pds fd
" clandestinum L (t fd
" latifolium L (t fd
" scoparium Lam (s p 4
" pubescens Lam (t
" pauperatum M (p
" dichotomum L (t h b
" nitidum Lam (p t panic grass
" agrostoides M (w p bks
Panicum virgatum L (w p fd
" proliferum Lam (p
" capillare L (p
" barbulatum ? Mx (s h p 5
Setaria glauca P de B (p 1 fd
" § italica P de B (cltd
§ Digitaria sanguinalis Scop (wd finger grass, crab grass
" glabra R & S (p wd
" filiformis M (p
Cenchrus tribuloides L (s p b 4 5 wd
Aristida dichotoma Mx (p beard grass, poverty grass
" pallens ? L (s p 5
" tuberculosa ? N (p
Calamagrostis coarctata T & G (w p fd
Arundo phragmites L (w r pds d reed grass
Danthonia spicata P de B (t h wild oats
Festuca tenella W (R t h
" pratensis ? Huds (t w p fl hy
" nutans W (t
Diarrhena americana Ph (bts
Glyceria fluitans R Br (pds fd water fescue
§ Poa pratensis L (fd hy meadow grass, spear grass
" parviflora ? Ph (w p
" § compressa L (cultd fd blue grass
" serotina Ehrh (t fd
" nemoralis L (t fd
" capillaris L (w p
" hirsuta Mx (p
" pectinacea Mx (p
" reptans Mx (w p
" eragrostis ? L (p 1
Uniola latifolia Mx (t bks
Melica speciosa M (t h melica grass
Tricuspis seslerioides T (s bts t fd hy red top
Kœleria obtusata Gray
" truncata Torr
" nitida Nutt
" cristata Smith
Bromus secalinus L (t 1 wd chess
" hybridus (wheat fields 1 wd
" ciliatus ? L (t
" purgans L (t p bks
" pubescens M (t broom grass
Atheropogon apludoides M (s h p 4 5 hair beard
" papillosus Engelm (s h 4 5
§ Eleusine indica Lam (Fd
Hordeum jubatum L (p squirrel tail grass, wall barley
" pusillum N (r 10
§ Secale cereale L (cltd rye
Elymus virginicus L (bks wild rye
" canadensis L (p bks
" villosus M (t lime grass
" hystrix L (p t hedge hog grass
Triticum æstivum L (cltd summer wheat
§ Spartina cynosuroides W (w p
Andropogon scoparius Mx (p broomgrass
" furcatus M (p t fd hy forked spike
" nutans L (p t fd hy beard grass
Lepturus paniculatus N (salt licks
Leersia virginica W (w p tfd white grass, rice grass
" oryzoides Swartz (bks pds cut grass
Zizania aquatica Lamb (pds water oats, wild rice

CLASS IV.—ACROGENÆ.

Equisetum arvense L (bks horse tail
" levigatum Braun (bks fd
" hyemale L (s p b fd scouring rush
Aspidium acrostichoides W (t h
" fragile W (h t
" asplenoides W (bks
Dickinsonia pilosciuscula W (bts fine horned fern
Cheilanthes vestita W (13 lip fern
Asplenium rhizophyllum L (h t walking leaf
" thelypteroides Mx (bts pds silvery spleen wort
Pteris aquileria ? L (t m common brake
Adiantum pedatum L (t m maiden hair

Scruthiopteris germanica ? W (bts
Onoclea sensibilis L (bts
Asmunda interrupta Mx (t m
" spectabilis W (w p m 4
Botrychium virginicum Swartz m rattle snake fern

Omissions.

Myriophyllum Verticullatum L
Taraxicam—new species? lobe of the leaves pinnatified
Koeleria pennsylvanica D C
Chara polyphylla Muhl

"BOMMER'S MANURES."

Several of our subscribers have requested that we will give whatever of the method of making manure indicated by the above title, that has been communicated to the public. We are glad to observe an indication, in this request, that the subject of saving and providing manure is attaining its deserved importance. The vulgar idea, so common in the first settlement of the country, that western lands require no manure, explodes whenever the cultivation of grass is undertaken; and is already, among reading farmers, to a good degree dissipated.

Still there are a great variety of substances on every farm, which are now wasted: but which by the process below given might undoubtedly be converted into fertilizers. Among these are the immense piles of straw, which, in the majority of instances, instead of being returned to the land as they ought to be, are committed to the flames! a sort of proceeding which would forever disgrace a farmer any where else, and which it is high time to discontinue.

The process called Bommer's was the invention of a Frenchman by the name of Jauffrets, who reached it by the most painful toil and study, continued through many years. It has been further improved upon by Messrs. Baer and Gouliart; and all that is known to the public of the matter has been communicated by these aforesaid gentlemen. Mr. Bommer appears to have come into possession of whatever he knows on the subject through this firm of Baer and Gouliart, whose right he claims, we believe, to have purchased. But whether in fact he has any right from them, we do not clearly understand; and whether he has any invention or discovery of his own attached to it, is a fact not before the public—as he is intent on selling his "Method" wherever he can find purchasers. It is presumed however that he has so modified and arranged the details of the process, that his pamphlet would be an important help to the farmer in making his experiments: but we do not understand that the process is in any sense his, or that he is entitled to give it his name.

In manufacturing manure on this plan, it is best to select a clayey spot if possible. A tank or vat is then constructed, about ten feet long, six feet wide, and six feet deep. If the land is clay it may be made sufficiently tight by scooping it out in the earth and pounding or puddling the bottom; otherwise it may be constructed like a tanner's vat. This vat is to be filled with a lye made as follows:

"For the conversion of from one to two thousand pounds of vegetable matter into manure, he takes about

200 lbs. of night soil,
200 " calcined plaster, in powder,
50 " wood soot,
20 " wood ashes, unleached,
60 " quick lime,
1 " common salt,
1 " rough saltpetre,
150 " lye or ferment drainings from a Jauffret manure heap.

These ingredients are in many cases to be replaced by others; this lye to be prepared 10 or 15 days before use. The quantity of materials above named, for the conversion of from 1 to 2000 lbs. of straw or other dry vegetable stalks, will answer for about double that quantity of green vegetable matter."

In case this is the first attempt, for the lye or drainings from a Jauffret manure heap, may be substituted filthy water from the sink mixed with urinary drainings from the stable, the more putrid and disagreeable the better.

The remaining part of the process is as follows:

"We give to the ground, where the heap or pile is to be made, an inclination towards the vat; if the ground is a firm clay, it may be merely sloped and have shallow trenches dug on its surface to conduct the drainings back into the vat; or it may have a flooring of timber, brick, or stone, as may be preferred, which may be so trenched as to conduct the whole towards a central drain. When our platform or flooring is of clay, we cover the trenches and whole surface of it with brushwood or rails, so as to form a temporary grating that will support the weight of the heap, and thus insure a drainage, and the admission of air to the heap from below.

The materials to be converted into manure we pile upon this prepared platform immediately as it is delivered by the carts; and this we sometimes continue to do until the heap has attained the whole height to be given to it, when by the use of a pump, buckets, or other suitable means, we raise the lye from the vat and pour it on to the heap, continuing to do so until the whole mass is saturated; we in general, however, raise the heap to a height of two, three, or four feet, more or less, and then pour on a portion of lye, repeating this as the height of the pile is increased. This procedure obviates the necessity of lifting the whole of the lye to the full height of the heap.

The materials which we employ in making the lye may be limited to the following, namely: cow, horse, or hog's dung, or night soil, the urine or draining from stables, and quick lime. The ingredients should be intimately mixed with a sufficient quantity of saturated water.

Two of the kinds of animal dung we have found to answer as well as a larger number. A perfectly good lye will be made by taking one barrel each of the two species of dung, two of the urinary drainings, one of quick lime, and about 50 barrels of saturated water, which is then to be used as above explained."

"At the end of 48 hours from the completion of the heap, a fermentation of from 15 to 20 degrees of heat by Reaumur's scale has been found to have taken place; and on the following day it has generally attained from 30 to 40 degrees of Reaumur. On the third day the top of the heap is to be opened to 6 inches deep, with a fork, and the sediment thrown on the top is to be turned over, and another good drenching with the lessive is to be applied to the heap, which is again to be immediately covered up. About the seventh day, holes about six inches distant from each other are to be made with a fork to the depth of three feet, and another drenching is to be applied, the heap being afterwards covered up again. About the ninth day another drenching is to be applied, through new and somewhat deeper holes, and the heap is to be covered up again. After the lapse of from 12 to 15 days from the making of the heap, the manure will be fit to spread."

20 degrees of Reaumur are equal to about 77 of Fahrenheit. A manure heap of this construction, inspected by a committee in the State of New York, exhibited, on the 15th of September, 76° Fahrenheit; on the 20th, 102°; on the 25th, 137°; on the 26th, 152°; and on the 28th, 122°. A heap of green stuff ranged from 80° to 201°.

EDUCATIONAL DEPARTMENT.

WESTERN EDUCATION—NO III.

Great Practical Difficulties to be obviated.

BY G. F. MAGOUN.

III. Laxity of FAMILY GOVERNMENT prevents the securing of one of the great ends of education—*discipline of character*. No man is educated, whose moral powers are uncultivated and undisciplined. The highest intellectual culture, unaccompanied by discipline of *the heart* and *the will*, leaves him unfitted for the duties and responsibilities of domestic, social, civil and moral life. It may make him a shrewd and sagacious man, but it cannet make him a good citizen and a good man. The disturbers of the world's peace in great or small spheres have simply wanted this one element of character—discipline of the moral powers. A man of great talents alone can be a great villain: a man of small talents can be a small villain; but it is only the man whose heart will have been brought into subjection to law and right, who can be *a good man*.

Now any parent who is permitting his child to grow up without being directed, restrained, in a word governed, in his daily moral conduct, is simply leaving him to enter into life without discipline of character. How can he know that in the various circumstances in which he may be thrown, he will respect the law of man, or the law of God? Left to the promptings of self will in his youth, will he of course subject his will to the rules which society and the Divine will enjoin upon him when he arrives to responsible maturity? Has he formed such habits of deference and obedience to rightful authority that the community, as he comes upon the stage of active life, can feel entire confidence in the uprightness of his intentions, the firmness of his principles, and the unfailing rectitude of his habits? Can they feel sure that in his person righteous law will never find a disobedient subject or an open rebel? As a youth of disciplined character, trained to habits of obedience, passes from under the parental authority, to be amenable henceforth only to that of civil law,—all good men feel that there is the highest probability that his early acquired principles and habits will ensure his living the life of a good citizen; and can it be so in respect to him upon whom *no authority* has been brought to bear at home?

George Washington is the acknowledged model of American youth. When he passed the threshhold of early manhood, the confidence of the entire community greeted without hesitation one who had learned so well the lesson of obedience under his father's roof. "He will be a good citizen," all men said, "who has proved himself so good a son. He is worthy to command who has learned so well to obey." All men felt that in whatever circumstances he might be placed, harrassed by whatever difficulties, and appealed to by whatever personal motives of an unworthy kind—his self-control, his regard to right and truth, his deference to just authority, in fine his discipline of character would sustain him. What a contrast to such a person is the young man of whom men think, if they do not say, "he will do what is right, if you keep on the right side of him,—if he has no personal prejudice against those who are in authority, if his passions are not excited"!

Now what I wish to urge is this: that it is a sacred duty which parents owe to their children and to society, to sustain family government. It is too much the fashion among us, to allow the young to have their own way, to do what is right if they choose, and to do what is not right if they choose, to follow, in short, any given course of conduct *because it pleases them*; not because the parents' judgment decides it is right and best, or because he commands it. The fact is that a great principle of moral government is here trampled upon—which holds alike under the government of the parent, of the civil ruler, and of God—which is this: *a subject of moral government who pursues a certain line of conduct, simply because it is his own pleasure, and not because just authority enjoins it, disregards that authority, and would pursue the opposite course, if he pleased.* What can a parent be thinking of who leaves his child to trample upon all authority thus; or to grow up as unfitted for life as ignorance of that principle renders him? Not to say that he cannot become a good citizen, save by accident, he cannot even become a gentleman.

Platteville Academy, March, 1846.

ILLINOIS EDUCATIONAL CONVENTION.

It will be borne in mind by the friends of education that, at the Jacksonville convention last summer, it was resolved a State convention of teachers and delegates, and friends of common schools, should be held at Chicago the coming fall, immediately to succeed the show of the Union Agricultural Society. The time of the show is fixed on the 7th and 8th of October next, and the Educational Convention will immediately follow it.

From this convention much may be expected. The present school law, so far as we are aware, will be but little discussed. The impression prevailed very generally at Jacksonville, that with some slight modifications to remedy incongruities, this law had best be let alone till the legislative session of '48–'9, and meanwhile those who are acquainted with the subject, and are willing to labor for its furtherance, should come together and devise plans which are best suited to our peculiar necessities, and unite all the friends of education throughout the State, in favor of the system which may be agreed upon. In no other way than by thus meeting together, and freely and cordially discussing measures to be adopted, can the various and conflicting views be harmonized. Could we all come together, determined to yield our own preferences, if in the opinion of a majority other plans were more desirable, and pledge to each other our united, hearty support of measures that should be agreed upon, what could we not accomplish!

It was because so large a number from a large part of our State flock to Chicago in the fall, that it was deemed advisable to hold a convention at that place. There will be a vast multitude who expect to go there to market, who can make it convenient to go at the time of this convention; and then there will be very many others who would like to attend, who can take a load of produce to that mar-

ket if they do not ordinarily go there. Of the latter class, we shall hope to see hundreds of teachers—*practical teachers*—who have actual experience in the difficulties under which they and the public labor. If good for anything, they must have awakened sufficient interest among the parents of their scholars, to induce them to give a bag of wheat a-piece, to enable them to go to meet their brother teachers, which will suffice to pay expenses on the road, and furnish presents for the *good* scholars at home. It is to be distinctly remarked, that *no member of the convention will be at any expense for board while in Chicago.* Our citizens open their doors to all with hearty good will.

The agricultural show, with the mechanics' exhibition, which immediately precedes it, will be an inducement to many to be here at that time, numbers of whom will be willing to remain and aid by their presence and counsel in giving interest to the convention.

Several distinguished friends of education from abroad will be here, and doubtless many from Wisconsin and Indiana, and some from Iowa. Every western State needs pretty much the same system of education, and we should unite our efforts to make one perfect, which all can adopt.

A series of essays upon the following subjects were appointed to be prepared, to be read at this convention. We give them here, with the persons' names who are to prepare them, that they may be sure to have them ready:

1. How may a system of education be so conducted as to afford the best preparation for the various professional, agricultural mechanical and commercial pursuits? Upon what principles, and to what extent should the course of instruction be accommodated to each class?
2. Should the same system of education be pursued in regard to males and females, or upon what principle and to what extent should any difference be made?
3. How can we extend the means of instruction to all classes of community?
4. How may we accomplish the moral culture and elevation of all connected with our schools?
5. Can a system of common schools be made efficient without the division of the State into political *townships*?
6. Should the communication of knowledge, or the discipline of mind, be the primary object of the teacher? What course and methods of instruction are best adapted to these ends?
7. How can we best elevate the character and qualifications of teachers?
8. Are colleges and female seminaries indispensable as part of a system of general education?
9. Should the course of instruction in colleges and female seminaries be conducted with reference to the preparation of competent teachers, and should legislative aid be granted, at least to the extent of the University fund, for the attainment of this end?

The nine queries were assigned as follow:

No. 1. J. M. Sturtevant, President of Illinois College.
2. Wm. *H. Williams, of Morgon county.*
3. Francis Springer, of Sangamon county.
4. Prof. J. B. Turner, of Morgan county.
5. A. W. Henderson, of Chicago.
6. Rev. C. E. Blood, of St. Clair county.
7. John S. Wright, of Chicago.
8. Hon. Wm. Brown, of Morgan county.
9. T. M. Post, of Morgan county.

Education embraces more than the mere acquisition of knowledge: it is the disciplining of the whole man, in his faculties, tastes, and opinions.

EDUCATIONAL ASSOCIATION.

MESSRS. EDITORS: We have lately been much interested in the perusal of a little work entitled "The duty of American women to their country." It seems to have been written by Miss Beecher, though her name is not given as its author—its object is to shew the great necessity which exists that every child in the country should receive an education.

One might think this subject had been exhausted, and that there was no child to be found in our land, who could not, if he would, learn at least to read and write. But such is not the case. Notwithstanding the large appropriations made by the different States for educational purposes, "*more than half the children of this nation are yet without schools.*"

This work makes us aware of the existence of an association formed in Cincinnati for the purpose of finding a field for the labors of such benevolent women as may wish to occupy themselves as teachers, but who, from the want of "a suitable escort, a proper home, and the advice, sympathy and aid that would be needed by a stranger in a strange land," are deterred from making the attempt.

Beside this association, many other ways are here mentioned in which a woman who is so disposed may give an impulse to the great cause of education. Take for instance the following:

"* * * Some who have but little time at command can render an esssential service by an occasional visit to the schools in their vicinity, especially at seasons of examination, thus encouraging both teachers and pupils by the conviction that their labors are known and appreciated, and that the community around are interested in their success. If the influential ladies in any place would go but once a year to the schools in their vicinity, to enquire for their comfort and prosperity, it would give a wonderful impulse to the cause of education.

The torpid indifferenee of the influential classes to the education of the young, except where their own families are concerned, is the grand cause of all the dangers that threaten us."

The above come to us without signature, but we have somehow the impression, that its author is a lady. The book alluded to has not yet reached us, though we were aware of the association, and have been led to entertain high hopes of it.—ED.

COMMON SCHOOL TEACHERS.

BY I. JULIAN.

MESSRS. EDITORS: Much has been said and written about "professional" teachers; and much obloquy has been cast upon a class of teachers who are not professional, but who merely expect to make it a temporary employment. Belonging to this irregular class myself, I say that this reproach is unjust. As far as my information extends, a majority of the teachers of our common schools are men who do not expect to make it a life-business—among whom are many of our most efficient teachers. They are generally young men, and, notwithstanding all that has been said to the contrary, will very favorably compare, in mind, manners, and morals, with *old professional teachers.* That they cannot

all be permanently retained as teachers, is to be regretted; but the fault lies not in them, but in the defective systems of education. They are wronged, if any one is, by being forced to seek some other means of living. It surely cannot be expected that they should surrender all their hopes of superior usefulness and character in the world, to toil and well nigh starve as "*professional teachers.*" Let them be sufficiently remunerated, and they will adhere to the business, and it will take a higher stand in community. But as to making teaching or any thing else "a profession," in the technical sense of the term, I very much doubt its utility. The names of Jefferson and Rush will not sanctify quacks and pettifoggers; neither can every farmer and printer solely rely on the reputation of Washington and Franklin. Let men be judged by their individual merits, and not by their profession.

Centreville, Ia., February, 1846.

CISTERNS.

"*Oft* in the stilly night,
When slumber's chains hath bound me,"

I've been aroused by the elbow of my "better half" coming in contact with my ribs, two or three times, in quick succession, and the words "come, my dear, it rains, and the rain-water barrel has dried up so in the sun that the head has dropped out, and the boards that were under the eaves are down, and all this water is wasting. You know how much we need it. Do get up and fix things so we shall catch some," &c. &c. So after much solicitation and some little labor in pulling open my eyes, up I get, like a dutiful spouse, find my way into a pair of shoes and an old coat, get a lantern, and proceed to "fix things." After being out for half an hour in the rain, getting well wetted, and very uncomfortable, the job is done, the shower is over, and you catch nothing for your pains *except* a cold. Brother farmer, was this ever your experience? If no, you are a fortunate fellow; if yes, I'll tell you how to keep out of such scrapes in future. Build you a cistern as follows: Dig where you want the cistern a place 8 feet square, and from a foot to eighteen inches deep, or till you come to clay, be it more or less; Then strike a circle in the centre six feet across. Dig the circle some four and a half or five feet perpendicular, then draw in gradually till you get a depth of six and a half feet, leaving the bottom in the shape of a large kettle. This circle leaves a margin of a foot on all sides for the covering to rest upon. Procure a barrel of water lime, six bushels of coarse sand, half a dozen 2 inch oak plank 8 feet long, and a pine board or two. The plaster for the first coat consists of one part lime to two of sand, and is made and used exactly like common lime mortar. This should be put on and dry one day, when it is ready for the second coat, which consists of equal parts lime and sand. The plaster should be, when completed, one inch thick at the top, gradually thickening to two at the bottom. It is now ready for covering, which is done by laying down two plank sixteen inches apart, and bedding them just their thickness in the clay margin, so as to allow the plank which run crosswise to lie level. Now put in the curb sixteen inches square, and nail it fast; then proceed to lay down a covering crossing the two plank before spoken of. Plaster up the cracks in the plank and the joint where the plank and wall come together, cover the whole with earth to a depth sufficient to exclude frost, and the work is done. In three days it will be dry and fit for use.

A cistern the size of the above will hold about twenty-three barrels, and if kept from freezing, will last a life time. Their greatest recommendation, however, is their being so cheap. The lime may be bought in Chicago for $2 50, or in Lockport, Will co. for $1 50, and the work any farmer can do, who can build a respectable tap to a cider barrel.

Try the above receipt, and if it don't sweeten your wife's temper, and whiten out your shirt, the lady is past cure, and the shirt dyed in the wool.

A Lady's Friend.

Naperville, February, 1845.

The clay will not always be found so readily as above supposed.—Ed.

LOCUST GROWING.

BY L. ROBBINS, JR.

Messrs. Editors: For the benefit of the readers of the Prairie Farmer who may wish to cultivate the locust for timber, I will relate my experience. The day previuus to planting, I take the quantity of seed I wish to plant, put it in a suitable vessel, pour upon it a sufficient quantity of boiling water to cover the seed after it has swelled—the next morning drain off the water, stir in it a little dry earth or ashes, to prevent the seed adhering together. Prepared as above the seed will vegetate as readily as good seed corn, and if planted about the time of planting corn, will make a growth of from four to six feet the first season, with the same culture as a field of corn. Care should be taken to cover the seed shallow, for if covered too deep there will be a certain failure. Some plant as late as June, but I prefer early planting, as there is less danger from drouth—the trees make a far better growth, and are not liable to winter kill, as I have seen instances with late planting. I have both planted where the trees are to remain, and transplanted from a nursery, and can see no perceptible difference in the vigor and growth of the trees; but I prefer to plant where they are to remain if it can be done without danger of being destroyed by the prairie hen, as it saves a deal of labor. As to distance, I prefer to plant a grove in hills from four to five feet each way, with three or four seeds in a hill. After the seed has all vegetated, the weakest plants may be withdrawn, leaving one in a hill, or they may be left until the following spring, and then transplanted, or may not be removed at all. The object of close planting is to save cultivation, and cause the trees to grow tall and straight. Early the second season they should have a thorough plowing, after which the foliage will be so dense, and the ground so completely shaded, further cultivation will be found unnecessary. True it is impossible for trees planted so thick to all live and attain to forest size. The fact is the weaker plants yearly, as they are overtopt and left in the shade by their more thrifty neighbor, dwindle, and at last die, root and branch; and I believe they will continue to do until they have thinned themselves out to such

a number that they may grow to handsome forest trees—whereas, if in the first place only the requisite number of trees were planted on a given piece of land, the bodies would be short, with large spreading tops, or the whole tree would be a perfect scrag, of not half the value for any future use as a timber tree.

I consider the planting of timber of the utmost importance, and the man who lives on the prairie year after year without making the least attempt to add to the value, or beautify his farm, by so doing, to be entirely destitute of any taste for rural scenes.

Henderson, Ill., February, 1846.

USE OF AGRICULTURAL PAPERS.

BY JOHN HOCKINGS.

The following communication belongs to a class which we have thought best to exlude for the most part this year—being devoted to setting forth the benefits of our journal. But the facts stated are so much to the point, and are told in so straight forward a manner, that we have concluded to let the author tell his story. His suggestion of a chapter on the work for the month has been thought of, and where papers have a limited circulation is doubtless a good idea, but ours circulates over so much territory, where so great a variety of practice prevails, that we should despair of making it very useful.

MESSRS. EDITORS: I have been in this country about twenty months. Last February I first saw your work advertised, and being ignorant of farming, having been brought up a mechanic in England, I began to ask, what sort of a work is this Prairie Farmer? I was told it was good for nothing, and that if I began book farming I should soon be ruined. I then began to ask what was the right time to sow such and such grain, but the information I got was not satisfactory to me. I then went round to see what I could gather from observation, but I was still in the dark. I looked at farm work, and it appeared so different and so slothfully done to what it was in England, that I said if book farming is worse than this it is bad indeed. I sat down and counted the cost of your useless work, so called by many, and found that for a hundred and fifty pounds of pork I could have it for six years. I directly sent five dollars, and duly received the back volumes. At the time I received them there was an epidemic amongst the calves here, and many of my acquaintances lost them. I had one, a fine calf, but doomed to die by those that don't like book farming. I carefully perused the Prairie Farmer, and in the February number I found a receipt for calves. It is for young calves with disordered bowels. I applied the remedy, and the first dose did its work, and in three days my calf was perfectly restored. I gave the receipt to many, and I can say that at the lowest calculation it saved 20 calves. Here were four times the value of your work for six years saved, and by only one receipt out of this useless work of yours so called by many; but the best of the joke is that those who called it useless, and did not like book farming, were the first that wanted to borrow it, to know how to do certain things. Last year I lost two cows and two yearlings from being ignorant how to manage them, during the winter. This winter I manage them according to your book farming system, giving them good sheds; and although I have not one cob of corn to give them, it is allowed that my cattle look as well as when they were first put up, and I have not lost one of my stock. Then I ask, does not gratitude compel me to return my thanks to you and your valuable correspondents for the benefit I have received, for when I came into this country 20 months ago, I knew no more about farming than a cow knows about a rifle. It is true I don't know much now, but what little I do know I got the major part from the Prairie Farmer. Some make one objection to it, which is, that they want to see in it a column devoted to the work of the month, and the work to be done in one month put in the preceding number. In the old country there are several little works published on agriculture and kitchen gardening. In these works it is stated in the January number the work to be done in February, and in February what is the work for March, and in the March number what is to be done in April, and what quantity of seed to put to the acre, and what time to put the different sorts of kernels or stones in the ground to raise fruit trees. I do think if you, or some of your numerous correspondents would publish this valuable information, it would increase the usefulness of your publication. I have lost nearly a hundred fruit trees by not knowing the right time to shift them.

Being a tee-totaler, an idea has struck me, that if pork is thought so valuable by some, and whiskey is so injurious to all, let one count the cost of two hundred glasses of whiskey at three cents per glass, and he will find that he will have the price of the Prairie Farmer and enough to pay the postage. Then let the whiskey drinker pause and remember, when he swallows three glasses of whiskey, that he has swallowed the price of one of the monthly numbers of your useful publication.

Burlington, Wisconsin, March, 1846.

THE BRUCHUS PISI.

During the season of green peas, any one who will take the trouble to make examination, will find, upon many of them—and often upon every pea in the pod—a small discolored spot, and a puncture through the pod corresponding to it. If he examines this spot after a few days, he will find a small white worm embedded in the pea. This worm continues to feed and grow till by the time the pea becomes dry, it has attained its growth. During the autumn it becomes a pupa, but before spring it again casts its skin, and becomes a beetle, known as the pea bug. They now begin to leave their dens, and before the peas are a year old, will have quitted them entirely. By the time the new peas are well formed in the pod, they are ready to commence the work of puncturing and laying their eggs again. At this time of the year, in almost any lot of peas great numbers will be found in which the bugs still linger, and may be seen looking out of their holes with as much gravity as a well fed horse from his stable window.

So far as the growing of green peas is concerned, they are no great injury—provided one has no scruples, conscientious or otherwise, to eating the larva

—a thing which the eater of green peas must infallibly do. But when peas are grown, to be eaten dry either by the family or by stock, the damage done is very great. The wevil devours about one half of every pea in which he harbors; and if dry peas are cooked, the full grown beetles are to be eaten also—a delicacy not especially to be coveted.

The germinating powers of the pea are not commonly injured by the wevil; but it is not to be doubted that its capacity for vigorous growth is greatly weakened; and that it is not best to sow those infected by this insect.

The insect may be easily destroyed, if, after gathering the seed it is plunged into boiling water and quickly taken out and dried, so as not to injure its germinating faculties. This would *not* secure the crop raised from such seed against the insect, as enough will be hatched from otherpeas to puncture all in the neighborhood. The accompanying cut is from life, and is twice the length and breadth of the living specimen.

WHEAT IN SOUTHERN ILLINOIS. CATERPILLARS.

MESSRS. EDITORS: Let me inquire whether it is a fact, as I have often heard it observed, that wheat is a very uncertain crop in Southern Illinois? For one I am not prepared to give full credit to the assertion. Why should not wheat, properly put in the ground, do as well here as in other States as far south as this? I think if wheat has failed here, it should be charged to bad management rather than to the climate. I know of individuals who have succeeded every year in raising a good crop of wheat for the last six years. Cause why? They ploughed their ground thoroughly, sowed their seed in season, and left the ground *smooth*, so that the water would drain off. The truth is there is much bad farming in Southern Illinois. But that wheat cannot be successfully grown here when properly put in, I have yet to learn. In proof of this will you publish the following from the Alton Telegraph:

"About three years ago, Mr. J. G. Crandell, of Monroe county, New York, removed to this State, and purchased a quarter section [160 acres] of prairie land near Brighton, ten or twelve miles from this city; and, with the assistance of two sons, proceeded to put the same under cultivation. Of his progress or profits during the first two seasons, we have no accurate knowledge. But we learn that his small farm, besides supporting his family, will yield him the present year over *fourteen hundred* dollars in cash. All the labor expended upon it, except during the harvest, has been performed by himself and his sons—the entire sum paid out for hire falling short of *one hundred dollars;* and his whole tax for State and county purposes, not amounting to *five dollars*. His main crop is wheat, of which he has sown 100 acres this fall, which has a promising appearance, and bids fair in due time to give him an ample return. We presume that many others among our agricultural friends in this vicinity have been equally successful; and notice the above particularly, because we have obtained the information from the person most qualified to furnish it—Mr. Crandell himself. His experience shows not only what may be effected by attention and skillful management, but also that a large farm is not indispensable to success. He tells us, that he formerly cultivated 250 acres of what was considered good land, near Rochester, N. Y., but never realized so much clear profit in any one year, during his residence in "the Empire State," as he has done the present season."

It will be observed from the above that the main crop was wheat. How much better have you of the north done than this? And here I will make a call on southern correspondents to give their experience on this subject. I call for light—for the truth of the case. Will any answer?

CATERPILLARS. I object entirely to the direction given in the last Farmer to cut off each limb having a nest of eggs on it. Were you to do that in the case of many small trees, you might as well do as the fellow did with the dog, cut off the tail just back of the ears, for in case of the tree no head would be left. My notion of the matter is this: go round and pick off all the nests you can find, and this you can easily do, and if any hatch, being overlooked by the first examination, get up in the morning, go to your trees and pick off the nests with your hands, while they are young, using a ladder for the larger trees—then lay them on the ground as quick as you please and put your foot on them. You will find them at home in the morning.

Tell friend Lathrop to go on, and give us further directions about bees. B.

Woodburn, Illinois, February, 1846.

GRASS SOWING—WEEDS—VINES.

BY J. B.—MANLOVE.

MESSRS. EDITORS: In the December No. of the Farmer I see certain remarks of Mr. Shillaber on grass culture to which I partially respond. I have had experience fifteen years in grass culture in this county. I have sowed in the spring and in the fall. I consider the best time for timothy and red top the usual time of sowing wheat, and for clover in the spring. I have had Timothy to do well in the spring; but several reasons exist which I think are against sowing then. When sown in the spring no crop is harvested the first season, and frequently hot dry weather whilst it is very young and tender kills it, and other growth of weeds &c. grow where grass should grow. When sown in the fall it takes root before cold weather, is not affected during the winter cold, and makes a full crop the first season. I have sown on oats and wheat in the spring; but it is liable to be killed as before when the crop is taken off, if not previously smothered by falling of the grain. If timothy alone is sown, not less than six or eight quarts per acre of seed—if timothy and clover, four of the former and two of the latter. The best crops of grass I have ever had was composed of timothy and red top, and red and white clover, cutting three tons per acre of good hay when well cured. It is not necessary to sow much red top seed, as it gains on other grasses every year. I have sown on unbroken sod, but have not found it profitable. Ground should be in complete order, plowed deep, well harrowed and rolled, and slightly harrowed or brushed after sowing. I recommend that seed be sown half one way and half the other, in

order to be more even, for if grass is not even or thick enough from the first sowing, it is some years before it becomes so in every place. It is a great benefit to pasture it in the fall, and the larger the quantity of stock that runs on it in the winter the better (the Berkshire breed of hogs excepted). If the ground is soft, and tramping makes it uneven and cuts the roots, harrow and roll in the spring, and it is all the better. The grass will grow thicker and faster, and be a heavier crop than if not pastured after mowing. What I have said on grasses is the result of observation on my own farm and others, and are facts here. I can raise as much timothy with clover as without it, and no difference how rich the soil, manure increases the crop very much. If any one doubts the propriety of mixing grasses, let them try the experiment in the same field, sown the same way.

Chinch Bugs. Have you any of the winter articles? A neighbor of mine has them by millions, preying on the wheat fields. Any time during winter, when frost has not prevented, the surface has been alive with miriads of all sizes and different colors and ages. They commenced by his last summer's corn-field, and take all as they go.

Horse Nettles. I don't know the botanical name of this plant, and many in the West do not know the plant. All should. I wage a war of extermination against it. Carolinians and Virginians know it, and in my native State (N. Carolina) it was the greatest pest that the soil produced. The appearance of the top is not unlike the potato, and bears little balls somewhat similar. The stalk and leaves are covered with long sharp briers that penetrate on the slightest touch. They are nearly the color of the skin, and are hard to get out, soon fester, and are very painful. In wheat, oats, corn, all crops where they get hold, they are harder to kill than any thing I have seen; one straight root runs down many feet in the ground. Cut it off, and in a few days it is growing as before.

VINES.—A Mr. Christopher Megley, a German, in this county, a few miles from the Illinois river, has a vineyard of about sixty square rods, planted out seven years this spring, from which he has had an abundance of good grapes for several years past. Last season he made four barrels of wine, the clear juice, besides selling thirty dollars worth of grapes. He sold from one vine five dollars worth, besides using from it for family use—has three varieties. Each does well. Mr. Megley understands the business, and thinks grapes will do as well as in Germany.

Schuyler county, March, 1846.

AN AGRICULTURAL SOCIETY IN MACOUPIN.

At a primary meeting, pursuant to notice, of a portion of the farmers and citizens of Macoupin county, held at Carlinville on the 21st of February, 1846, Mr. JOSEPH C. DUGGER was called to the chair, and JOHN A. HALDERMAN to act as secretary.

The object of the meeting, as explained by J. C. Halderman, was to inquire into the expediency of forming an "Agricultural Society," for the benefit of the farming community in this county. Whereupon the following resolutions were unanimously adopted:

Resolved, 1. That a general meeting of the citizens of Macoupin be held at Carlinville on the first Monday in May next, for the purpose of organizing a county Agricultural Society.

2. *Resolved*, That John A. Haldeman, Henry Edwards, and F. A. Olds be a committee to give public notice, in the county, of said general meeting in Carlinville; and to procure some person to deliver an address to said meeting in favor of the organization of a county Agricultural Society.

3. *Resolved*, That J. C. Daws, John A. Halderman, and Wm. W. Freeman, be a committee to present a form of Constitution for the consideration of the meeting in May next.

4. *Resolved*, That the proceedings of this meeting be sent to the Prairie Farmer, with a request to the editors for publication.

On motion, The meeting adjourned to meet at Carlinville, Ill., on the first Monday in May next.

JOSEPH C. DUGGER, *Ch'n.*

JOHN A. HALDERMAN, *Sec'y.*

SUGAR GROVE FARMING AGAIN.

MESSRS. EDITORS: You will oblige me by giving this to your readers. The reasons for my requesting this favor is, that wrong and injurious impressions may be removed, which have been caused by the publication of an article in the January No. The article alluded to is "Sugar Grove Farming." That injurious impressions have arisen from those reports there can be no doubt. I have been thrown into company where the subject has been brought up (keeping dark as to my connection with the Institute,) and have heard the opinions and expressions of many upon it, and can readily see that our Institute has fallen into disrepute. Erroneous statements have prejudiced the public mind against us. Now what I aim at in this, is to show that as a body we do not sanction those reports. I wish to state things as they probably are, and then leave the public to judge for themselves.

Wheat field, by W. B. Gillett—a premium awarded on an amount that is less than the average crop through the whole town. I consider this report, as a whole, a burlesque upon the Institute, and a disgrace to them, inasmuch as it bears upon its face inconsistences and improbabilities. There can be no man found in our section of country so out of reason as to believe, and much more to think, that he can make others believe that at the time of seeding last year he could hire a man who would find himself and team to plow two acres for one dollar per day—the actual value of a day's work at that time being nearly or quite double that amount. From all calculations which I have ever seen made upon the cost of raising wheat per bushel, none have ever fallen short of twenty-five cents, and many exceed thirty, especially in an ordinary crop, as the one spoken of, and I am inclined to think that if neighbor Gillett had calculated the whole cost,

his would have been more than twenty-five cents.

Account of 12 acres of winter wheat:	
Sowing one day,	$0 75
Plowing 4 days, man and horse,	6 00
20 bushels seed, at 58c,	11 60
Harvesting 12 days,	18 00
Stacking, 2 days, 2 men and team,	7 00
Threshing 270 bushels, at 12½ cents,	33 75
	$77 10
Cost of raising per bushel,	28½
Cr. by 270 bushels at 58 c,	136 60
Nett gain,	$59 50
12 acres leased, ⅓, 94 bushels at 58 c,	54 52
Advantage of tilling your land, on 12 acrs,	$4 98
Account of 18 acres:	
Plowing 18 acres, 9 days,	$18 00
Marking and planting, 12 days,	13 25
Plowing out, 16 days, man and team,	24 00
Hoeing, 8 days,	6 00
Husking 720 bushels,	21 75
	$82 95
Cr, by 720 bushels, at 20 cents,	144 00
Nett gain,	$61 05
Cost per bush. at 40 bush. per acre,	11½

A true statement of things can do no harm, and when we are reckoning the cost of cropping in this country, let us give a righteous account, and then it leaves us a liberal rent for our land. Your readers can make the comparison between the two, and then judge for themselves whether friend Gillett's report or mine is nearer to the true cost of cropping in that section of country from which the reports hail. A MEMBER OF THE INSTITUTE.

Sugar Grove, February, 1846.

SPRING WHEAT & SMUT. EXPERIENCE.

MESSRS. EDITORS: The new insect noticed in your Sept. No., page 210, I have seen for several years, but have not known it to prey upon wheat so extensively as last season. I have noticed it more particularly in spring wheat than winter, for I raise more of it, and think it better for family use. The past season my spring wheat gave 33¾ bushels to each acre, which I sold for two cents less on a bushel than my winter sold for. My spring wheat is bearded, with white chaff and small straw. With regard to smut in wheat, I find enough on page 60 of your March No. 1845, to pay for ten year's subscription to the Prairie Farmer, but as it will soon be time to sow spring wheat again, and some may not have read that, or have forgotten it, I will give my experience. About twenty-five years ago, having sowed about six acres of good ground with clean seed on a fine morning, I went to dragging, but before night there came up a shower, and feeling anxious to finish that day, I kept at work till it rained pretty fast, and then stopped till the shower was over. I then finished the balance, which was something less than one acre. At harvest, that which was dragged in the morning was good, with hardly a smut head to be found—that which was dragged after it commenced raining was very smutty; and that which was finished after the rain was so smutty that it was not worth harvesting. I then heard of putting brine and lime on seed wheat, which I have followed ever since; and the consequence is, that I have not raised one quart of smut with my wheat managed thus in the whole twenty-five years. My manner of preparing it is this: I take a cask sufficiently large to hold what I intend to sow in one day, (as I do not farm it largely,) and fill it partly full of strong brine, turn in my wheat half a bushel at a time, stir and skim it till I get it clean of oats and poor wheat, or any thing that the brine will raise, taking care to keep brine above the wheat, so that it can be skimmed off clean. After it has stood through the day, at evening I drain off the brine, and mix new slacked lime with it till I am quite sure that lime has reached every kernel, and let it lie over night. Once, about twelve years ago, it chanced to rain before morning, while my wheat was in the lime. My ground being a wet piece, as it kept raining, I was resolved to give it a fair trial—so I spread my wheat and stirred it often for about three weeks, till it looked rather hard, and my neighbors said it would not grow at all. I sowed it, however, on the 19th day of May, and on the 21st day of August I cut and put it up, the best I ever raised in the East. F.

Delevan, Wis., February, 1846.

CONDENSED CORRESPONDENCE.

The Chinch Bug. Mr. L. Robbins informs us that in Henderson county, where this little marauder made his *debut* last season, every warm spell awakens him to life; so that little hope remains that the winter will prove his quietus. Mr. R. states that a piece of wheat on new-broken land was but slightly damaged, while an adjoining one was three fourths destroyed.

A letter from Dr. Thaddeus W. Harris, received by us last month, states that this insect is probably the *Phytocoris lincolaris* of his work; but as his book has not yet come to hand, we are unable to make the comparison. We have forwarded specimens to Dr. H.

The Fly Wevil. The letter of Dr. H. also contains the following extract:

"For some time past I have been trying to get specimens of the fly wevil, or Augoumoi's moth, from the South and West, and have written numerous letters requesting statistics respecting it, and specimens of the insect and of damaged wheat containing living larvæ. To most of my letters no answers have been received. I have however through the kindness of a gentleman of Virginia, received some of the moths in pretty good condition; and have got a sample of the corn, *full of the insects,* from which I have obtained *several fine specimens* of the moth, and have now made drawings of the insect in all its stages. You will oblige me much if you will give me any statistics as to the amount of damage done by it in your region or elsewhere—with any other particulars relative to its history that you may please to add."

Will our correspondents in regions where this insect's work is carried on, enable us to answer the above inquiries?

Cherokee Rose. Col. Alexander McDonald informs us that the garden of Mr. Camak of Athens, in Georgia, Editor of the Southern Cultivator, is surrounded with this briar, and that his fruits are as safe as if under lock and

key—neither white nor black men, swine nor cattle, being able to reach them. Col. McD. also sends us the following from his note book, showing how gardening is done in Alabama:

"On the 13th January, 1846, sowed the following seeds: The early English pea, (last year we had them on our table here on the 20th March,) the common cabbage, and the onion. Planted Irish potatoes the same day; sowed the drum-head cabbage and the cauliflower. I find on the 20th inst. the following entry: the English peas, lettuce, and cabbage, sowed on the 13th December now up."

Cherokee Rose. W. H. Wilson of Adams county states his experience with the Cherokee rose thus:

"Some years since a friend of mine brought some cuttings of this rose from Georgia, and planted them in the south of Kentucky—lat. 36° 30′. They grew well, but would not stand the winters. In no instance did they survive the second winter. This rose is an evergreen in the South, but dropped its leaves in Kentucky."

Swine running at large. Mr. D. C. Drain of Warren county writes as follows in relation to this subject:

"I had a mind to say something about petitioning the next General Assembly for the purpose of having a law passed to keep up all hogs and small animals, as timber is not too plenty in this State for fencing the prairies; I think such a law would be productive of great good to this commonwealth, as the vacant lands would be settled much faster, and there would be much better hogs and less trouble to take care of them; and better feeling between neighbors."

Wintering Sheep. So far as we can learn from extended inquiry, the keeping of sheep has been highly successful during the past winter. A letter from D. Sanborn of Peoria county remarks as follows: "I have lost but 7 so far, out of 475, and do not believe I shall lose many more before they go to grass." This is as great a loss as we have been able to hear of. The contrast between the past season and the one preceding is probably due to several causes. In the first place far less of the flocks were last fall new comers, and those which were such had been driven early; and as the last summer was a good one for driving, they had suffered very little—so that flocks generally went into winter quarters in good condition. In the next place, the winter has been a better one, having been less open and wet than the preceding. And lastly, the food prepared for winter use was universally better. The immense rains of the summer of 1844, flooding all meadow grounds, where their waters often stagnated and corrupted, had a tendency to produce a washy and diseased herbage, such as could not be safely eaten by sheep; and it was due to this as much as to any cause that so many sheep died during the winter of 1844–5.

The Fair at Chicago. A letter from J. B. Richardson of Clark co. concludes thus:

"I feel quite anxious that the agricultural meeting or fair contemplated may "come off" at Chicago next fall. I wish to exhibit some of my horses, and show *some folks* that thorough bred horses are not always the *spindle shanked* animals they suppose, but are better calculated for the horse of all work than any other breed whatever."

Chesnuts. Russell Cheney Esq. of Janesville, Wisconsin, writes thus:

"I have received one barrel of chesnuts from western New York, packed in earth when gathered, and now froze, which I intend planting in the spring. Has any one tried to raise a chesnut grove? Any information upon the subject would be gratefully received through the Pr. Farmer."

Chesnut growing has proved, as far as we are aware, a poor speculation. We know of some four or five years old and not yet two feet high. It is hoped that Mr. C. may succeed better. We should recommend a manure of leaves for them.

Back Volumes of the Prairie Farmer. A subscriber writes as follows:

"Mr. G. wants your back volumes. He came to this conclusion in the following manner. He called upon me yesterday to see if the Prairie Farmer said any thing of 'Grubs in the heads of sheep,' as he had lost a good many by this disease. We found directions on the subject in the first volume; and Mr. G. concluded that if one volume contained an article so much to his purpose, the others might contain others. Mr. G. sold last season about one hundred hogs, 18 or 20 stall-fed cattle, one ton of honey, besides other matters in proportion."

The above gives us an opportunity to answer a certain class of inquiries. One wishes to know why we do not publish an article on this, and another asks if we will not give information on that subject—when the truth is, we have published fully on both in some of our past volumes; and our subscribers who have stood with us from the beginning would be justly offended if we were continually printing the same matter over and over again. On matters of which we have already published fully, we intend to give whatever may be discovered that is new and useful; and for the rest we can refer to past volumes, which are none the less valuable because old.

To G. P, Hampshire, Kane co. The buckthorn seed may be procured, undoubtedly, at New York, and probably at St. Louis, Cleveland, or Buffalo. The black locust in our opinion, will make no hedge at all. Wherever the buckthorn is found, the seeds may be gathered plentifully, as it is a great bearer.

Sun-flower Seed. Mr. J. N. Hough of Clinton county, Iowa, answers our inquiry on this head.

"In your February number you ask for information relative to some sun-flower seed taken to St. Louis last fall; if you get no better answer you can take mine. The seed met a ready sale, for the purpose of being manufactured into oil; and sold within one or two cents of the price of flax seed. I did not see it sold, but was informed of the fact by a commission merchant, who also told me that good sun-flower seed would always command a ready market at flax seed rates, the oil being equally as valuable as the flax seed oil. If such be the fact, would it not be a profitable crop for the farmer?

I also wish to inquire if you know any thing of a movable horse-power saw mill, which was advertised in Baltimore some three years ago; if it answered expectations, and from whom I can obtain any information upon the subject. Also—Has the raising of capons ever been attempted in the West? In New Jersey they are a source of much profit to the growers of poultry. I myself have sold them for never less than 12½ cents per lb. Its introduction there I believe dates some five years back. There they are as easily raised, fat easier, grow larger, and pay better than other chickens of the same class."

Of this machine we heard something about two years since in Jacksonville in this State, but did not see it; and no account of it has since met us. Probably some citizen of that town could announce its fate.

To justify capon growing, a steady and well-paying mar-

ket would seem to be necessary. We shall publish on that head before long, for the benefit of the uninitiated.

Trees killed by the Winter. From J. M. Hurd Esq. Jersey county:

"The fruit trees in this vicinity have suffered extensively from the cold weather this winter. Peaches are killed, trees and all. The apples appear to be killed, and some of the trees. It is something new with us."

From what we can learn, it is probable that this destruction is very extensive in the south of this State.

Slavering of Horses. The same letter adds:

"Please tell your readers how to prevent horses from slavering when fed on clover hay. I believe clover hay does not have that effect in the eastern States, but it does here; and as it grows better here than any other grass, it is desirable to find a preventive."

This latter inquiry we cannot answer; perhaps some of our readers can.

S. A., Salem, Wisconsin, who asks us for an article in our April number on transplanting fruit trees, is informed that our last volume is full of just that matter. As we have no article of the kind on hand for this number, we have forwarded a back number in which he will find a sample. We append his recipe for

Removing a kernel of corn or any like substance from the nostril of a child, with great pleasure, as we have known the most distressing results from children crowding such things into their noses.

"Take a common weaver's quill, insert one end of it in the opposite nostril, place the other end between the lips of the operator, who is to perform it by blowing—at the same time taking care that the mouth of the patient be closed to prevent any escape of wind from that organ—and the business is done. The operation is attended with no pain, and success is certain."

Reapers and Harvesters. James E. Starr Esq. of Edwardsville writes us that he has an agency for one which he proposes showing at the Fair here next fall. It has never been introduced to the public for sale; but was shown at a Fair of the American Institute in New York successfully.

Questions from Missouri. W. L. Pugh Esq. of Roanoke, Missouri, suggests several inquiries:

"What kind of land suits buckwheat? amount of seed per acre; time to sow; mode of harvesting."

We have had a hand in raising buckwheat here and at the East; and though it does best on tolerably rich land, we have always supposed it hard to find ground where it would not grow. It is sown at all times from the first of May to the first of July—we have sown it in Massachusetts on the 4th of July and harvested a good crop—on well pulverized land; about three pecks or a bushel to the acre. Rolling is a benefit to it.

It must be cut before frost comes—with a cradle if it stands well—and should be threshed after a few days' drying. When cradled, if the raker follows at once and rakes it into gavels and sets them up on end, which is easily done, it will dry better and much cleaner—which is a great object when it is intended for family use.

We notice that in the conversations of the Massachusetts Club at Boston, all the speakers scout this grain, with the exception of the venerable editor of the Plowman. We honor his spunk in standing by the buckwheat. In our opinion, a man who does not relish hot buckwheat cakes, made of clean flour—not sandy meal—well buttered and dressed with syrup, on a cold winter morning—ought not to have any.

Mr. P. further writes:

"I wish to include some bottom land, for hemp, which lies on a creek, and I design crossing the creek to save fence; said stream frequently rises during the year until it would swim a horse. Any approved mode of constructing water gaps on a branch of this size, would be very acceptable to me just now, and perhaps others are in want of the same kind of information. I take an agricultural paper to learn from the experience of others; and believe it of equally as much importance to the man who manages a farm to read a farming paper, as a grinding stone is to the man who uses tools.

I believe every farmer is under obligations to give his experience and improvements to the public through the columns of an agricultural paper; and believing so, I shall occasionally give my experience and mode of farming, to disposed of as you may think proper.

I had intended to give you my mode of raising sweet potatoes, which I so astonished the "natives" with last spring by rushing them out of a hot bed in a few days, and before those who had planted in hills had the pleasure of seeing a sprout on theirs; but a mode you have published in one of your back numbers is the identical manner by which I raise them, and precludes the use of my writing my plan."

Taxation for Schools. Mr. W. D. Barrett of McDonough county, writes that it is proposed to raise a tax to assist the school fund in his township; and that while he hears many speak in favor of taxation, no one speaks against it. He remarks "I suppose I must vote for taxation for the benefit of the community generally, though it will be of no immediate good to me. The wheat crops here were injured by a sort of bug." We believe that when men begin to think in earnest about schools, there will be little difference of opinion about taxation. Nor should we agree with our correspondent that because he has no children of his own, good schools will not benefit him. Intelligence benefits every man in a community. Property is worth a round per centage more where good schools are maintained, as a little observation will convince any one.

Mr. C. A. Watkins writes from Ray co. Missouri:

"*Tobacco and hogs* are all the rage here at this time. There will be but little hemp raised in this section of the State this year."

Spring Plowing against Frosts. Mr. L. H. Ide of Sangamon county remarks in relation to an article in our February number:

"The philosophy of the Michigan Farmer upon plowing in the spring to prevent the effects of the frost *seems* very good; but the universal experience *here* is against the theory as far as corn is concerned. I could state facts if desirable."

Mr. J. D. Wood of Montgomery county also writes on the same subject as follows:

"I see by the Prairie Farmer, you have a notion "up north," that stirring or plowing will protect growing crops from injury by frost. Whether this notion be founded on facts or theory I know not; but this I do know—the reverse proved true here, last May. I had five acres of corn, in the centre of a 40 acre field, plowed just before the frost—it was all cut to the ground; while corn that had not been plowed, in the same field, on the same level, sustained little injury. A neigobor had corn and castor beans in the same field; the corn, fresh plowed, cut to the

ground; beans, not plowed, slightly injured. I have been at some trouble to inquire, and find the same *fact* on every farm in this region. I leave the *theory* to those who like it.

Ditching Machine. Will you tell us how we are to get a ditching machine in these parts? Some persons think we have not energy enough to use one. Will you induce some one to try us?"

"The Perfect Ditcher," so called, is extensively used in this State; but we are not aware who has the right for Montgomery county; if we can ascertain we will write. We also saw an advertisement of a ditching machine in a Peoria paper, but are not informed of its operation.

The mode of preventing the destruction of trees by rabbits recommended by Mr. C. B. Watkins, has been before published by us; but nurserymen object to its great expense of time and trouble. It is undoubtedly effectual.

A HORSE STOLEN.

The following is a description of the horse: color bay, with black mane and tail, and black legs to the knee and gambrel joints, three years old last spring, taken about the 1st of August. Any person who will give information where said horse can be found shall be rewarded. Direct to

WM. C. PEARSALL.

Elk Grove, Cook co., Illinois.

Green Ointment or Oil for Cuts, Wounds, Bruises, Burns, &c. Take one handful of the following herbs: Red Sage, Camomiles, Rosemary, Rue, Thyme, and Lavender—boil them (a brass kettle is best) in a pound of lard—let it simmer for some little time, strain and squeeze out the herbs, and when cool, the ointment is fit for use. For cattle, linseed oil is as good as lard. W. B.

METEOROLOGICAL RECORD.

Lat. 41° 45′ N.; Lon. 87° 35′ W.; from Feb. 19 to March 15. By GEO. F. WILSON, *Principal of Chicago Academy, for Chicago Mechanics' Institute.*

Day of the month.	Height of Barometer in inches and hundredths.				External Thermometer.					Clearness of the sky.				Wind, its force and course from.				Rain—Quantity in inches.	Remarks.
	Sunrise.	9 o'cl A.M.	3 o'cl P.M.	9 o'cl P.M.	Sunrise	9 A. M.	3 P. M.	9 P. M.	daily mean	Sunrise	9 A. M.	3 P. M.	9 P. M.	Sunrise.	9o'cl A M	3o'cl P M	9o'cl P M		
Feb. 19	28.43	28.30	28.37	28.40	29	31	31	38	32.00	2	0	0	0	NE3	NE4	NE4	NE4		
20	28.49	28.45	28.42	28.42	24	29	30	18	25.25	8	9	6	3	SE2	SW2	W2	NW2		
21	28.60	28.60	28.62	28.62	16	27	16	04	15.75	9	10	8	10	W2	W2	W2	W2		
22	28.70	28.60	28.64	28.73	0	14	28	10	13.00	9	10	7	5	W2	W2	SW2	SW2		
23	28.40	28.37	28.35	28.60	6	22	31	10	17.25	3	9	8	4	W2	W3	W3	W2		
24	28.67	28.63	28.64	28.70	7	12	16	04	09.75	2	8	9	10	W2	W2	NW2	NW2		
25	28.84	28.82	28.74	28.80	0	12	16	00	07.00	10	10	10	10	NW3	NW2	W2	NW2		
26	29.00	28.94	28.90	28.92	*6	04	10	06	03.25	10	10	10	10	NW2	NW2	W 2	NW2		
27	28.90	28.76	28.74	28.80	10	14	16	09	12.25	9	8	9	10	NW2	NW2	W 2	NW2		
28	28.67	28.60	28.58	28.49	14	22	30	16	20.50	10	10	10	10	W2	W2	W2	W2		
March 1	28.40	28.40	28.37	28.42	22	30	32	21	26.25	10	10	10	10	W2	W2	W2	W2		
2	28.49	28.41	28.40	28.46	24	31	32	28	28.75	10	10	10	10	W2	W2	W2	W2		
3	28.50	28.49	28.46	28.50	27	32	36	27	32.50	10	10	10	10	W2	W2	W2	W2		
4	28.60	28.50	28.48	28.47	28	34	48	32	35.50	10	10	10	10	SW2	SW2	SW2	SW2		
5	28.35	28.30	28.29	28.37	32	34	46	35	36.75	8	8	9	9	SW2	SW2	SW2	SW2		
6	28.34	28.30	28.29	28.30	31	36	48	39	38.00	4	8	9	10	SW2	W2	W2	SW2		
7	28.34	28.32	28.30	28.30	32	36	38	34	35.00	9	9	9	9	W2	SW2	E2	SE2		
8	28.30	28.20	28.10	28.10	32	32	40	37	35.25	9	9	9	9	S2	SW2	NE1	NE1		
9	28.35	28.30	28.24	28.34	34	38	48	32	38.00	9	9	9	9	SE2	SE2	SE2	SE2		
10	28.36	28.33	28.30	28.30	31	36	46	36	37.25	10	10	9	8	SE2	SE2	E2	SW2		
11	28.30	28.25	28.20	28.15	34	42	56	39	43.25	5	3	0	1	SE2	SE1	SE1	SE1	.52	Rain
12	28.10	28.15	28.20	28.24	36	39	47	38	40.00	4	5	7	8	SE2	SE2	S2	SE2		
13	28.30	28.25	28.22	28.37	32	34	54	38	39.25	0	7	9	4	SW2	SW2	SW2	SW2		
14	28.40	28.38	28.37	28.39	34	39	47	36	29.00	8	9	7	4	W2	W2	W2	W2		
15	28.50	28.46	28.45	27.60	30	39	52	38	39.75	10	9	8	9	SW2	SW2	SW2	SW2		
Means	28.49	28.45	28.40	28.45					28.03									.52	* Below 0

Monthly mean of Barometer, 28.27. Monthly mean of Thermometer, 36.02. N. B. The cistern of the Barometer is placed 36 feet above the surface of Lake Michigan. The external Thermometer has a northern exposure, and is out of the reach of the direct rays of the sun. In the column headed "Clearness of the sky," 0 represents entire cloudiness—10 entire clearness. The figures 1 2 3 4 5 6 denote the force of the wind, 2 denoting a gentle breeze, 4 a strong wind, 6 a violent gale, &c.

EDITOR'S TABLE.

"Republication of the Edinburg Review, Blackwood's Magazine, London Quarterly Review, and the Westminster Review. By Leonard Scott & Co., 112 Fulton street, New York.

These four reprints, whose advertisement was contained in our last paper, have made their appearance on our table for some months past.

It is not too much to say that the publishers are doing the American public an inestimable service in bringing forward these works at rates which put them within the reach of every one. These works embrace the very best literature in the world; being sustained by the pens of the very first writers in Great Britain. The work of reviewing there is not left to second rate men, or mere literary adventurers, but is taken up by the best minds. Who has not heard of the articles of T. B. Macauly in the Edinburg, or of Prof. Wilson, the glorious old "Kit North" of Blackwood. The articles of these men alone are worth the prices of their respective works.

Other writers, second only to these, in great numbers contribute to these pages, of whom are the late Sidney Smith, Lord Brougham, &c.

It is not to be doubted that these reprints will find exsive sale in this country, when once they are brought to the notice of the public; and their extraordinary cheapness is considered. Blackwood is said to have 40,000 subscribers in Europe, and it is worthy of an equal number here.

For terms, we refer our readers to our cover of March.

Prince's Nursery. A letter from Mr. Prince complains of the short notice inserted by us last season in relation to a quantity of ornamental shrubbery sent here for sale. Mr. P. avers that the plants were correctly named, and remarks of their qualities as follows:

"In selecting the parcel, it being a first adventure, and the distance and usual delays so great as to render their living uncertain, and presuming that the people would not pay high prices, we sent only our cheapest varieties. They were all correctly named, and persons could buy or not. Shrubbery and plants bloom but indifferently the first season of being transplanted; and as those we sent survived and bloomed after so long a travel, it proves our superior style of packing, it being now settled that even delicate carnations can be sent safely. In conclusion, we have simply to say that if any persons desire our finest trees and plants, they need but to pay their prices, and we guarantee the accuracy of every article, and those who will visit our establishment will find it so completely systematized that it is next to impossible to commit an error. Precision is with us an object of particular pride. As a mere matter of interest, a man must have very little brains who can believe that a physician will poison his own patients."

We are assured by our informants that the plants alluded to are well cared for, and will have a chance to vindicate their character.

Eclectic Magazine. The Eclectic is a great favorite with us, and loses none of its interest of late. The strongest and best articles in the foreign reviews are copied into it. We hope the editor will not listen to a suggestion made in a leading journal lately, to copy less of reviews and more from magazines. We have enough of that, in all conscience. Let us have strong articles—such as have made the Eclectic hitherto worth binding and keeping. New York: $5 in advance.

☞ We regret to learn from Solon Robinson that he has been confined to his house by ill health all the winter, and is still very feeble.

☞ A sample of the wool of Mr. Jewett's buck "Fortune" has been received. Very long and nice.

Orchard Grass Seed has been enquired for considerably. There is now some in the city.

Foul Meadow. Mr. Townsend, of Au Sable, has left with us a sample of "Foul meadow Grass," called in some places herd's grass, growing on his farm, which he prizes highly for wet lands. This grass is well known to eastern men. We have cut it often higher than our head. It possesses a soft stalk, and is very well relished by cattle. A gentleman from Walworth county, Wisconsin, informs us that it is extensively scattered there.

Mr. T. also showed us a sample of what is called in Vermont "wire grass," which he insists is the true blue grass—(it is blue enough, that is certain,) and that the grass sold here as blue grass is the true eastern "spear grass," which accords with the scientific description of it. There is considerable confusion in the *names* of these grasses, but we believe they are themselves well known enough. Eaton & Wright, in the North American Botany, call the *poa protensis* spear grass, and *Poa compressis* blue grass. This wire grass is, if we mistake not, the *eleusine indica.*

Put out Trees The spring time offers another opportunity to attend to this business, and it should not be suffered to go by unimproved. There is scarcely any one who does not want an addition to his fruit; or who cannot find a place for a shade or ornamental tree.

Trees are now plenty, and can be had any where almost. Nurseries are multiplying on all hands, and every thing wanted may be had of them. Our advertising sheet will point out the locations and address of these establishments. First there is our friend F. H. Hastings of this city, who will be ready, as we understand, with a good assortment, particularly in the ornamental line. Then there is the garden of J. A. Kennicott & Co. at Wheeling, in this county, whose advertisement we received too late for this number, but who have some 70 varieties of roses Hayden, Baker & Sargeant, of St. Charles, are able to supply trees to a large amount, as we are told. B. Hodge, of Buffalo, N. Y., should not be forgotten—he is a generous dealer, and the man who trades with him will get the worth of his money. Elliott & Co. of Cleveland, have every thing choice, and can send easily to any point on the lakes. Prince, of Flushing, L. Island, every where known, has perhaps the most extensive assortment in the United States. Let no one overlook the Edgar county Nursery, owned by Joseph Curtis—which is perhaps the oldest in the State of Illinois. Mr. C. we have found a fair dealer. Nor would we forget our old friend E. Harkness, of Trivoli, Peoria county, who has often advertised with us, and whose writings are spread through all the Prairie Farmer. No man will get cheated with him. We understand also that our Wisconsin correspondent, F. K. Phœnix, of Delvan, is getting forward a nursery. Others have advertised with us before now, say E. B. Colman, of Peoria, Valk & Co., Flushing, Long Island. Others, still, are subscribers, but who have not got forward their establishments so as to make much noise about them. Of these are C. & J. Overman of Fulton co., M. Moyer, Niconza, Indiana, L. Montague, Wadam's Grove, Stephenson co. Ill., and John Bell & Co., Gardner's Prairie, Walworth co. Wis.

Let each man attend to setting trees.

"The Catalogue of Fruit and Ornamental Trees cultivated and for sale at the Wisconsin Garden and Nursery, By John Bell & Co., at Gardener's Prairie, Walworth co, Wisconsin, is received. This is said to be the most extensive nursery west of the Lakes; and from the size of the catalogue we presume it is true. In addition to a full list of apples, pears, cherries, peaches, plums, &c., the list of garden fruits and ornamental shrubs and plants is very large.

The school "marm" abroad. A friend in a neighboring State sends us a sample of education, as peddled out by a school mistress in his neighborhood. The chirography and orthography are twins. She kept "cheap":

"Miss H——, pleas to send by the barer my Gloves tie handkerchief & skirt & linnen cholar and you will oblige your friend F."

Merry's Museum for March, full of good things for the young, is received. Every man who has children is bound to furnish them intellectual and moral food, as much as food for their bodies. Such will find Merry's Museum an important auxiliary.

Will the publisher send us the May and June Nos. of last year?

Morrell's Shepherd. A letter from the author informs us that this work is finding a very large sale—a fact of which we felt sure beforehand. We hope Mr. M. did not part with the copy right for a song. "The laborer is worthy," &c. Mr. M.'s letter contained two samples of beautiful wool, merino ✕ on Saxony.

Galvanism, &c. We think the editor of the Farmer's Monthly Visitor mistaken in asserting that a galvanic current cannot be produced without the use of acid applied to the plates. A slow current is produced by moisture alone, but to secure an active current, acid is necessary; but a too active current would be dangerous to vegetation.

Book Farming. A correspondent writes us that his neighbors some of them have a poor opinion of book farming, and think they can get along very well without the Prairie Farmer, *especially if they can get a peep into his copy!* Very likely. We have seen such despisers of book farming. Interest and avarice are here at hand grips, and avarice is a little too much for his opponent.

To E. S. G., Fairfield, Iowa. The letter of Mr. H. and the money were handed over to W. W. Barlow & Co., who keep the P. Magazine on sale, and he informs us that a number of the work was forwarded according to order.

☞ We would call attention to the letter of Thomas Affleck, Esq., of Washington, Mississippi, in another column. Mr. A. was for several years the editor of the Western Farmer and Gardener, published at Cincinnati, a work which he conducted with great spirit and ability. He is now the agricultural editor of the Commercial Times, an able newspaper lately started at New Orleans. His suggestions as to hedges and cisterns will be found worthy of attention.

Sussex Hogs. J. S. Norton Esq. of Winnebago county, called upon us a few days since with an invitation to look at a Sussex pig belonging to him. The porker alluded to is a noble specimen of the genus, measuring 7 feet and 4 inches from the tip of his nose to the roots of his tail, and girting 6 feet 3 inches. His proportions are every way equal to his size. The breadth of his back and the size of the hams, with the extraordinary bone of his legs, show that he was made to put on fat, and to carry it. His weight alive is reported at present to be 1260, which we should suppose to be overrated; but we have no doubt he might be fatted up to 1000 lbs easy enough. His head is small, and cheek dishing, which shows him to be an easy fattener. Mr. N. states that he butchered three pigs of the breed 10 months and 16 days old, whose weight averagsd 316 lbs.

Canada Flint Wheat. Mr. Norton also left with us a sample of this beautiful wheat. The berry is not exceeded for plumpness and color—size a little above medium, and short. It is reported a prolific yielder.

Apples for Swine. Mr. R. L. Pell, of New York, has made experiments upon fattening pork with apples. He pronounces the pork so made sweeter, and fifty per cent. whiter than any other. The fat is firm, the skin thin and every way superior. The cost he pronounces to be less by one half. The apples fed are sweet, with now and then an alternation of sour ones for change. Farmers putting out orchards should think of this.

Horses. In Wales, in the tenth century, the price of horses was regulated by law. The price of a foal of fourteen days old was four pence; of a year and a day old forty eight pence.

☞ Documents are received from Hon. John Davis, Hon. J. Rockwell, Hon. S. Breese, and Hon. E. D. Baker.

The National Magazine and Industrial Record, is the title of a new journal of which several numbers have reached us. It is edited by Redwood Fisher, and published at 161 Fulton street, New York, at $5 per annum, free of postage. The object of the work is to set forth the progress of the nation in all its great industrial pursuits, Agriculture, Manufactures and Commerce. We have not had time to examine the work very critically, but so far as we can judge, it promises to be one of great excellence.

Corn Sugar. We are under obligations to John Beal, Esq., of New Harmony, Ind., for his attempt to send us a sample of his corn sugar. We know of no mode of sending, but will keep a look out.

The Western Medical Truth Teller, W. T. Linn, *Editor,* is the title of a publication to be issued simultaneously at Greenville and Hillsboro, Ill., of which a prospectus has reached us. It is to be devoted to the science of Medicine as taught by the botanic system, of which Thompson was the founder.

Albany Cultivator and other papers. Our brother of the Western Farmer and Gardener thus remarks, in answer to a correspondent's good wishes,

"We thank him for his kind wishes; but we despair of making the Farmer and Gardener as good a paper as the Cultivator, which is, we think, incomparably the best agricultural paper in America. And if it were adapted as well to western farming as it is to eastern, we should prefer securing its circulation in Indiana, rather than to establish another one. But it is impossible to make the most of our farmers take a paper from so far abroad, and equally impossible for a distant paper to give that special and minute attention to the details of western husbandry, which its true interest requires. Therefore, we labor to establish a western journal."

Now did it never occur to our Farmer and Gardner friend that it was this very freedom from "that special and minute attention to the details" of local agriculture that enables the A. Cultivator to receive such praise as he gives it. It is our impression that its national character, which enables it to cut loose from all that local matter uninteresting to distant readers, and to select the pure *farina* of information, equally of interest to all, places it in just the position it occupies. Were it to become a local paper, it would undoubtedly be an excellent one, but it would not be the paper it is at present by any manner of means. Judging it by its own standard, we think as highly of it as its best friends desire; but does our Indiana friend think it superior for the farmers of Indiana to the W. Farmer and Gardener? We do not: and were it to become so, it could never receive the praise he gives it. That is our idea.

Buffalo Horticultural Society. A pamphlet containing the proceedings of the Buffalo Horticultural Society, together with the Address of George W. Clinton, at its Exhibition in September, has been received. This society was organized in 1845, but appears to have entered on its work with great spirit. Lewis F. Allen, Esq. is President, C. F. S. Thomas Recording, and B. Hodge Corresponding Secretary. Its meetings are held monthly, and it will undoubtedly make itself felt in that city and vicinity. The address we have not had time to examine thoroughly, but it appears to be an eloquent and chaste production.

Fine Hogs. Mr. S. G. Powell, of Sugar Grove, brought into market a lot of ten hogs, on the 25th of February, which weighed together 3900 lbs.

Female Correspondents. An old friend in Pike county asks, "where are all your female correspondents?" There are several female hands in this number, and there is room for more.

Foreign Grapes. Mr. Longworth, of Cincinnati, in a letter to the W. Farmer and Gardener, says: "Keep clear of Foreign Grapes." He says he has spent thousands of dollars and twenty years time, and failed at last with them. The Catawba he thinks is a product of the Fox Grape.

Errors. The W. Farmer and Gardener speaks of several standard agricultural works which do not publish any errors. We should like to know which they are. Our exchange list embraces nearly all in this country, and we find no one which keeps clear of mistakes; and we will defy any one to do so until its editors are possessed of omniscience.

NOTICES OF BOOKS.

"McCulloch's Universal Gazetteer: A Dictionary, Geographical, Statistical, and Historical, of the various countries, places, and principal natural objects in the world; by J. R. McCulloch Esq." In which the articles relating to the United States have been greatly multiplied and extended, and adapted to the present condition of the country and to the wants of the citizens; by Daniel Haskell A. M. late President of the University of Vermont. In two volumes. New York: Harper & Brothers, 82 Cliff street. 1845."

Two huge octavos of eleven hundred pages and upwards, each, bearing the above title, are laid upon our table by the publishers. We have delayed noticing them until we could find time to look through them somewhat carefully, in order to be satisfied of their true worth.

Perhaps there are no two volumes, large or small, in existence, which embody a greater amount of information concerning the physical, political, and social condition of the whole world, than is crowded into these teeming pages. There is scarcely a place in existence, of any importance, to which civilized man has ever penetrated or of which he has heard, which does not here find its description. As a matter of course, many towns which are yearly springing into existence in the Western States, are not found; to keep up with these would require a yearly edition—and then the thing would be hardly possible.

So far as we can judge, the description of places, however insignificant, when it is undertaken, is surprisingly correct; the author having relied, as he informs us in his preface, only on data strictly reliable.

The work is by no means, however, taken up with a mere enumeration of towns and obscure places. Its articles upon the principal countries, both in the old and new world, are spread out into extended treatises upon their physical condition, their Natural History, their political, social, and religious history and condition—in which an incredible array of facts are given, hardly to be met with elsewhere. It is indeed for these extended articles upon the nations of the earth, illustrated as they are by seven large and complete maps, that the work is chiefly valuable.

A great advantage in a work of this sort is here secured which ought not to be overlooked. This is the dictionary or alphabetical arrangement, which supercedes the necessity of an index, and enables the reader to turn, without a moment's delay, to the article he wishes to find.

The work, in truth, is a book of *facts*—of which it is full from beginning to end; and to the scholar, the professional man, or to any other individual whose ideas go forth out of his daily employments, and who can afford the purchase, it is a rare treasure.

"Chemistry, as exemplifying the wisdom and beneficence of God; by George Fownes, Ph. D. New York: Wiley & Putnam. 1844."

The occasion of the above named work was as follows: In the year 1333 Hannah Acton caused an investment of one thousand pounds to be made, the interest of which was to constitute a fund out of which one hundred guineas was to be paid once in seven years as a prize to the person who would, in the judgment of a committee, produce the best essay upon some Natural Science, illustrating the wisdom and beneficence of God. The author, Mr. Fownes, chose that of Chemistry, and this book is the result.

The subject is discussed under the following heads: The Chemical History of the Earth and the Atmosphere; The Peculiarities which characterize Organic Substances generally; The Composition and Sustenance of Plants; The Relation existing between Plants and Animals.

These topics are treated of in a very chaste and beautiful manner, and independent of the argument sustained, convey a great amount of information, valuable no less to the scientific farmer and mechanic than to the scholar.

We select a few extracts, pretty much at random.

"Starch. There is scarcely a plant or part of a plant, which, when closely examined, does not yield more or less of this substance; not unfrequently the quantity is so great as to produce in the plant the appearance of deformity by enormous distention of the cellular tissue in which the starch is contained. We have examples of this in the common potato, a fleshy, under-ground stem, bearing buds upon its surface, but swollen out of all shape and figure by an accumulation of starch mingled with water within each individual cell; in the roots of certain orchideous plants, and in very many others where a soft and succulent character is observed; the plant which furnishes arrow-root, a mere variety of starch, is a case of the kind; the interior of the stems of many palms is often filled with loose cellular substance, rich in starch; and, lastly, it constitutes a very important and often very abundant, ingredient in seeds of all kinds."

Absorption of Nitrogen—Carbon. "M. Boussingault experimented on a cow and a horse; his principal object at the time was to settle the disputed point of absorption or non-absorption of nitrogen from the air by animals, which he to a great extent effected, by showing that in an animal so supplied with food that its weight remains for a long time unchanged, the nitrogen contained in that food always exceeds that voided in the excretions. At the same time an opportunity was afforded for examining the amount of carbon lost, by the aid of a similar comparison.

It was found that in twenty four hours the cow consumed in respiration the enormous quantity of seventy ounces of carbon, and the horse seventy seven ounces. Professor Liebig has lately applied Boussingault's method to the human subject. His mean result indicates an expenditure of about fourteen ounces of carbon daily, for well-fed, healthy men, employed in labor in the open air, as soldiers: the amount is much smaller in those who lead a depressed or sedentary life."

LIST OF JOURNALS,

Literary, Agricultural, and Scientific, exchanging with the Prairie Farmer.

Name of Journal.	*Price*	*Place of publication.*	*How often published.*
Albion,	$6	New York,	Weekly.
American Quarterly Jour. of Agriculture and Science,	3	Albany, N. Y.	Quarterly.
American Jour. of Science and Art, (Silliman's)	5	New Haven, Conn.	Once in two months.
American Review, (whig)	5	New York,	Monthly.
Blackwood's Magazine,	3	New York,†	Monthly.
Democratic Review,	3	New York,	Monthly.
Eclectic Magazine,	6	New York,	Monthly.
Edinburgh Review,	3	New York,†	Monthly.
European Agriculture,	5	Boston (in 10 parts)	Irregularly.
Farmers' Monthly Library,	5	New York,	Monthly.
Hunt's Merchant's Magaz.	5	New York,	Monthly.
Knickerbocker,	5	New York,	Monthly.
Littell's Living Age,	6	Boston,	Weekly.
London Quarterly Review,	3	New York,†	Weekly.
North American Review,	5	Boston,	Quarterly.
Penny Magazine,	6	New York,‡	Irregularly.
Popular Lectures on Science and Art, (Lardner's)	*	New York,	Irregularly.
Railroad Journal,	5	New York,	Weekly.
Spirit of the Times,	5	New York,	Weekly.
Westminster Review,	3	New York,†	Monthly.

* Published in Parts, at 25 cts. each. †Republished.
‡ In 21 Parts, at 25 cts. each.

These publications are all—each in its particular line—the best of which we have any knowledge, either in the United States or in the old world. Many of them are too well known to require more than the mention of their names. Others, though not as well known, are equally excellent. Samples may be seen at our office; and subscriptions paid us will be cheerfully forwarded.

CHICAGO PRICES.

Corrected, March 23, 1846.

WHOLESALE.

PROVISIONS.		$ cts.	$ cts.
Beef	₩100	2 50.	@3 50
do. Mess	₩bbl	6 00.	@7 00
Pork	₩100	3 50.	@
do. Mess	₩bbl	11 00.	@12 00
Lard	₩lb	6	@7
Butter	do	10.	@
Cheese	do	6.	@9
BREAD STUFFS.			
Flour, superfine	₩bbl	4 00.	@4 25
do. fine	do	3 55.	@
Corn meal	₩bush	28.	@32
GRAIN.			
Wheat, winter,	₩bush	75.	@76
do. spring,	₩bush	65.	@67
Oats	do	20.	@25
Corn, shelled	do	27.	@30
SUNDRIES.			
Hides, dried	₩lb		@7
do. green	do		@3
Feathers	do	31.	@33
Beans	₩bush	75.	@87
Potatoes	do	18.	@
Onions	do	44.	@50
Wood	₩cord	2 25.	@3 50
Eggs	₩doz	8.	@10
Flax seed	₩bush	85.	@90

RETAIL.

GRASS AND FIELD SEEDS.			
Timothy	₩bush		@1 50
Blue Grass	do		2 00
Orchard do	₩ bush	37½	@1 00
Red Top	do		@2 00
Red Clover	₩lb		@12½
White do	₩lb		1 00
SUNDRIES.			
Salt	₩bbl	1 75.	@2 00
White Fish	do		@6 50
Mackinaw Trout,	do		@6 50
Mackerel	₩ lb		@8
Dried Apples	₩bush	1 75.	@2 00
Lard Oil	₩gall	87½	@1 00
LUMBER.			
Boards, 1st quality	₩M	14	@15
do. 2d quality	do	9	@12
Scantling and joist	do	9	@10
Flooring and siding	do	10	@15
Lath	do		@2 50
do. board	do	6	@7 00
Shingles	do	1 75.	@2 50
Sash—8 by 10	₩light	2½	@3½
Square timber	₩ft	6.	@10

Meeting of Executive Committee of Union Agricultural Society. This takes place on the first Tuesday in May, which will be the fifth. As it is necessary to transact some business in connection with the next Fair, it is hoped there will be a full attendance.

☞ A correspondent in Knox co. says:

"If any of your subscribers have any experience in making pise and putting up pise houses, I should like to hear from them, for I think of trying one this summer, and would like to hear from some one that had tried it on the prairie."

Irregularity of the Mails. We never have taken as much pains before as we have this year in directing packages, and have never heard half the complaints of their non-reception. There is either great carelessness on the part of Post Office agents, or the numerous changes of them do not allow them to become acquainted with their duties.

CONTENTS OF THE PRESENT NUMBER.

THE PRAIRIE FARMER,

Devoted to Western Agriculture, Mechanics, and Education. Published monthly at Chicago, Illinois, by John S. Wright, containing 32 very large octavo pages, besides a colored cover with advertisements. Terms, $1 per annum, 6 copies for $5, 13 copies for $10, 40 copies for $30, 70 copies for $50, 103 copies for $70, in advance. All communications must be sent free of postage. John S. Wright and J. Ambrose Wight, Editors. Vol. 6, 1846.

REASONS FOR TAKING IT.

1. It is one of the largest and cheapest agricultural papers published in the United States. Specimen Nos. sent to those requesting them.

2. It is not published for the whole country, but for the especial benefit of western farmers.

3. A large amount of the matter is supplied by correspondents, more than three hundred in number, from all parts of the West; as a body unsurpassed in ability and practical knowledge, by those of any other agricultural paper. 4. It is illustrated with an abundance of well executed engravings; is well printed on good paper; and each number accompanied by a cover to keep it clean.

5. A full and complete Index is sent at the end of the year, making a volume of about 400 pages, invaluable as a work of reference,

6. The information contained either under the head of "Veterinary Department," or "Household Affairs," or "Orchard and Garden," is worth several times the cost of the paper.

7. It contains Chicago Prices Current, with the latest intelligence of New York and other markets.

8. Common Schools are too much neglected in the West, and two or three pages are occupied with disseminating the most important information concerning them.

9. It is permanently established, and as a western paper should receive the undivided support of Western farmers, particularly as

10. It is pronounced by those who have taken it from the commencement, and by the public press generally, the best agricultural paper for western farmers, that is published.