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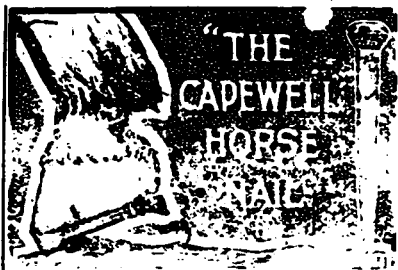


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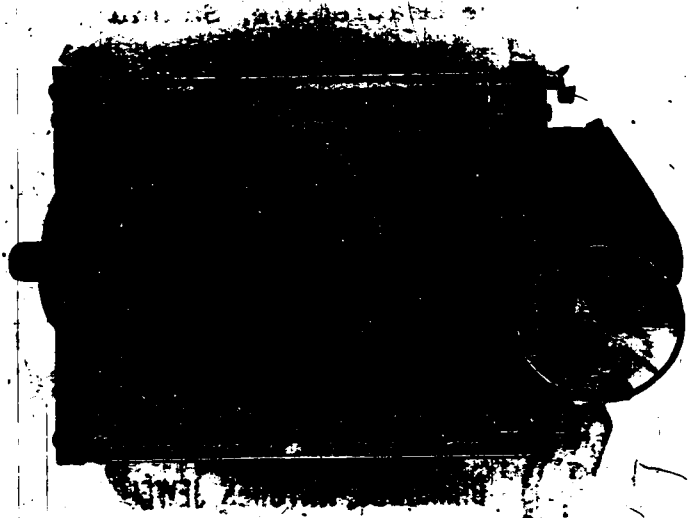
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FORT LEAVENWORTH, KANSAS.

\$3.50 per Annum. 50 Cents a Copy.

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LIEUTENANT COLONEL EZRA B. FULLER, U. S. ARMY, RETIRED,
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Entered as second-class matter, January 21, 1911, at the Post Office at Fort
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JOURNAL

OF THE

United States Cavalry Association.

Vol. XXIV.

JULY, 1913.

No. 97

THE ORGANIZATION OF A CAVALRY REGIMENT.*

BY CAPTAIN M. C. SMITH, FOURTEENTH CAVALRY.

WHILE much has been written on this subject recently by officers of our own army, and much that has a direct bearing on it has been written by officers of foreign armies, it has seemed to the writer that the material available for a discussion of this important matter permits of an arrangement which will enable us to arrive at a correct conclusion with less difficulty and more certainty.

It will hardly be disputed that an organization will have merit in proportion as it is based on past experience, war experience of ourselves or other nations; and this leads us to history for the facts which are to serve as a guide.

We must study carefully the organization of the cavalry regiments of the several important powers, considering ourselves as one of these, at the different epochs, and consider seriously the reasons leading to the adoption or continuance of such organization.

We must not fail to consider how changed conditions of warfare have brought about in foreign countries changes in the

*Thesis prepared for Staff College course, 1912-13.

organization of all the arms except the cavalry; and we must inquire whether these changed conditions have affected the use and employment of cavalry; and, if we find that the cavalry, like the other arms, has been affected, we must seek out the causes which have led that arm in foreign countries to remain at a stand still while its sister arms have progressed. We must also, as throwing light on this last proposition, consider the origin and traditions of the arm.

In arriving at a conclusion as to the proper organization of a cavalry regiment we must keep constantly in mind two points, efficiency and economy. Any organization which cannot answer to these two requirements must be rejected even though it be that of the most important military nation of the world.

Taking the beginning of modern organization as a starting point and tracing the evolution of the organization of the cavalry regiment from that time to the present, we should have data which, in connection with the changed conditions of warfare, will serve to guide us in arriving at a conclusion as to the correct organization for the future.

Modern organization dates from the close of the feudal epoch in the fifteenth century, after which wars were waged less for national purposes than for the furtherance of dynastic or State interests, and were no longer carried on by the levy of the nation, but by mercenaries hired by the monarch or the State.

This process originated in Italy, where the rivalry of trading republics caused them to engage Swiss, English, and other mercenaries to fight their neighbors. With these men war was not an occasional occupation but a trade. Experience gained in a war was not, as had been the case formerly, lost by a return to peaceful pursuits, but was converted into improved formations and methods to be used in behalf of the next employer. Hence we find that military organization in its modern form originated in Italy, and that, in consequence, most military terms are derived from the Italian, as may be seen in such words as infantry, cavalry, colonel, squadron, battalion and regiment.

The word company in its military sense denoted originally the gathering of feudal retainers who followed their lord to the war; it then came to mean the band who obeyed a captain

(*caput*—head), some noted leader among the mercenaries from whom regular armies sprang.

The company of Horse was soon differentiated from that of Foot, by being called a troop, a word of uncertain origin, by some connected with turba (a crowd), by others with the root of the Teutonic *treiben*, and akin to drove.

The strength of the company was at first indefinite, and amounted to some hundreds of men, but it was gradually made smaller, so as to be more flexible and mobile. The practice of the most successful leaders finally reduced it to a definite body of about one hundred men, which it was found was the largest number that could with certainty be reached by the voice, and commanded by one man in battle.

It had become usual by the 16th century to raise soldiers by larger bodies than the company or troop, and these were called regiments from being under the regiment or rule of one man, the colonel. This word comes from *colonello* (little column).

It became a practice for men of position to raise regiments. Such noblemen were often too busy, or too grand, to attend personally to their regiment and often became mere absentees. Their command was then exercised by their *locum tenens*, the lieutenant of the colonel (appointed by the colonel.) The staff and non-commissioned staff of the colonel very soon came to have practically the same composition it has to-day. And the officers and non-commissioned officers of the company are practically the same now as they were then.

The battalion from the 16th century onwards has always been the fighting unit of infantry. Battalion in Italian is *battaglione*, *battaglia* or battle array.

In the early 16th century when the company was only an administrative unit, the *battaglia* were its tactical subdivisions, and formed small units fighting separately. Hence *Battaglione*, the great *battaglia*, was the name given to the large fighting unit, consisting of a mass comprising several regiments and several thousands of men. This battalion was gradually diminished in size to meet changes in tactics which demanded a more flexible formation for mobility, and a smaller target for artillery. The experience of more successful leaders pointed

eventually to forming a battalion of a few hundred men, so that two or three could be furnished by a regiment instead of forming a huge battalion of several regiments.

The battalion thus from being one of the parts of a company came to be a unit composed of several companies, while the squadron (European), at first formed as we shall see, of several troops, soon were reduced in numbers until they were practically the size of the original troops, this subdivision disappearing.

The word squadron was also derived from the Italian, the corresponding word in that language being squadra, meaning square. This name was supplied to a body composed of several troops, and was so applied because the tactical requirements of the time called for troops formed in squares.

Cavalry was first organized into regiments by Maurice of Saxony, 1696-1750.

Cavalry first fought, as did the Infantry, in ten ranks, but through improvements introduced in both drill and discipline by Maurice of Saxony, the number of ranks was reduced to six, the squadron then numbering 300 men.

followed by Maurice of Saxony, but reduced the number of ranks to four. His regiments consisted of eight troops of seventy men each. He was the first to teach shock action. Cavalry still continued to fire from horse-back until the time of Frederick the Great, about 100 years later. Frederick forbade firing from horseback, formed his cavalry in two lines, and trained them to charge boot to boot in long lines at high speed over long distances. At first two troops composed a squadron; later four smaller troops composed a squadron.

The foregoing notes on the evolution of modern cavalry is almost entirely epitomized from the interesting and valuable work on Organization by Colonel Herbert Foster, Royal Engineers, British Army.

The history of the evolution of the German cavalry organization affords material for argument for advocates of the large, medium or small sized regiment. Not only did the different classes of the cavalry vary in the strength of their

regiments, but we find in some cases great differences in the strength of regiments of the same class.

Tracing briefly the history of the Prussian Cavalry, we find the following:

In 1718, mounted regiments consisted of five squadrons (ten companies of 130 privates each), and dragoons had the same organization.

In 1725, the company organization was discontinued, the dragoon regiments being organized into ten squadrons of 110 privates each, increased the next year to 120.

In 1726, one dragoon regiment was made into two regiments, and in 1727 another regiment was likewise changed.

From 1731 to 1735 all dragoon squadrons numbered 132 privates and five supernumeraries.

In 1734 the Hussars had the same strength as above.

In 1740 heavy cavalry and dragoon regiments consisted of five squadrons, and numbered 774 effectives and seventy-two non-combatants, total 846.

No further changes in the cavalry took place up to the Seven Years' War (1757-63).

In 1762 the strength of hussar regiments was increased to 1,500 men.

In 1799 a cuirassier or dragoon squadron numbered 31 officers and 810 men. The hussars had two battalions (10 squadrons), each regiment having 45 officers and 1,498 men.

In 1807 the cavalry was reorganized. A cavalry regiment was to consist of four squadrons each squadron to number 6 officers, 125 men, a total of 500 men.

In 1810 each cavalry regiment had a peace strength of 24 officers, 502 horses, and a war strength of 601 horses. All regiments were of four squadrons.

The strength of the German cavalry regiment to-day is 25 officers, 725 men, 678 horses. Regiments are mobilized at from four to six squadrons. The strength of the squadron is 150 men.

After Seidlitz no German cavalry leader appear to have gained distinction. The German cavalry after the death of Frederick the Great, according to German authorities, went backward.

During the Napoleonic Wars no German cavalry leaders of exceptional ability appeared, and the cavalry seems to have been of poor quality. It was almost invariably whipped by Napoleon's cavalry. It was during this time (in 1807) that the reorganization of the Prussian cavalry took place, the regiments of the different classes of cavalry being given the same strength, and all reduced to a strength of 500 men. We should not fail to note that at this time when the Prussians, under indifferent cavalry leaders, were reducing the strength of their cavalry regiments Napoleon desired to increase the strength of his. Whether the changes made by the Prussians were for economical reasons, or whether the poor work of the cavalry was attributed to its organization, is not known. The truth seems to be that the cavalry, both officers and men, was of poor quality, and, such being the case, a small regiment was more logical than a large one, especially as cavalry at that time depended almost entirely on shock action.

Blucher, in his report of the operations of the cavalry around Ligny, Wavre and Waterloo, was so bitter in his criticism of the work of that arm that many of the officers concerned considered his criticism as implying cowardice on their part. Naturally his report gave rise to much controversy, and to a number of articles written with a view to determining the causes of the shortcomings of the Prussian cavalry.

One writer, General von der Marwitz, at the end of a long article says:

"I will recapitulate the essential points which must not be disregarded if we are again to occupy our former preëminence:—

- 1.—Stronger regiments.
- 2.—More officers to the regiment, a consequence of No. 1.
- 3.—Transfers to be made as seldom as possible.
- 4.—Better horses.
- 5.—Revival of the art of horsemanship, etc."

He says further: "The number of officers in our cavalry is too small, only twenty-three, and that total is rarely maintained."

"The regiments in themselves are too weak * * * and the formation of some more by taking a squadron from each

and grouping every four of these squadrons to form a new regiment was a blunder of the worst kind at a time when we were almost in the face of the enemy."

In the report of General de Borstell (made in 1817), on the same subject we find the following:

"A strong regiment has more confidence in its own strength than in the support of several other regiments that adjoin it, p. 10. The regiments of Beling and Zieten, the Black Hussars, the Chestnut Hussars, and the Dragoons of Baireuth, would never have rendered themselves so redoubtable by their uniform and their name, if instead of being composed of ten strong squadrons they had only numbered three or four weak ones.

"In consequence we propose as a desirable amelioration the creation of regiments of cavalry 1,050 strong divided into six squadrons."

Blucher commenting on this report says:

"In the appended report General de Borstell has developed with a profound knowledge and much clearness the causes which up to the present time have exercised such a deleterious effect on our cavalry. With a frankness which does him honor he has indicated the remedies to be employed to give this important part of the army the perfection it should have for the good of all.

"I have very little to add to the report of General de Borstell."

Here we have the views of the ablest Prussian officers as to the strength of a cavalry regiment. As their opinions were formed after twenty years of almost continuous warfare in which cavalry played a most important part, it can hardly be said that they are not based on experience.

The French Organization.

Prior to the Revolution, cavalry and dragoons consisted of 689 men, chasseurs and hussars of 1,028 men (Organization and Tactics of the Three Arms, p. 232.)

The organization provided for on January 10, 1794 was as follows: Cavalry, 32 officers, 672 men. Dragoons, chasseurs, and hussars, 58 officers, 1,353 men.

In the Campaign of 1805 the organization of Napoleon's cavalry was as follows: light cavalry, 43 officers, 947 men. Carbineers and cuirassiers 35 officers, 673 men; dragoons, 43 officers, 1,098 men.

Speaking about this time of cavalry organization Napoleon said:

"If I could put as many men in the cavalry as I desired I would never be deterred from carrying regiments of cuirassiers and dragoons of 1,000 men each and regiments of chasseurs and hussars of 1,200 men each, forming 4 squadrons of 300 men each."

In 1807 Napoleon directed that regiments of cavalry be given the following strength, the necessary men to be called from the reserve: Carbineers and cuirassiers 997 men; dragoons, hussars, and chasseurs 1,000 men.

In 1808 his cavalry was raised to 1,200 men per regiment.

It will be generally conceded, I think, that Napoleon knew how to make effective use of cavalry. He overlooked no detail bearing on the effectiveness of any branch of his army, and we may suppose that his cavalry, to which he intrusted such important duties and upon which he placed so much reliance, received an organization that had been given careful study by him. It will hardly be disputed that there were not opportunities in abundance for testing the efficiency of any organization adopted.

The French Cavalry after the Napoleonic wars.

In 1820 the subdivision of the squadron into two companies disappeared, and the squadron, which was already the tactical unit, became at the same time the administrative unit. Each regiment had, as before four squadrons. By 1829 all the regiments had been increased to six squadrons the hussars and cuirassiers which had only four.

About 1840 all the regiments had five squadrons, the fifth being a depot squadron.

In 1859 the cuirassiers and dragoons had a strength of 1,164 men and a depot troop. The hussars and uhlans had a strength of 1,816 men and a depot troop. The rôle of cavalry in this war was limited chiefly to action on the field of battle.

The French regiment of today has a strength of 44 officers, 787 men, and 734 horses.

From the close of the Napoleonic Wars to the close of the Franco-Prussian War the results accomplished by the cavalry of European nations were not such as would cause us to look in that direction for a model for organization or use of cavalry. Indeed as a result of its record in the Crimean, Italian, and Austro-Prussian Wars, there were many who thought its day had passed. Some said that the arms of precision had ended its career and that in the future it would be part of armies only because of historical traditions.

It is hardly necessary to comment on the work of the cavalry of Frederick the Great, or that of Napoleon. The former had large and small regiments, the majority small; the latter continued to increase the size of his regiments until they were 1,200 strong. The English at Waterloo with small regiments did excellent work, but the same, as we have seen, cannot be said for the Prussians. The simple truth is, as we are forced to conclude from what has been said that, so far as mounted action is concerned, results are a question of leadership and training, and not of the size of regiments. Assuredly there is nothing to warrant our saying that we must have small regiments for mounted work; and yet in an article by Colonel F. N. Maude, in the last edition of the *Encyclopedia Britannica*, we find the following:

"The existing organization of cavalry throughout the civilized world is an instance of the survival of the fittest in an extreme form * * *. The size of the unit next above the squadron, the regiment, is again fixed by the number of subordinates that an average commander can control, and the universal experience of all armies has settled this as not less than four and not more than eight. Experiments with eight and even ten squadrons have been tried both in Austria and Prussia, but only exceptional men have succeeded in controlling such large bodies effectively, and in the end the normal has been fixed at four or five squadrons in quarters and three or four in the field. Of these the larger number is undoubtedly preferable for with the work of the quartermaster and adjutant to supervise, in addition, the regimental commander is economically

applied to the best advantage. The essential point, however, is that the officer commanding the regiment does not interfere in details, but commands his four squadron commanders, his quartermaster and his adjutant, and holds them absolutely responsible for results."

This article will, no doubt, be accepted by many as settling the question definitely and finally.

Up to the present we have discussed cavalry organizations admittedly based on the use of cavalry for mounted work and shock action only; for while the musket was carried by some classes of cavalry from the beginning of modern organization, dismounted action was very exceptional and of a very limited nature; and the men had little or no training in the use of fire arms.

When we consider that, a hundred years ago, the knowledge of the use of fire arms was limited to a very small percentage of the population of the different European countries, and that the flint lock musket was a cumbersome affair, and required the cavalryman, already sufficiently encumbered, to add considerably to the impedimenta carried by him, it is not surprising that there was not an early development of dismounted action.

The desirability of having his cavalry trained for such action did not, however, escape the brain of such a soldier as Napoleon. Efficiency was the idea always uppermost in his mind, and he was constantly striving to make his cavalry a force that could do something besides reconnoiter and charge. A letter written by him in 1811 to Clarke, his Minister of War, is interesting in this connection:

"It is recognized that it will be difficult for a cuirassier to make use of a carbine, but it also very absurd that from 3,000 to 4,000 of such brave men should be surprised in their cantonments are stopped in their march by two companies of voltigeurs. It is then indispensable to arm them. The regiments of cuirassiers of the old régime had muskets that they carried, not like the light cavalry, suspended from bandoleers, but carried to be made use of as guns.

"I desire that you form a board of cavalry officers and that you reach some conclusion on this subject. I am not accus-

tomed to see 3,000 picked men held up by a few light troops in a surprise or insurrection, or stopped in a march by a few bad shots posted behind a brook or a house. My intention is that each man have a gun. Whether it is a short musket or how it is carried matters very little to me. I gave the cuirassiers muskets during the peace, but they sent them back, and in the last campaign did not have them.

"Send me then your plans which will make it unnecessary to guard the cantonments of 3,000 men, and which will enable these men when they meet a very much smaller force of infantry to dismount and push on. War is composed of unforeseen events, and it is visionary to suppose that 15,000 heavy cavalry can always be so disposed that they can be covered by other troops.

"As to the lancers, see if it is possible to give them a carbine with their lance, if it is not possible it is necessary to have at least a third of the company armed with carbines, that is to say, all the front rank and a half of the second * * * The Cossacks have the lance, but they have carbines and even long range guns."

And he says in another place:

"Cavalry of all descriptions should be furnished with fire arms and should know how to maneuver on foot—3,000 dragoons should not hesitate to attack 2,000 infantry, should the latter, favored by their position, attempt to stop them."

"Turenne, Prince Eugene of Savoy, and Vendome attached great importance to dragoons and used them successfully."

Speaking of dragoons, which, at first were not efficient, he says:

"But in Spain these very same regiments, when better disciplined, and after having had some experience in the field, during the campaign in Germany and France, in 1813 and 1814, proved rivals to the cuirassiers."

Under the circumstances it was hardly to be expected that the French cavalry after the abdication of Napoleon, should continue to develop along progressive lines. It is a matter of history, that like the rest of the French army, instead of going forward it went back. The French today advocate the use of dismounted action to a much less extent than their more pro-

gressive neighbors, the Germans, but there are a number of French officers of high rank who now look upon dismounted action favorably.

Von Moltke's description of the American Civil War as a "conflict between two armed mobs" seems to have been taken literally by German officers, and, as a consequence, they have not, until lately, made any study of that war.

The dismounted work of French's cavalry in the South African War seems to have led the German's to a study of dismounted action.

The German observer with French saw the latter make a highly successful mounted charge under exceptionally difficult circumstances one day, follow this up with a dismounted attack the next, and on the third day by defensive action dismounted hold his position in advance of the army against largely superior numbers.

While it can hardly be true, yet from the comments on French's dismounted work in the German Official Account of the South African War, one would certainly be justified in saying that the Germans had never before heard of such results being obtained from dismounted action. The comment referred to is as follows:

"It was owing to the gallant perseverance of the British cavalry and to the heavier and more effective fire of the batteries that a further and victorious advance of the Boers against the left flank was prevented, and that the whole Boer army was stopped for an entire day by scarcely more than a thousand dismounted cavalymen. This was a very remarkable achievement, and it shows what cavalry fighting on foot can do when properly used, and of what incalculable value great masses of cavalry, trained in dismounted action, may be throughout a campaign. The capture of Cronje was chiefly due to the ability with which the cavalry division was handled and to the skill of its gallant and resolute commander * * *

"It is not possible to draw a clear picture of the employment and tactics of the cavalry, when fighting on foot, from what has hitherto been published on the subject. It appears, however, that the cavalry, imitating the tactics of the Boers, which had been so successful, was widely scattered in

groups on the kopjes and small eminences, while the horses were placed under cover in rear of their respective groups. This method of dismounted action for cavalry is unquestionably a very good one, and worthy of imitation, for a great extension of front when smokeless powder is used, may easily deceive the enemy as to the force which is in front of him. The increased power of the modern rifle favors a stout defense, and will render a decrease in the depth of formations all the less hazardous, because, in engagements, such as the one just described, it will generally be more important to make the enemy halt than to fight a decisive action. The combats of the English cavalry division on February 16th and 17th are of quite extraordinary value in this respect. When on the former date it endeavored a decisive action, and by attacking the enemy, to drive him out of his strong position on the heights of Dronfield, it showed itself unequal to the task; on the other hand, when, on the 17th it was merely a question of a stubborn defense in order to stop the adversary, the cavalry carried its duty in a brilliant manner, and rendered incalculable service."

French's failure to take Dronfield ridge by dismounted attack is, of course, easily explained. In the first place his cavalry was not by any means thoroughly trained in fighting on foot, and in the second place, French, knowing the more important duties ahead of him did not care to pay the price. Is there any conceivable reason why if a man is properly trained he should not be able to fight offensively as well as defensively? Does the fact that he rides a horse take this out of him?

Dismounted action is not merely a matter of theory with the Germans now, it is also a matter of practice, as the following from the German Field Service Regulations will show:

"By reason of its fire arms cavalry is also capable of dismounted action. It is thus in a position, and especially so when supported by horse artillery and machine guns, to offer resistance to detachments of all arms, or to cause them serious loss by unexpected fire action. Nor need it shrink from attacking should the situation require it. It will often have to combine dismounted with mounted action.

"Cavalry will often be obliged to clear the way for further activity by means of dismounted attack. Attempts also on

the hostile lines of communication (such as the capture of railway stations or magazines, the destruction of important engineering works, or the capture of isolated posts, etc.) On the battlefield, however, dismounted cavalry will rarely be pushed forward."

Von Bernhardt objects to the above paragraphs in so far as they lay emphasis on dismounted action for the defensive only. He thinks that at least the same emphasis should have been laid on the offensive.

General von Bernhardt is one of the ablest of the German officers and his views on the subject of dismounted action carry weight. He says in "Cavalry in War and Peace."

"In the wars of Frederick the Great and Napoleon, as well as in the German War of Unification there is a total absence of analogy from which to draw conclusions that can be applied."

"The most interesting and instructive campaign for the service of modern cavalry appears to be the American War of Secession, which is, however, almost unknown in Germany where there is lack of opportunity to study it."

"* * * I believe that only in exceptional cases will a purely cavalry combat take place, at all events on a large scale."

"We must not conceal from ourselves the fact that in future wars it will by no means always be a matter of choice whether we fight mounted or dismounted. Rather by himself dismounting and seizing the rifle will the opponent compel us to adopt dismounted action."

This is exactly what happened time and again in our Civil War.

Speaking of the campaign of 1870-71, he says:

"Again, and again was it necessary to detail infantry to the cavalry divisions in order to brush aside by offensive action resistance that hindered the advance of the cavalry, and which could not be broken down even by the horse artillery which accompanied it."

He quotes the following from an English writer:

"Soon after the outbreak of the war (American Civil War) Stuart distinguished himself as a cavalry leader, and his strategical work in blindfolding the enemy and in enlightening his own army has never been surpassed. As a cavalry tactician

he is not only the first, but hitherto the only, leader of the arm who understood how to combine the effects of fire and shock, how to render effective service in fighting on foot without losing the power to strike on horseback when opportunity offered," and he adds: "Here, indeed, was a man worthy of emulation."

"We must, I think, be resolute in freeing ourselves from all old fashioned conceptions of those knightly combats which have in reality become obsolete owing to the necessities of modern war. We do not in this need to break with our ancient and honored traditions, for the spirit of tradition consists not in the retention of antiquated forms, but in acting in that spirit which in the past led to such glorious success."

"This principle has been embraced in all the other spheres of military development; it is only the cavalry that has remained behind the times."

"To reckon with the charge alone is, on the field of battle out of date, and calculated to limit the effect of cavalry action."

"The cavalry must not shrink, when necessity demands, from employing its whole force in the fire fight; disregarding for this purpose its purely cavalry rôle, which may, perhaps be resumed later."

"The first essential is that victory shall be won. To this end all forces must cooperate. We will find a good example to follow in the battle of Fredericksburg and the manner in which Stuart threw the whole of his cavalry into the fight. The employment of cavalry in the War of Secession in North America, the study of which I have urgently recommended, can here again serve as a guide to follow."

The German maneuvers of 1911 were witnessed by Captain E. D. Scott, Sixth Field Artillery, and the following extract from his report shows that the Germans are practicing what they preach.

"Great attention was paid to patrol work and apparently none to spectacular attempts. The infantry were not slow to say that the cavalry are really mounted infantry. The cavalry say that they are much superior to mounted infantry, but admit that they depend more than ever before on dismounted action. The tendency in this direction was well shown on one occasion. The Red cavalry division got on the flank of the

Blue right column unobserved, and attacked from less than 1,000 yards with eighteen guns and dismounted squadrons. The remaining squadrons remained mounted as a reserve. It was a complete surprise to the Blues. A better opportunity for a mounted attack could not have been desired. However, the attack as carried out was fully approved by higher authority. Some time later this division found itself on the flank of the victorious Blues, who were on the point of carrying the Red position. It looked like the psychological moment one reads about had arrived, and there seemed nothing to prevent the mounted charge, but again ten squadrons dismounted and advanced to the attack. The halt sounded before their attack was well organized and the exercises ended. Not much doubt as to the conduct of the German cavalry in the next war."

The following are extracts from a memorandum issued by Lord Roberts, in 1903, in explanation of his reasons for making changes in the armament of the British cavalry:

"In America, on the other hand, the cavalry leaders very early recognized the increase of power to be gained by arming their men with a rifle in addition to the saber. Their tactics against both cavalry and infantry were a combination of fire and shock, and their achievements were far more brilliant than those of the Germans of 1870.

It was by adopting these tactics that Sheridan's cavalry brought about the dispersal of Early's army on the Shenandoah in 1864, and the surrender of Lee's army on the Appomattox in 1865. In the former series of operations the cavalry fought in two pitched battles and drove the enemy back 130 miles in nine days (19th to 27th of September), capturing over 30 guns, 1,500 to 1,700 prisoners, and turning every position which the Confederates attempted to hold. The fighting was not all dismounted. During the battle of the 19th of September one division alone made six distinct charges against cavalry and three against infantry and artillery.

"It is said that cavalry cannot be trained to fight indiscriminately on foot and in the saddle; that on foot they will be very indifferent infantry and in the saddle very timid cavalry. * * *

"The truth is that it is a matter of training and discipline.

"The conclusion to be drawn from the above appears to me to be that cavalry will generally act dismounted, but that small bodies may effect surprise by shock action."

There is an article written by General Rodenbough in 1875, entitled "Cavalry of the Future," and there is a remarkable agreement between this and the above quoted remarks of Lord Roberts.

One paragraph of General Rodenbough's article reads as follows:

"The coming cavalry, in my opinion, will be essentially dragoons, and the prejudice still existing in European armies against such an anomalous organization will pass away before the progress of military enlightenment."

General Wesley Merritt, commenting on the above, says:

"It would be well for every one taking an interest in such matters to read this really wonderful prediction * * * It is but another proof that our experience during the Civil War was a lesson that needs study, and what we learned then is well worth preserving and improving."

The present views of the British and Germans are not the result of theoretical study. They are the result of object lessons, and they have lately discovered that these are confirmed by our experiences of the Civil War.

We have given above the German attitude on dismounted action as stated in the Official Account of the South African War, and this view may be taken as having the highest official sanction. Official accounts are published by the Germans as a means of keeping their officers in touch with the latest developments in practical warfare; and the comments are the official view as to the lessons to be learned. We have seen that the German view has recently been given effect in the German Field Service Regulations, and that General von Bernhardt, the ablest of the German cavalry officers, a man who served through the Franco-Prussian War and has made a careful study of the work of our cavalry in the Civil War, thinks that the German Field Service Regulations fall short in not providing more specifically for offensive dismounted action. We have had the views of Lord Roberts, the ablest soldier that Great Britain

has produced for many years, and we have seen that his views are approved by a distinguished cavalry officer of our army.

May we not infer from what has been stated above that the Germans, the leading military nation of the world, will make much use of dismounted action in their next war and may we not also infer that as men and officers become better trained in applying its principles, and therefore better able to demonstrate its value, its use will be greatly extended?

The organization of foreign cavalry is admittedly based on its use for shock action. Will it be logical to retain this organization when the chief value of the cavalry is found in dismounted action? Will it be logical to retain in this arm an organization which cannot stand the tests so rigorously applied to the other arms, the tests of efficiency and economy?

The answer is obvious, but nevertheless, we need not look for changes in the organization of cavalry regiments of European countries for many years to come. There are several reasons for this. In the first place the cavalry was formerly in Europe, and probably is today to a greater extent than the other arms, the arm of the nobility, and the student of history knows how tenaciously this body clings to the past and its traditions. As to tradition, a military writer says: "The strength of tradition and inertia in armies is enormous. No human institutions, not the law, not even the church so cherish ceremonial and reverence tradition and custom, or remain so long blind to changed conditions. In military arrangements the very object of their existence often seems obscured by a haze of unessential conventions. Military methods, once unsuitable, soon pass into mere forms which it is considered sacrilegious to modify, however useless or even harmful they may have become."

But suppose that the foreign powers had come to realize that their organization was not the best. Are there any practical difficulties in the way of a change? The answer to this question is that the practical difficulties are such that a change is almost if not quite impossible. The reason is that each European nation now has practically all the cavalry it can afford. A change in organization could be effected only by the consolidation of regiments. It is hardly necessary to speak of the

difficulties that would be encountered were an attempt made to do this.

The opinion held by many British and other foreign officers on the subject of dismounted action is interesting, if not peculiar.

General Sir Evelyn Wood says, writing in 1897 and speaking of dragoons:

"There are however, still some cavalry officers who argue that there is no necessity to teach selected infantry marksmen how to ride, alleging that cavalry on foot can do all that infantry can accomplish, and do it as well, if not better. These enthusiasts assert that it is possible so to train men as to render them equally efficient on horseback as they can be made perfect when on foot; equally confident in meeting an enemy whether armed with sword, lance or rifle. That this is an error there can, I think, be no doubt.

"After the death of Frederick the Great, 'Dragoons' were trained alternately on horseback and on foot, in the manner indicated by Rogniat, who wrote: 'How absurd is the manner of training our dragoons. When mounted they are taught that no infantry can resist the impetuosity of their charge, when drilling on foot they are taught to consider themselves invulnerable against cavalry. It is from these causes they are despised by both Horse and Foot.'"

Napoleon knew Rogniat, and commenting on his book, says: " * * * he is a stranger to the service of the infantry, the cavalry, the artillery and the staff."

Sir Evelyn Wood goes on to say, speaking of Napoleon's advocacy of the use of dragoons: "For the purpose of a British army, however, Napoleon conceded the whole argument when he laid down that 3,000 men trained to fight both mounted and on foot ought to be equal in fighting power to 2,000 infantry." Sir Evelyn evidently forgets to make an allowance for horseholders.

The above has been quoted to illustrate the strength of traditions and prejudice. One of the principle objections to cavalry is the expense of the arm. Mounted infantry, owing to its lack of training, ought to be more expensive than cavalry. The British solution, or rather the solution of some British offi-

case, of providing for dismounted action is to provide an arm more expensive than cavalry.

It is not difficult to account for the development of dismounted action in our own army. Conditions in the early days were favorable in a high degree to the development of the practical and common sense way of doing things, and making the most of the means at hand, regardless of previous custom.

Before the Civil War a comparatively large proportion of the population of the United States knew how to ride and were familiar with the use of fire arms. The horse was necessary as a means of getting from one place to another, and the rifle frequently as a means of protection. Also in many parts of the country the two separately or together furnished the chief, and, in many cases, the only means of diversion. The rifle was frequently needed by the horseman as a means of protection. As he could not use it effectively on horseback, he dismounted as a matter of common sense.

We should expect a cavalry formed from such a population to develop along practical and common sense lines.

The nature of the duties of our cavalry prior to the Civil War was such that the rifle was practically its only arm of offense and defense. When the Civil War came on our cavalryman saw no reason why he should not continue to use his rifle as before, particularly as his opportunities for using the pistol and saber were comparatively rare. His practical nature and common sense again helped him out; and his lack of knowledge of the European definition of cavalry and the traditions regarding its use were of great value to him.

The time, the circumstances, and the men were all favorable for the development of a cavalry, the chief characteristics of whose organization and tactics should be common sense and efficiency. And it was developed.

Some European writers claim that our arm during the Civil War was not cavalry. The relationship, however, was sufficiently close for its work to furnish the European cavalry with grounds for continuing to exist.

A French writer reviews briefly the work of the American cavalry during the Civil War, but seems to think that some explanation for his doing so is necessary. He says: "A review,

then, of the means employed by the American cavalry is indispensable, because of the Crimean and Italian wars had, up to a certain extent, made the cavalry unpopular in certain quarters, we must recognize that the Americans are entitled to the credit of having restored it to its place of honor in modern wars."

There can be no question but that the fighting of the cavalry during the Civil War, Union and Confederate, was chiefly on foot. The Records of the Rebellion show this.

In a very valuable book entitled "Cavalry Tactics as Illustrated by the Civil War (Part I)," Captain Alonzo Gray has presented extracts from the reports contained in the Records of the Rebellion covering all the cavalry fighting of any importance of any kind that took place during the war on either side. He says: "All references show that a very large part of the cavalry fighting was done on foot." This will be apparent, I think, to any one who examines the Records. This does not mean that there was no mounted fighting. There was much of it. It was used when practicable, but the nature of the country frequently made such fighting impracticable. Both sides knew the value of dismounted fighting; and the weaker of two opposing forces generally avoided the mounted combat, and, by dismounting, forced his opponent to do the same. The custom of intrenching early adopted by the infantry reduced the opportunities for mounted action against that arm.

Sheridan says, speaking of the fight at Yellow Tavern: "This engagement, like that of the day before around Trevillian, was mostly dismounted by both sides, as had also been the earlier fights of the cavalry during the summer in the Wilderness, at Todd's Tavern, Howe's Shop, and Matadequin Creek. Indeed, they could hardly have been fought otherwise than on foot, as there was little chance for mounted fighting in Eastern Virginia. The armament of both parties, and the practice of barricading making it impracticable to use the saber with anything like a large force, and so, with the exception of Yellow Tavern, the dismounted method prevailed in every engagement." Two brigades fought dismounted at Yellow Tavern.

There seems to be no question either at home or abroad as to the value of the work done by both the Union and Confederate cavalry during the Civil War. The Union cavalry was reorganized in 1862; the regiments, twelve troops each, were given a strength of 1,200 men. In 1873 the three battalion organization was adopted in the Cavalry Tactics published that year. If results are any criterion, we may safely say that the organization of our cavalry during the Civil War measured up to the standard. Fortunately we have not only the testimony offered by its achievements but also the opinions of several distinguished officers.

The variety and extent of his experiences and his reputation as a cavalry leader entitle the opinion of General Wesley Merritt to great weight. Writing with the experiences of the Civil War fresh in his mind, he says, in an article entitled "Cavalry, Its Organization and Armament, published in the Journal of the U. S. Military Service Institute for 1879, and republished in the CAVALRY JOURNAL of March, 1913.

"All our experiences during the war of 1861-5 taught us we were well equipped and well fitted for cavalry service * * * Our cavalry as now constituted is susceptible of the following organization: Each company to consist of 100 men, including non-commissioned officers; to be officered by two first and one second lieutenants; four companies, thus organized, to constitute a battalion, to be commanded by a major, three of these battalions to comprise a regiment, to be officered, in addition to those already named, by a colonel and his staff, and a lieutenant colonel * * * A brigade to consist of three to five such regiments, and a division of three brigades. The brigade and division to be commanded by a brigadier and major general, respectively. Such in brief should be the organization of the cavalry, as far as it is necessary to characterize it for the purpose of war."

Have we any cavalry officer today whose experience or reputation entitles his opinion to more weight than that of General Merritt?

The following is an extract from the Memoirs of General W. T. Sherman:

"Inasmuch as the regular army will naturally form the standard of organization for any increase, or for new regiments of volunteers, it becomes important to study this subject in the light of past experience, and to select that form which for peace as well as war will be the best.

"A cavalry regiment is now (1875) composed of twelve companies, usually divided into six squadrons of two companies each, or better subdivided into three battalions of four companies each. This is an excellent form, easily admitting of subdivision as well as union into larger masses.

"A single battalion of four companies, with a field officer, will compose a good body for a garrison, for a separate expedition, or for a detachment; and in war three regiments would compose a good brigade, three brigades a division, and three divisions a strong cavalry corps, such as was formed and fought by Generals Sheridan and Wilson during the war."

Speaking of the infantry organization he says:

"The ten company organization is awkward in practice, and I am satisfied that the infantry regiment should have the same identical organization as the cavalry and artillery, viz.: twelve companies, so as to be susceptible of division into three battalions of four companies each.

"These companies should habitually be about 100 men strong, giving 1,200 men to a regiment, which, in practice would settle down to about 1,000 men."

Some officers have contended that since many of the cavalry regiments were much reduced in strength during the Civil War their record is an argument for the small regiment. But since all regiments which accomplish anything in war are bound to quickly become reduced in strength, the small regiment, if it were able to accomplish anything, would supply an argument for a still smaller regiment, and so on, ad infinitum. If this argument were sound it would apply also to the infantry, for the greater part of their regiments were also much reduced in strength; but the infantry seems to be trying to bring its strength up to 1,500.

Some have said that the Confederate cavalry had the foreign organization, that is, the small regiment. This does not happen to be true.

In the act of the Confederate Congress providing for the regular military establishment, a cavalry regiment was to consist of ten companies of seventy-two men each.

In July, 1861, the Governor of South Carolina sends one regiment of 876 and another of 916.

In a circular of November, 1861, the Secretary of War says that cavalry companies must consist of at least sixty men.

The Confederate regulation of 1862 provide that a company of cavalry shall consist of at least sixty men, but that no company shall consist of more than 120 men rank and file.

On March 25, 1865, a general order was published giving the act of the Confederate Congress providing for the consolidation of companies, battalions, and regiments when reduced in strength. Companies were to be consolidated when their strength was reduced to thirty-two.

The subject of the organization of a cavalry regiment is discussed in the report on the Land Forces of the United States, War Department, 1912, where it is stated:

"As far as cavalry action of the future is concerned, the organization of that arm must facilitate (a) quick and powerful dismounted fire action, and (b) equally quick and powerful mounted shock action. At the same time the organization must be so flexible that it will permit the assignment of proper units as divisional cavalry—first, to meet the requirements of a division as part of a higher tactical organization, and, second, with a division or smaller unit acting alone. In addition the organization must be adapted to the formation of cavalry brigades and divisions.

"Not only must the organization of the cavalry regiment be so flexible as to meet all these requirements, but the organization decided upon must possess a high degree of mobility, and must be adapted to varying tactical situations.

"The present cavalry regiment has a total war strength of approximately 1,200 enlisted men. As now organized it is so flexible that it can be formed to meet almost any particular tactical situation. A squadron of four troops can be detailed and the remainder will form an appropriate command for a

colonel. If a detachment of three troops is all that is required, the remaining troops can be handled as three squadrons of three troops each. If it becomes necessary for the regiment in two equal parts each part can consist of six troops organized into two squadrons.

"It is believed that the President should be authorized to add an additional or headquarters troop analogous to that proposed for the infantry regiment and officered in the same manner.

"If the maximum authorized strength of the headquarters troop is placed as that of the cavalry troop now authorized, its actual strength can be determined by service requirements as they may arise. The headquarters troop should comprise a demotion section in lieu of the scout section of the infantry headquarters company.

"The band might be dispensed with and a trumpet corps organized with the trumpeters of the troops."

It seems to me that sufficient evidence has been produced to warrant our saying that 1,200 men is a suitable strength for a regiment of cavalry.

We have not considered the size of the troop, the organization of the squadron, the allotment of machine guns, or the question of depot troops. Several points raised in the above report also calls for consideration.

While there seems a desire on the part of some of our officers to have our regiments reduced to the same strength as the small regiments of the principal nations of Europe, none seem to favor the large troop (squadron) of those countries.

General W. H. Carter says: "The expedient of increasing each troop to 125 men, which was adopted several years ago during active service in the Philippines did not commend itself sufficiently to justify a continuance of such large troops (CAVALRY JOURNAL, Vol. XIX, p. 8); and one experienced officer on duty with the provisional regiments organized in 1911, at San Antonio, advocates a troop of seventy men.

The German view of the strength of a cavalry troop (their squadron) is as follows:

"In the case of Cavalry, the squadron of about 150 men is the smallest unit, a number based on experience; 150 horses and the same number of riders can be rapidly inspected in the smallest detail by a single commander.

"About the same number is here adopted as that which the country farmer of North Germany considers feasible to keep on a single farm. If his business increases so that more than 150 men and a like number of horses and plough oxen becomes necessary they are distributed among outlying farms."

There is now no unit intermediate between the company and the regiment in the cavalry of foreign countries. This as we have seen, was not the case formerly. We have seen that the size of the squadron was reduced until it became in strength about what the troop had been, the troop becoming a platoon. The disappearance of the intermediate unit was the natural result of decreasing the size of the regiments. Napoleon's cavalry of 1805 was organized in companies and regiments, but the organization tables show two chiefs of squadrons for each regiment. With regiments as large as ours a unit intermediate between the troop and regiment is necessary. It is also desirable, since most of our fighting will be done on foot, to have an organization which will lend itself to this method of fighting. That this fact was early appreciated is shown by our adoption of the three battalion organization before it was adopted by the infantry of our army.

It is a question if we have not carried the application of the principle of uniformity too far in assigning an invariable number of troops to a squadron. We are taught to avoid the division of units, and, if we apply this principle strictly, we will, in many cases, with our squadrons organized as at present, use too few or too many troops for a particular mission. In Upton's Tactics the squadron was composed of from three to seven troops, and this provision was suggested to the author no doubt as a result of his war experience.

The squadron being a tactical unit, and according to Regulations, having no headquarters and keeping no records, there seems to be no good reason why it should consist of a fixed number of troops. It is a convenient organization in

time of peace, but in time of war our organization would certainly be more flexible if the number of troops were variable.

Napoleon says: "It is admitted that, for facility in maneuvering, the squadron should consist of 100 men, and that every three or four squadrons should have a superior officer."

The system, if we may call it such, now provided for keeping our regiments up to strength during time of war is the same as we had during the Civil War, and there is abundant testimony to show that it was entirely unsatisfactory at that time. We tried the depot battalion shortly after the Spanish American War, and found it unsatisfactory, why, I do not know; for there certainly seems to be no reason why this unit should not answer its purpose here as well as it has in foreign countries, where it has been in use for many years, and is regarded as of the highest importance.

The following order issued by Murat at Kirk, on the 27th of September, 1805, after his cavalry had crossed the Rhine at the commencement of the Campaign of 1805, shows the importance attached to depots by one of the greatest cavalry leaders of all times:

"It has been reported to his Serene Highness that some generals commanding military divisions have sent away from the regimental depots of the cavalry all the officers and non-commissioned officers which regimental commanders had left there for the instruction of recruits. This measure contrary to the intentions of His Majesty, can lead only to the disorganization of the cavalry, and Prince Murat therefore orders that colonels whose depots lack officers and non-commissioned officers necessary for the instruction of recruits, shall send them there immediately. Generals of divisions are charged with the supervision of the execution of this measure."

General Upton discusses this matter fully in his "Military Policy of the United States." He says:

"Whatever policy we may adopt for replacing losses suffered by our regiments during war, it is certain that we should avoid that in use (if we may call it a system) during our Civil War."

He then goes into a discussion of the subject in detail under the headings, "Depletion of Armies," "Need of Regimental Depots."

The following from his book, p. 416, shows the working of the depot system in Germany which system is substantially the same now as then:

"The Landwehr battalion districts, the company districts, and the regimental depots are the links which, in foreign services, connect the people with the army. In each battalion district, in Germany, for example, there is a cadre consisting of a field officer and adjutant, and three non-commissioned officers. The rolls of all men in the reserve, in the Ersatz reserve, as also in the Landwehr, are kept at the district headquarters. A sergeant major or First Sergeant lives in each company district and serves as a medium of communication with the men at their homes.

"When war is declared, each regiment designates a battalion to serve as a regimental depot. It consists of twenty-two officers and may be recruited as high as 1,208 non-commissioned officers and men. The three battalions in the field, the depot battalion, the cadre of the landwehr battalion, and the company districts all form part of one and the same regiment. Whenever a regiment loses ten per cent. of its men from battle or disease, the colonel does not apply for recruits to the Adjutant General at Berlin, but sends an order direct to the commander of the depot battalion to forward at once the number required.

"No man after having been once enrolled in the army for active service, can skulk away and return to his home. The regulations require that all men in the reserve, the Landwehr-Ersatz reserve, or on furlough, shall, on returning to their company districts, report in person to the sergeant major."

"The Government thus knows where every soldier is, who owes military service. If one deserts and does not return to his home, he cannot long remain undiscovered by the many officers and men who are undergoing military training in the districts where he may seek refuge."

The lack of the depot system in our Civil War facilitated desertion, and increased enormously the work of collecting absentees, stragglers, and convalescents and forwarding them to their regiments. There was no way of communicating with these men at their homes except through the newspapers, there being no district sergeant major. And the officers with whom

such men came in contact had no regimental or local interest in the welfare of the soldiers. Such recruiting as was done for the purpose of providing for the losses of regiments was for the most part of a general nature. The result, as we know, was that the strength of the army was kept up by the organization of new regiments, while veteran organizations dwindled to mere skeletons.

It is interesting to note that regimental recruiting was abolished also during the Spanish-American War.

If we are to avoid the evils of the past we must make provision for the future. What General Upton has said on this subject is worthy of careful study.

General Sherman says on this subject:

"The greatest mistake made in our Civil War was in the method of recruitment and promotion."

He then speaks of the custom of organizing new regiments instead of filling up the old, and says:

"I believe that 500 new men added to an old and experienced regiment were more valuable than a thousand men in the form of a new regiment, for the former by association with good, experienced captains, lieutenants, and non-commissioned officers soon became veterans, whereas the latter were generally unavailable for a year. The German method of recruitment is simply perfect, and there is no good reason why we should not follow it substantially."

In his letter forwarding the reports of officers on the provisional regiments into which the Eleventh Cavalry was divided while at the division camp at San Antonio, in 1911, General W. H. Carter makes the following recommendations:

"I now recommend for trial a rearrangement of our cavalry regiments in conformity to the following scheme: A regiment to consist of three active squadrons of three troops, each troop with an authorized strength of 100 men. One of the three remaining troops of each regiment to comprise the machine gun detachment, a wireless communication detachment, trained scouts, orderlies, regimental clerks, etc. Two troops of each regiment to be given fixed stations and to constitute the recruit and remount depot for the regiment. The officers of the two depot troops to constitute recruiting officers, and none

others to be detached from the regiments. The lieutenant colonel to habitually command the depot troops, and, in case several regiments have depot troops at the same post, the senior to command so far as post administration is concerned. With the development of the brigade and division cantonments, some valuable reservations and buildings will be available for this purpose.

"The experience in this division makes it certain that skeleton organizations, filled with recruits on the eve of active service, is about the worst possible form of economy. Regiments under this system are reduced so greatly in efficiency at critical periods as to jeopardize their morale. All recruits at regimental depots would be more carefully trained than at general depots. All recruits, whether cavalry or infantry, should be instructed, vaccinated for small pox and typhoid fever, and passed through quarantine for measles, mumps, and other diseases which have been brought to this division to so large an extent from recruit depots.

"It would be entirely practicable to train remounts at regimental depots.

"This system will retain our present cavalry organization intact, but distribute in a way to secure greater efficiency at less cost of time and energy and money."

The machine gun has demonstrated its usefulness beyond doubt. It will be an adjunct of great value to our cavalry, which has made and will continue to make so much use of dismounted action. Having had no experience in actual warfare with these guns we should study the experiences of other nations until such time as we shall be able to draw conclusions from our own.

The Germans, who have given much study to the question of machine guns, make them a separate branch of the service, the idea being to increase their efficiency by developing specialists. This would seem to be the better arrangement were it not for the fact that a cavalry regiment is at any time liable to have to act alone. With the machine guns a part of the regiment they would always have its guns with it. In this case, also, the regimental commander should be more familiar with its training, tactics and possibilities.

In the Russo-Japanese War the Japanese started out by assigning batteries of six guns to infantry and cavalry brigades. They found, however, that six gun companies furnished too large a target for artillery, and guns were assigned singly or in pairs to infantry battalions. It is now their intention to permanently attach a six gun section to each regiment of infantry, and an eight gun section to each brigade of cavalry. The Russians at the beginning of the war had several machine gun companies attached to divisions. Russia now has a six gun detachment for each cavalry division.

The British attach two machine guns to each cavalry regiment and infantry battalion.

The composition of a detachment for handling two guns seems to have been pretty well worked out in our service. The only question now is as to the number of guns to be assigned to a regiment, and whether, if we are to have more than two, they shall constitute an independent detachment or be assigned to squadrons.

I can see no especial reason for assigning guns permanently to squadrons. In such a case it is not probable that the guns would be allowed to follow the squadrons on the march, but that they would be assembled and marched at the rear of the regiment. It would seem to be better to have such guns as are assigned to the regiment placed under the direct control of the regimental commander, to be assigned by him to squadrons as necessity required or otherwise disposed of according to circumstances.

Experiments with a machine gun troop provided with six guns were carried on in our service for a couple of years, and have only recently been discontinued. It is believed that this troop was organized on the recommendation of General Montgomery M. Macomb, who was one of the American observers during the Russo-Japanese War.

Whatever their number, the guns should be assigned in pairs. The machine gun troop or detachment should have at least four guns. This would permit of two guns being assigned to a squadron temporarily detached for some special duty, and leave two for the remainder of the regiment. Probably this would be sufficient. Adding another machine gun platoon

to the proposed headquarters troop would bring its strength to eighty-two. It will probably be possible in the near future, owing to the reduced size of the machine gun to reduce the size of the detachments necessary to man them.

As to divisional cavalry, to my mind the employment of cavalry with infantry divisions, while a necessary and important use, may be considered a subsidiary use of the arm, and its employment for this purpose should have practically no influence in determining the size of the regiment or determining its organization in other respects.

The number of cavalry employed for this purpose will bear a relatively small proportion to the number used for other purposes. Von Bernhardi says, in "Cavalry in Future Wars:"

"There remains, therefore, for the divisional cavalry only the service with the most advanced of the infantry outposts (orderly duties with the infantry pickets in cases where the ground precludes the use of the cycle), duties connected with requisitioning; and reconnaissance only during those periods in which the mass of the independent cavalry has been drawn away towards the wings of the army to clear its front for battle, carrying messages during the combat, and actual reconnaissance during the progress of the engagement itself. All these requirements can, I think, be met with a very small amount of force. All the more so because reconnaissance under fire in modern war seems to me practically impossible, and can generally only be initiated by those divisions which form the wings of the army, but even then their field would be a very limited one.

"The scale on which we must decide the appointment of divisional cavalry must depend on the fact that infantry does not generally operate in small detachments, but works in large masses, and it is the necessities of these large masses which fix the standard.

"To apportion to single columns or divisions for particular circumstances an increased force of cavalry to be taken from the available mass of independent cavalry divisions, ought not in general to occasion unusual friction; but it is most difficult and troublesome to take away from the infantry the squadrons,

definitely assigned to it by peace time organization, and unite these under independent cavalry commanders.

"We must, therefore, lay down as a principle that as much cavalry as possible is to be organized for strategical independence, and as little as expedient retained for the infantry divisions.

"My opinion is that, if we make the fullest use of the bicycle and, with this object in view, reorganize our system of conveying orders and intelligence, then two well trained and effective squadrons (300 men) should amply suffice for the ordinary duties with an infantry division."

One of our regiments as at present constituted is very probably considerably more than should be assigned to a division. This, however, can probably be easily arranged in time of war by assigning regiments which have become reduced in strength to the divisions, replacing them with the larger regiments, which can then go to the independent cavalry.

Comparing large and small regiments as to mobility the small regiment, of course, has the advantage; still it can not put more men on a charging line in a given time than a large regiment.

We hear a great deal about mobility, flexibility and surprise. Many speak of the cavalry always being ready for instant action in such a way as might lead some to think that we land upon our unsuspecting prey somewhat after the fashion of the wily tiger. If one of our principal duties is to cover the other arms and obtain for them early information of the enemy we ought to be able to secure information for ourselves in time to enable us to take up a formation suitable to the circumstances. Our Drill Book prescribes formations suitable for marching across country from which we may pass quickly to a formation for mounted or dismounted action.

A large regiment, as has been stated, has more confidence in its own strength than in the support of several other regiments that adjoin it; it can make detachments and still leave a command suitable for a colonel; it can, of course put more men on the dismounted firing line than the smaller regiment; its efficiency for shock action was proved in our Civil War and in the Napoleonic wars; it simplifies administration by reducing

the number of units; and last, but by no means least, it is more economical.

I can see no reason for making essential changes in the organization as it now stands.

Due principally to improvements and changed conditions, the following minor changes seem to me necessary:

The following additions to the present legal organization:

To each troop:

One stable sergeant,
One horseshoer.

To each squadron:

The headquarters detail now provided by general orders of the War Department.

To each regiment:

A depot troop with the same organization that other troops now have except that the corporals and sergeants are increased to ten each.

A headquarter detail similar to the one now authorized by War Department orders.

A headquarters detachment comprising all enlisted men of the regiment not assigned to troops.

There are in our branch of the service some officers who advocate a smaller regiment, an organization having about the strength of the French or German regiment. It is believed that the number of such officers is small, a very decided minority of the whole. Experiments have been made with smaller regiments, and a Board of cavalry officers is now considering the question of a proper organization for our cavalry. What its recommendations will be is not known; and what effect these recommendations will have, if a change is recommended, is problematical.

It is recognized by all that any changes made must be of such a nature as not to call for an expense above the present cost of the arm; and some organizations meeting this requirement have been proposed.

In the CAVALRY JOURNAL for July, 1911, Captain Mathew E. Hanna, since resigned, gives in detail the organization of a two and three troop squadron regiment conforming to the above idea, that is, necessitating no additional expense. This article appeared shortly after experiments made with provisional regiments organized somewhat along the same lines.

In both the organizations considered by Captain Hanna the proposed regiments have three squadrons. The troops in the two troop squadron regiment have a peace strength of eighty-five men, in the other of eighty men. In both the troops have the same war strength, one hundred men. Both have a headquarter troop of the same composition three officers, the Band, organized as now, machine gun platoon (22), and additional men for Headquarter detachment, the latter the same as now provided for by Field Service Regulations except that one cook is added. Each has a depot troop of three officers and fifty men.

In the first, the two troop squadron regiment, the peace strength of the squadron is eight officers and one hundred and seventy four men, and of the regiment, thirty-five officers, one chaplain, one veterinarian, and 639 men.

In the second, the three troop squadron regiment, the squadron has a peace strength of 11 officers, 244 enlisted men, and the regiment a peace strength of 44 officers, 1 chaplain, 1 veterinarian and 849 enlisted men.

The enlisted war strength of the first, omitting the depot troop, is 685, and of the second, 985.

The first or smaller organization formed into twenty regiments would increase the number of officers by twenty five, the second—the three troop, three squadron regiment—would reduce the number of officers by ninety, fifteen regiments being provided for.

Examining the tables prepared by Captain Hanna in reference to the three squadron—fifteen regiment organization—we find the following:

Gains:

45 supply sergeants, squadron,
76 corporals,
199 privates.

Losses:

90 officers,
 30 first sergeants,
 150 sergeants,
 30 supply sergeants, troop,
 45 cooks,
 15 farriers,
 15 horseshoers, (the number of horses being slightly increased);
 15 cooks,
 45 trumpeters.

The 45 supply sergeants gained are practically non-combatants; so that, to balance a gain of 76 corporals and 199 privates, we have a loss of 90 officers, 30 first Sergeants, 150 sergeants, 30 troop supply sergeants, and the other men named above.

The following additional criticisms can, I think, be made of the proposed organization:

The troop: No stable sergeant provided for. Experience shows that one is necessary for each troop. Each troop is provided with only one horseshoer. This would not be sufficient, especially for field service.

The depot troops are given the same allowance of non-commissioned officers as the other troops. The object of these troops is to prepare men to take the places of those lost on service, and as, for various reasons, the full quota of non-commissioned officers will seldom or never be available, for this purpose, it would seem to be wise to increase their number to ten sergeants and the same number of corporals.

For convenience of administration the non-commissioned staff should be made part of the headquarter troop.

The two organizations discussed above seem to have been suggested by the experiments that were carried on with somewhat similar organizations formed from the Eleventh Cavalry, then (1911) a part of the Maneuver Division, of Fort Sam Houston, Texas.

The regiment was organized into the First and Second Provisional Regiments on April 4th, and the experiments continued for about one month.

The First Provisional Regiment was composed of two squadrons of three troops each, 14 officers, 575 enlisted men. The Second Provisional Regiment was composed of three squadrons of two troops each. The strength of this regiment varied from ten to fifteen officers, and the troops averaged about sixty men for the drills that were had.

All officers were required to report on the effectiveness of the provisional regiments as compared with the old organization; the following reports being covered in each report:

(a) In movements in close order, taking into consideration handiness and number of men brought into action; (b) in the charge; (c) in the battle exercise dismounted, acting independently; (d) in a general engagement, dismounted, as part of a large cavalry force; (e) (as to regiments) in raids; (f) (as to squadrons) as contact squadrons; (g) as advance and rear guards; (h) in outpost duty; (i) in the order of march; (j) as suitable commands for colonels and majors; (k) as concerns administration, discipline and supply.

Reports were made by Major General W. H. Carter, Brigadier General W. S. Schuyler, Colonel James Parker, Eleventh Cavalry, and twenty one officers of the Eleventh Cavalry—two lieutenant colonels, three majors, five captains, eight first and three second lieutenants. The reports of the regimental officers were in the form of answers to the questions above.

General Carter says: "An organization should be the one best adapted to our use without servilely copying any other nation. No other nation has so consistently adhered to the development of fire in its cavalry as has the American army for fifty years, but all have made progress since the Civil War in America, and especially since the British War in South Africa." He recommends further experiments with three troop, three squadron regiments; the remaining three troops of each regiment to be used, one as headquarter troop, and the other two as depot troops.

General Schuyler prefers the three troop, three squadron regiment, but states: " * * * there is great justice in the contention that for dismounted fighting the large squadron of four troops has great advantages, and when the day arrives

that the cavalry must form a great mobile army reserve to move rapidly to reinforce points where the necessity has been indicated by the wireless or aeroplane service, we shall find the large regiment of three squadrons of four troops demonstrating its justification. We must understand that our cavalry is usually to fight dismounted."

Colonel Parker favors the present organization, but says: "In movements in close order, mounted, taking into consideration handiness and number of men brought into action, the three troop squadron is to be preferred. Experience has shown, however, that the four troop squadron is a handy force. The six troop regiment is handier than the twelve troop regiment."

One lieutenant colonel favors the three troop squadron; and one says, speaking of foreign countries: "When we find that all have smaller cavalry regiments than we, the average being about half that of our cavalry regiments at war strength, may we not conclude that probably they are right, and we are wrong?"

One major favors the three troop, three squadron regiment with a strength of about 700 men. One favors the three troop, three squadron regiment for mounted, and the four troop squadron for dismounted service.

One captain favors the three troop, three squadron regiment, the remaining four captains the old organization.

Six first lieutenants favor the three troop, three squadron regiments, and three the old organization:

Two second lieutenants favor the three troop, three squadron organization.

Considering their reports the majority of the officers of the regiment seems to favor an organization different from the one we now have. Considering the officers with the rank of captain and above, they seem to be evenly divided; but some of those favoring a new organization qualify their approval of it very materially by stating that they prefer the present organization for dismounted service. Practically all of the officers say that the present organization is preferred for dismounted action.

General Carter in his report says: "It is not known just what led the War Department to order the experiment as to these particular organizations of a regiment."

GOVERNMENT HORSE BREEDING IN FRANCE. AND HUNGARY.

BY COLONEL SPENCER BORDEN.

THE signal victory won by a team of French officers at the last Horse Show at Olympia, London, makes the study of French methods of horse breeding a matter of great interest.

That success, however, was more an illustration of superior horsemanship than of extraordinary horses. Baucher was a Frenchman. He was the originator of a system of training horses, and of correct riding, which have been followed by his countrymen, and others, ever since his day. From his time forward no one unacquainted with his methods could justly lay claim to being a finished horseman.

Contrary to the common belief, the English are not good horsemen. Their horses are ill trained, the men are not good riders, excepting such riding as is involved in not falling off a horse that is jumping obstacles.

That was a travesty of judgment, in the Charger Class at the New York Horse Show of 1910, when, of the team of French officers who came with well trained horses from the great cavalry school at Saumur, Lieutenant Jolibois, riding perfectly a mare that made no mistakes—one of the very horses that won at Olympia in 1912—could get no better than third place. No wonder the French did not come again to Madison Square Garden.

As noted, the French have given much attention to the matter of horse breeding.

What they call "L'Organisation des Haras," the Government Horse Breeding Bureau, was established by Colbert, for Louis XIV, in 1665.

The ordinance of that year declared the object to be in order that—"the subjects of the King should no longer need to take their money to foreign countries for the purchase of horses."

Stallions were brought from Friesland, Holland, Denmark and Barbary. The larger horses were scattered through the country from Bretagne to the Garonne, "wherever there were mares of proper size," the Barbs were placed in the interior of Poitou, Saintonge and Auvergne.

It was decreed that mares which had produced foals should be exempt from seizure, either for taxes or imposts of any public nature, or for private debts.

The breeding studs, in effect, were for the purpose of furnishing remounts for the army, which Louis XIV reorganized giving it new uniforms, and placing promotions of all kinds under the control of his War Minister, Colbert.

That army, which had been reduced to 72,000 men by the treaty of the Pyrennees, was gradually increased to meet the bellicose projects of the King, and its cavalry soon numbered 30,000, for whom remounts had to be found.

In addition to these, the Royal household was very numerous, since the officers of the army disbanded in 1660 had been kept together as private attendants of the King. This body also had to be supplied with horses before they could take any part in operations against the Sultan, and to carry its members to victory in Flanders, the Franche-Comté, and to the Rhine.

Laws passed in 1665, 1668, and 1683, compelled every parish to keep a record of the number and quality of its entire horses, and of its mares suitable for breeding.

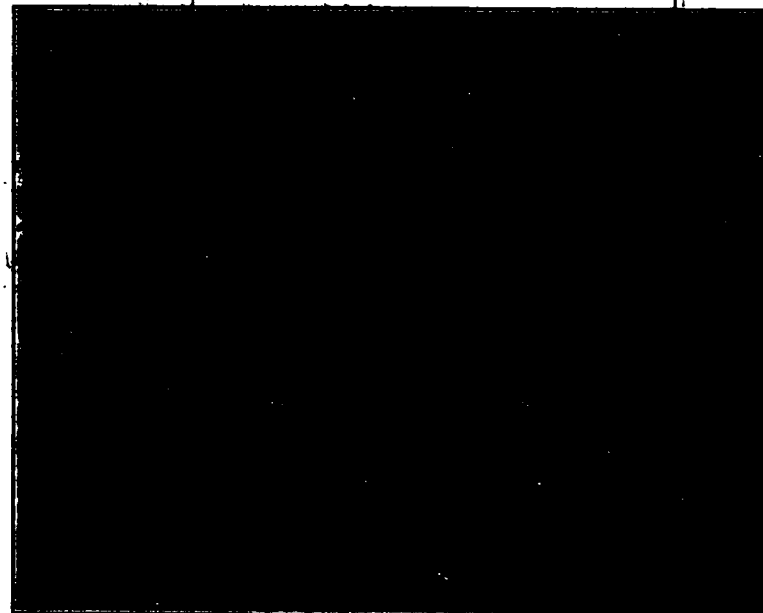
Proprietors of whatever condition in the State were required to have their stallions approved and marked, so under control of the Government, which prescribed the size demanded, and forbade, under penalty of 300 pounds fine, their use in the stud before the age of four years. They were also forbidden doing any work so long as they were in use for breeding purposes.

Later—February 24, 1717 and June 26, 1718—laws were passed dealing with mares suitable for breeding, assuring the quality of their offspring by indicating the stallion each owner intended using. These must be approved by a Government Inspector. It was also forbidden that any such mare should run in the same pasture with any stud colt one year old or over.

Coming along to 1790, we find two types of establishment under the control of the Royal Directeurs des Haras.

1. The breeding studs proper, including 300 brood mares reserved to the supply of horses for the hunts and riding of the Royal household, the Haras du Pin organized in 1714, and the Haras de Pompadour which became crown property in 1760.

2. Stallion depots, for the purpose of bringing approved stallions within easy reach of peasant proprietors through the country, who should desire to use them.



CUT 1. BRUCE.

A thoroughbred stallion from Le Pin. Shown at the Concours Hippique International at Paris, in 1900. An excellent type although he might have more bone below the knee.

There were also provincial breeding studs, some belonging to private individuals, others to certain of the great nobles.

So great were the privileges granted to some of these proprietors, taking the form of reduction of taxes and exemption from contribution to public funds of various kinds, the Revolu-

tionary National Assembly abolished the studs altogether in 1790.

The wars of Louis XIV are said to have cost France 100,000,000 francs (\$20,000,000) in money spent for horses alone. Yet in 1788 nearly one-half the cavalry of France was mounted on horses bought from foreigners.

When Napoleon Bonaparte became Emperor, in 1806, one of his first acts was to establish anew the State Breeding Studs. To fill the voids made in his cavalry by the battles of Marengo, Ulm, and Austerlitz, he was compelled to provide horses afresh before he could undertake to win at Jena and Eylau, at Friedland and Wagram.

The reestablishment of the studs in 1806, was followed by the creation of the Breeding Council in 1809. An Imperial decree issued from Schönbüch on May 17, 1809 established a central committee charged with the care of—"the propagation of horses, the improvement of the horse breeding establishment, the management of stud farms, and the art of riding."

The Imperial decree of 1806 not only reestablished the Government Breeding Studs, it enlarged their usefulness. Six studs were created, in four of which only stallions were kept, in the other two mares and colts as well as stallions.

In the North was Le Pin, Langonnet in the West, Pompadour in the middle, Pau in the South, the "Haras de la Manche de la Venerie" in the East, and Deux Ponts in the North East.

May 28, 1822, witnessed a decree of the King rearranging the management of the Haras. Another of January 16, 1825, reaffirmed the use of Le Pin, and added Rosières, as studs where stallions, mares and colts should all be kept, as feeders of stallions to the other studs and twenty-four stallion depots throughout the country.

On November 12, 1828, still further attention was given to the Administration des Haras. A commission of ten to administer all the affairs of the Government Studs was appointed, its President being given full powers vested in the former Director General. Three Generals of the army, three private breeders, and the oldest Directors General of the studs were called to serve on that commission, whose President was the

Duc d'Escars. This commission greatly developed the studs of Le Pin, Pompadour, and Rosières by especial attention to the brood-mares of those studs, a Royal decree of 1833 on the report of M. Thiers, then Minister of Agriculture and Commerce, being the moving cause for the addition of Pompadour to the other studs.

Under this impulse the Administration des Haras developed in an extraordinary manner. Between 1815 and 1834



CUT 2. INTRIGUANT.

Half thoroughbred stallion from Le Pin. Paris Exposition of 1900. A horse of good bone, a bit lacking in his body but generally of substance. His cold blood appears in his coarse head.

they brought 1,223 stallions from Arabia or England, 8,530 of Norman race and 826 of the best of other French breeds.

Further changes were made in 1848, 1850, and again in 1852, a law of the latter date establishing trotting races, stallion races, riding schools at the different Haras, and brood mares

at Le Pin, though it greatly reduced the size of Le Pin, that same year.

In 1841 Rosières was closed out. In 1860 breeding at Pompadour ceased, and from that time forward dependence was had on mares privately owned, for whose use stallions were supplied through the stallion depots.

Then another commission was established to which was assigned the duty of managing stallion depots, passing on the qualifications of stallions offered to the Government, giving prizes for blood mares, and general oversight of all Horse Shows. Government money was offered as prizes, visiting private breeding studs and reporting thereon.

This arrangement lasted till the disasters of 1870, the Franco-Prussian War. Then chaos reigned till 1874. The law of May 29, 1874 established the system now in force with certain modifications.

The necessity for the renewal of Government breeding studs was then recognized by M. Bocher in the opening of his report on the subject to the Corps Legislatif:

"The subject immediately demanding our attention is not merely a question of agricultural and commercial importance, even that of increasing the public wealth. We are called on to provide for the defense and security of our Country itself."

He then explained that to provide for the security of France, there was demanded at the time he spoke at least 80,000 or 90,000 horses for the Army on the peace footing of 1874, which could be increased promptly to 250,000 or 260,000 in case of war.

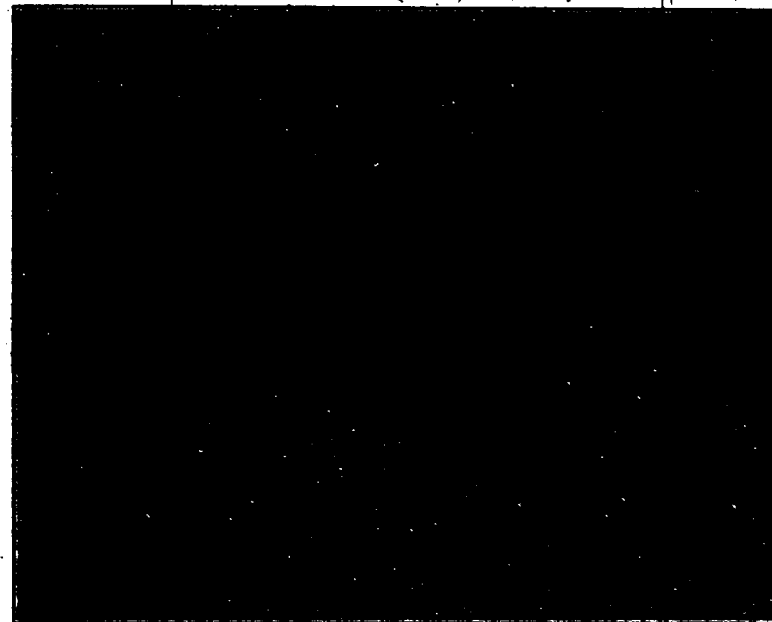
This demand involved the existence of at least 76,000 horses in the country on which the army could promptly lay its hands in case of mobilization. "Can they be found?" asked M. Bocher. "Yes!" he declared,—"but the quality would be bad, for the reason that the mixing of breeds in the country had left only such as were fit for farm work, and these were of no value as military horses."

Here we find an exact statement of conditions in the United States at the present time. With thousands, even millions of horses, nearly all are of the slow moving draft type.

Such as are suitable for military horses do not exist in sufficient number, nor are they being bred.

M. Bocher urged that the horses needed for the army could only be made available by reestablishing the Government breeding studs, especially Pompadour, and basing operations on pure blood, Arab, Anglo-Arab, and Thoroughbred.

In the argument following the introduction, of M. Bocher's report in the Corps Legislatif, M. Griyat, Minister of Agri-



CUT 3. ZUT.

Anglo-Arab from Le Pin. Might have more bone below the knee. His capped hocks are result of accidental conditions and need not be considered. He is a better type than other Bruce or Intrigant.

culture, expressed his opinion that the enactment of such a law as was suggested, though called a military law by its opponents, was not an extravagance, but a precautionary law, which necessity made obligatory. He declared that when a law was passed reorganizing the army, which reorganization

strong, and able to bear short rations and great changes of temperature; they are capable like the horses of the Orient of going 300 kilometers (60 to 65 miles) on a single days journey."

It is said that the cross of a Barb stallion on a Camargne mare produces a most excellent cavalry mount. Sanson the eminent naturalist and student of hippology, declares that in using Arab or Barb stallions with Camargne or Tarbes mares, there is really a regeneration of type by reinfusion of the original pure blood.

The Tarbes horses are cousins of those of Camargne, also of Asiatic descent, and a trifle larger.

The regenerating influence in all the French breeding studs is composed of pure English thoroughbred stallions, pure bred Arabs, and pure Anglo-Arabs. These last are a mixture of English thoroughbred and Arab blood, either in equal portions of each, or one or the other of the pure bred strains given a predominant part.

In 1906 these stallions numbered 565, all recognized as pure bred, of which the Anglo-Arabs were 228, the thoroughbreds 238, the pure Arabs 104, such being the report of the Directeur General des Haras for 1907.

Speaking of this combination of Arab and thoroughbred blood, the report of 1909 declares: "The Anglo-Arab is a special product of France, as is the Anglo-Norman, and the center of its production is the southwest. It makes a marvelous horse for the army, full of energy, supple, of distinguished appearance, enduring, and is found by the officers of the remount service mostly in the neighborhood of Pan and Tarbes."

Something must be allowed for gallic enthusiasm, in the claim that the Anglo-Arab is a special product of France. The same horse is called a Gidran in Hungary, is the standard cavalry horse of the Austro-Hungarian empire, and is turned out in great numbers from the great Hungarian breeding stud of Mezohegyes.

That he is appreciated in France need occasion no wonder. The introduction to the report of the jury of the International Exhibition held at Paris in 1910, declares:

"The pure-bred Anglo-Arab justly figures in our stud book as thoroughbred, has a special class assigned him in our

Horse Shows, and is recipient of 160,000 francs of public money, annually, as purses at the race tracks and special prizes at Horse shows. In the annual purchases of the Commission des Haras, held at Joulouse in October, prices paid for young stallions ran from 5,000 to 12,000 francs."

The amounts at command of the Administration des Haras in France, would seem extravagant if suggested to the Appropriation Committees of the Congress of the United States. In 1908 M. Fernand David asked for eight million francs, in addition to the Government interest in the "pari-mutuel," the betting proceeds at the public race tracks, an interest amounting to three million six hundred thousands francs in 1906.

The *Journal Official* of 1907 showed that the total funds at the disposal of the Administration des Haras amounted to twelve millions of francs. Besides this large sum they could direct the expenditure of sixteen millions more, a total of twenty-eight millions of francs devoted to horse breeding annually in France. In view of the great size of this fund of public money, expenditures for draft horse breeds have since then been taken from the control of the Administration des Haras.

The figures mentioned do not take into account expenditures for horse breeding in the French colonies.

According to M. H. Lecoq, Inspector of Agriculture for Algeria, there are no less than 4, 500,000 horses in that country, mostly of Barb or Arab blood. In 1906 the Government had 800 Barb and Arab stallions on circuit in Algeria, and 147 in Tunis.

Add to these the Government horses in the French Sudan, Madagascar, Indo-China, New Caledonia, and it becomes very apparent that the Republique Francaise is thoroughly impressed with the importance of maintaining an adequate horse supply as part of the scheme of National defense.

HUNGARIAN HORSE BREEDING.

Baron Jules Podmaniczky, of the Bureau of Horse Breeding in the Royal Hungarian Ministry of Agriculture, at Budapest, has just issued (March, 1913) a most interesting report, entitled "The Present State of Horse Breeding in Hungary." It contains valuable lessons for Americans, especially in view of the present state of anxiety among our army officers over the questions of remounts for our cavalry.

It appears that at the time of the last census, in 1911, Hungary—not including Croatia—had 2,023,711 horses, or 7.1 for each sq. kilometer in the country. Germany alone had more, with 8, England had 6.4, France 6, Russia 4.5, Italy 3.3. In proportion to population Hungary was far ahead of all others, with 110 for each 1000 inhabitants, Germany 67, Austria 63. In 1911 Hungary had in the stud 9,326 stallions, and 919,670 brood mares.

The experience of Hungary is that the increase in horses is always coincident with extensive exports. Thus, in 1911, there were sold out of the country 65,511 animals. Yet the increase since the last previous census was 28,499, and Baron Podmaniczky remarks: "The more horses sold abroad the more a country produces, and they are constantly improving in quality."

The Hungarian Ministry of Agriculture encourages the breeding of different kinds of horses, each in that part of the country where experience has proven the environment best adapted to any particular breed. English thoroughbreds are located in the rolling country near the Danube, which is not too hilly. In the more sandy and less fertile regions, Arab blood predominates. In the mountainous regions of the Carpathians are the Lippizans, originally from the Karst highlands of Austria. Finally, on the borders of Austria and Croatia, heavy draft horses fit in best with the animals of that country.

The control of this entire system of breeding is centralized at the Ministry of Agriculture, and exercised by a special section of the Ministry, which directs and administers all the personnel as well as the material of horse breeding (the Government breeding studs and all the stallion depots), and in general everything that relates to the breeding of horses in Hungary.

The entire scheme is subject to military discipline. Indeed they are considered part of the National Defence (Hoaved). The instruments for control of horse breeding, consist in the following:

1.—The Government breeding studs, Kisher, Babolna, Fogaras, Mezohegyes.

2.—The four great stallion depots.

3.—The purchase of mature stallions by the Government. Every year, in June, breeders are invited to report any stallions between three and eight years of age they have for sale. These are examined, and such as are found desirable are purchased by the Government. Besides this, a sale of stallions is held at Budapest every autumn, where the Government purchases thoroughbred stallions that have been raced through the season.

4.—To help supply the Government stallion depots, arrangements are made with proprietors of private breeding studs, whereby they agree to sell to the State, at an agreed price, three year old stallions produced in their studs, after examination has proven them of satisfactory quality. This price is fixed at a figure based on the value of the horse population of the stud.

5.—The Government buys, especially in communities where the quality of stallions used is high, about 350 yearling horse colts, annually, from breeders. These are taken to the Palanka Colt Farm, and carefully raised till three years old. They are then sold to communities through the country at moderate prices, with the reservation that said communities must agree to keep them for stud service a certain number of years.

6.—Stallions removed from the Government depots each year, either because of age or replacement by fresh stallions, are sold on the spot at moderate prices to horse breeders.

7.—Surplus brood mares from the Government studs are sold by auction to proprietors who can show their qualifications as horse breeders.

8.—The Government offers purses each year for races organized through the country.

9.—The Government gives material aid to Horse Shows, in the form of prizes and diplomas.

10.—Since certain communities have been forced by agricultural conditions to circumscribe the area of their pastures, the Government gives annual assistance to such communities or associations, establishing and maintaining commercial grazing lands, to the end that colts may have systematic rearing.

11.—The Government subsidizes Racing Associations.

12.—Finally, (a) The studs on State properties, (b) studs belonging to individuals, (c) breeding in general by the whole people, and receiving vital force from the two preceding sources, so producing great numbers of the superior horses in Hungary—all are under the national control and direction of the Section of Horse Breeding in the Ministry of Agriculture.

The State Breeding Studs.

These great establishments are for the production of the highest type of stallions for use of the breeders of the country. The system has not been allowed to vary for many years from the line of action established at the beginning. In each of the National breeding studs great care is given that the brood mares are submitted to conscientious tests. These are made in three ways: (a) Young mares are tried before being bred, in the special manner characteristic of their breed, under saddle; (b) They are tried in harness, followed by races in harness, organized at the breeding studs; (c) A certain number are loaned to hunt clubs, where they are tried for a season of hunting. Others are sent each year to military riding schools, and after training they follow the routine of that institution through a hunting season.

Young stallions of three and one-half years taken into the Government studs and distributed in the stallion depots are not submitted immediately to such tests, in view of their age, but after the age of five years they take their tests also, either with a Hunt Club, or in a military riding school.

All these tests are followed to the end that no horse shall be kept for breeding purposes but such as have proven their desirable qualities.

Kisber.

This stud was established in 1853, on a domain of the same name belonging to the Government. From the beginning it has been devoted to breeding English thoroughbreds. At first its breeding stock came from the other Royal studs, Babolna and Mesohegy. In 1854 seven mares and six stallions were brought from England. In 1860 a training stable and track were established, to try out young stock by public races. This public race track was suppressed in 1867, and since that time yearlings are sold by auction, the purchaser agreeing that none shall be resold to go abroad, excepting by special permit from the Minister of Agriculture. In 1865 the great horse Buccaneer was bought, foaled in 1857. He was in the stud at Kisber for twenty-one years. Nine of his offspring won the Austrian Derby, among them the celebrated horse Kisber, who also won the English Derby, and the Grand Prix de Paris, in 1876. In 1872, Cambuscan, son of Newminister, came from England. He proved his value by his offspring, among them the unbeaten mare Kinsem, the most celebrated race horse ever bred in Hungary. Of more recent importations were Bona Vista, a remarkably good horse, and later still Adam, for which \$60,000 was paid. There are now at Kisber 201 thoroughbred English mares, its total population is 694 horses, young and old. Private breeders send, annually, 250 to 300 mares to the stallions at Kisber.

Babolna.

This stud, started in 1790, is devoted to the breeding of pure bred and half-bred Arabs. To maintain the purity of its stock, and also to freshen its blood from time to time, this stud procures, when possible, new importations of stock from the Orient. Such animals were added in 1836, 1843, 1852, 1876, 1897 and 1901. The position occupied by the stud of Babolna in the scheme of National horse breeding, is considered of the highest importance, the excellent qualities of Hungarian horses being attributed principally to the Arabian blood in their veins. The larger stallions bred at Babolna are distributed in the more level parts of the country, those furthest advanced in culti-

vation, whereas the smaller ones are more used in the mountainous regions.

At the Paris Horse Show of 1900, it was an Arab horse from Babolna, Kobeilau, that won the Grand Championship. Service is made at present time at Babolna, by four pure bred Arab stallions imported from the Orient, two pure bred raised at Babolna, and six half-bred stallions of Arab blood. Mares owned by private individuals are admitted to the use of Babolna stallions, and there are at present belonging to the stud forty-five pure bred and one hundred and thirty-seven half-bred Arab mares, 182 altogether. The total horse population of Babolna is 732.

Mezohegyes.

This great stud, organized in 1785, had in the beginning 172 Circassian mares, 148 Holstein, 177 Moldavian. Since that time it has undergone many changes, but its stock has always been robust, big boned, well built. These characteristic qualities, quite exceptional indeed, are largely due to the particularly favorable influence of the soil of Mezohegyes. Thanks to this circumstance a family of Anglo-Norman horses has been established at this stud, which, under the names Grand Nonius and Petit Nonius has added glory to the National scheme of breeding in Hungary. Four stallions, especially, have had great influence in establishing the line of horse breeding in Mezohegyes. In 1816 ten stallions were brought from the stud of Rosières (France) taken therefrom by troops returning to Hungary. Among them was Orion, an English thoroughbred foaled in 1810, who was the sire of Nonius. The dam of that horse was a Norman mare, and he was progenitor of the strain of horses still produced at Mezohegyes. Nonius reached an exceptional age, and did service in the stud for twenty-two years. The second stallion of importance in the stud was Furioso, an English thoroughbred bought in 1871 from the stud of Count George Karolyi. The third was North Star, a thoroughbred brought from England in 1852. The last two horses were the progenitors of the half-breds called Furioso and North Star in the present day. The fourth great name at Mezohegyes was Gidran I, and Arab stallion, founder of the race of Gidrans now so highly prized in Hungary.

At present the stud of Mezohegyes is divided into five groups, as follows: 1. The English half-breds of the stud, descendants of Furioso and North Star; 2. The Gidrans, all chestnuts; 3. Grand Nonius and Petit Nonius, divided in the stud according to height. In this part of the stud English thoroughbred blood has been used from time to time, besides the stallions raised in the stud itself. This section may indeed be considered half-bred English horses. 5. Lippizans, a race whose mares have now mostly been removed to Fogaras.

The chief production of Mezohegyes in importance is the Nonius family. The stallions of that race are very robust and pleasing in appearance. Horses of this family are universally appreciated and preferred above all others for use in heavy harness and agricultural work. The Lippizans were originally brought to Mezohegyes for the developing influence of the soil of that domain, to increase the size of the stallions. The experiment was not altogether satisfactory, and they have now nearly all been taken to Fogaras. The animals now at Mezohegyes, are as follows:

Stallions: Five English thoroughbreds, three Anglo-Arabs for breeding Gidrans, two Furioso for half-bred English strain, six Nonius, three Lippizans, total sixteen stallions. There are of brood mares, 142 English half-breds, 100 Gidrans, 141 Grand Nonius, 139 Petit Nonius, twenty-four Lippizans, total 546 brood mares. The entire horse population of Mezohegyes is 2,100 head.

Fogaras.

The stud of this name was established in 1872. Its object is to procure stallions of the Lippizan breed, hardy, of good bone, light movement, such as is best adopted for mountainous countries. The stud has been reinforced from time to time by new acquisitions from original sources. The present strength of the stud is made up of descendants of the strains of Favory, Maestoso, Napolitano, Peuto, Conversano and Incitato. The annual production of the stud is pastured on the high mountain sides. Eight stallions of the breed are now in service, and there are at Fogaras fifty-three mares. The total of horses at Fogaras is 332. In the four great Government studs there are 982 brood mares.

Mares young or old, culled from the four studs not the most desirable but free from hereditary unsoundness, are sold by auction, as already stated; but it must not be forgotten that only qualified breeders are permitted to attend these auctions. Other disposable stock are sold at Budapest each year. Stallions from the Government studs are distributed at three and one-half years of age among the stallion depots, whence they return to the remount stations at four years.

Hungarian Stallion Depots.

The Government has four Stallion Depots, divided into eighteen sections. At the head of each depot, also of each section, is a commandant whose attention covers the entire district. Each of these sections comprises a considerable number of villages or cities. Each of these decides the location of a service station for stallions, also the number and breed of the stallions for each assignment.

The service fee in the stations is not always the same but varies from two crowns to sixteen (\$0.40 cents to \$3.20) according to the quality of the stallions used, and the material condition of the region. Certain stallions also are rented for the season to private breeders at an agreed price, this in some instances allowing his retention for a whole year. The number of mares he shall serve is limited to forty-five.

Draft horses needed for use in the parts of the country where such are required, are taken from the neighborhood administered from Kisber, or from importations, especially from Belgium. In the future distributions of draft horses such will be exclusively of the Belgian breed.

The four stallion depots, are at Szévesfehérvár, Nagykörös, Debreczen, Sepsiszentgyörgy. At these four, in 1912, there were:

(a) In 871 Breeding stations.....	3021 stallions.
(b) Located with individuals.....	225 "
(c) Rented to private studs.....	142 "
Total	3388 "

The stallions from these four stations covered in 1912, 141,980 mares, an average of forty-seven for each.

Of these 3,388 stallions, 380 were bred at Kisber, 343 at Babolna, 1,026 at Mezohegyes, 158 at Fogaras. In the year 1912 there were bought 1,258 mature stallions and 223 yearlings.

Outside each of the four great breeding studs, is a domain in the neighborhood, where horse breeding is under the direction of the stud management. In these domains (list omitted) there were located in 1912, thirty-one stallions, 446 brood mares, 1,898 of all ages. The mares of these six "domains" excepting those at Kolozo, are used in farming operations.

Private Studs.

These play an important part in the country's scheme of horse breeding. There are about 420 private studs in Hungary, in which are 13,000 brood mares. Of these, 59 breed English thoroughbreds, 337 English half-breds, 32 Arabs, 13 Nonius, and Anglo-Normans, 12 Trotter, 22 Lippizans, 19 heavy draft horses, Belgian or Percheron. Of stallions in these studs there are 210 English thoroughbreds, 168 English half-breds, 17 Arabs, 24 Nonius, 23 Trotters, 18 Lippizans and 18 draft horses.

In General.

Horse breeding has undergone important changes of late, not only by reason of the regrettable diminution of pasture lands, owing to the growing intensity of agricultural methods, these employing much machinery and so demanding an increase of heavier breeds of horses.

To oppose an obstacle to the undue increase of cold blood, breeding of this type of horses has been limited by organizing the region where they may be produced; outside this section the employ of cold blood stallions for public service is absolutely prohibited. The only exceptions to this rule is made in favor of certain breeding associations which specialize in breeding certain families of heavy draft animals.

The ends always kept in view by the Hungarian Administration of horse breeding, are (1) to make horse breeding not only useful but lucrative; (2) to put at the disposition of the farmers, such number of draft animals as are needed for cultivating the soil; and, (3) to secure for the army an adequate supply of good horses.

Finally there should be mentioned the activities of an association of private breeders in the neighborhood of Mezohegyes, who breed large horses of the general type of the Nonius family, suitable for harness purposes. This association, in 1912, maintained ten stallion stations, where 120 stallions covered 4,916 brood mares belonging to 2,819 private owners, an average of forty-one for each stallion. In consideration of the excellent quality of horses produced by this association, the Minister of Agriculture gives every encouragement, and contributes material help to their efforts.

Besides the foregoing control and encouragement to horse-breeding given by the Government, appropriations from the Treasury are made to numerous race meetings through the country, not only running races, but also trotting and steeple-chases.

SOME EXPERIENCE WITH ARAB HORSES.

BY CAPTAIN FRANK TOMPKINS, TENTH U. S. CAVALRY.

DURING my service as a cavalry officer, covering a period of twenty-two years, I have been deeply interested in the ability of different types of horses to cover long distances under service conditions.

In 1908 in Cuba, I made a march with my troop, of one hundred and twenty-seven miles in a little less than thirty hours, including all halts. I noticed that the small, compactly built horses of about 15 hands stood this test better than the taller horse of the troop, those over 15.2.

Since I have been on duty as Professor of Military Science and Tactics at Norwich University, Northfield, Vermont, I have had an opportunity to study the Morgan horse and the Arabian horse, and the more I see of these horses the more convinced I am that they are what we need in the cavalry service. As you probably know the Morgan horse is descended from the Arabian. They have many similar characteristics.

On October 30, 1912, I rode to Fort Ethan Allen, Vermont, and return, a total distance of one hundred and two miles. The trip was made in five minutes less than twenty hours, including all halts. The halts aggregated four hours and thirty minutes—this made the actual riding amount to fifteen hours and thirty minutes, or very nearly seven miles an hour.

I was accompanied on this trip by Cadet R. C. Kimball of the Junior Class, who rode a Morgan gelding, the property of Norwich University; six years old; fifteen hands, weight about 975 pounds; sired by Prince Charley. I rode the pure bred Arabian stallion Razzia, owned by Colonel Spencer Borden of Fall River, Massachusetts. Razzia was foaled in 1907, he is 14.2, and weighs about 950 pounds. Razzia's dam is Antika, his sire Harb, son of Bint Helwa. Razzia is an Abeyeh Sherakieh.

Going, we covered the fifty-one miles in eight and one-half hours, including a halt of one hour and thirty minutes on the road, making the actual marching time seven hours, or an average of a little over seven miles an hour. Returning, we covered the fifty-one miles in nine hours and thirty minutes, and halted one hour on the road, making the marching time eight hours and thirty minutes, or one hour and thirty minutes longer coming back than going up. This longer time was due to darkness and stormy weather, making it unsafe to travel faster than a walk in many places.

We left the Norwich University Stables at 3:35 A. M., and arrived at Waterbury, a distance of twenty-three miles by road at 6:45 A. M. I had planned to leave the stable at midnight and my hostler had groomed the horse and saddled him before this hour but my arrangements for being called failed me and I did not appear until 3:35. The stable being lighted during all this time and the horse being saddled, deprived him of the rest that he otherwise would have had were he not disturbed until time for departure.

The sky was overcast but enough light from the moon filtered through to make the road visible but it was not sufficiently light to distinguish objects on the road such as depressions and stones. When about half way to Waterbury a heavy rain storm soaked the riders and horses. At Waterbury the horses were fed three quarts of oats. We left Waterbury at 8:15 A. M., and arrived at Ethan Allen at 12:05, noon.

We dismounted in front of the Administration building and were immediately surrounded by officers of the Tenth Cavalry who were much interested in the march made by these little horses, and were greatly surprised to learn that the same little horses were to make the return trip that day. At this time the horses showed no signs of weariness. Contrary to my custom I turned the horses over to a Tenth Cavalry soldier with instructions to water them, feed them two quarts of oats, and rub them down carefully. I have reason to believe that my instructions were not obeyed and that the horses were neither watered or fed at this time.

When fifteen miles from Fort Ethan Allen we encountered a very heavy wind blowing clouds of dust, making riding exceedingly disagreeable for both men and horses.

I took my annual physical examination at Fort Ethan Allen, ate a hearty luncheon, and started on the return trip at 2:00 o'clock. At 5:00 o'clock it got very dark, so much so that we had to slow down and walk in many places where we would otherwise have taken a trot. We arrived at Waterbury, twenty-eight miles from Ethan Allen at half past six. I had the horses watered and fed hay, all they would eat in the hour's rest. We left Waterbury at 7:30 and arrived at the Norwich University stables, a distance of twenty-three miles, at 11:00 P. M., with the horses coming strong and up on the bit all the way. As soon as they recognized their home territory it was necessary to hold them in.

I watched the horses that night and could detect no signs of weariness. They moved with a springy movement, head and tail up. The next morning I also examined these horses and they were ready to go on with a day's march. There was no swelling or stiffness of any description.

Neither of these horses were prepared for this test, in fact they were both somewhat soft. The test was made on the spur of the moment and as I have said before, without any preparation. When I started it I did not think it possible for either horse to cover the one hundred and two miles in the time stated, with so little preparation.

Again I found it necessary to go to Fort Ethan Allen and bring down a couple of Arabian horses, the property of Colonel Borden, to this University. This was on the 19th of March, 1913. The two Arabians were Halcyon, sired by Hail, he by Hagar; her dam, Heiress, sired by the famous Maidan. And Halin, a bay stallion foaled in 1906, his dam Hilmyeh, she a daughter of Bint Helwa. Halim's sire Astraled, a son of the Queen of Sheba and Mesaoud. Halim is of the Seglawi Jedran of Ibn Sudan's strain. Halcyon is a chestnut mare, lightly but very prettily made, standing 15.1 and weighing about 900 pound. Halim stands 14.3 and weighs something over 1,000 pounds.

I took Cadet Kimball with me. He rode Halcyon and I rode Halim. We left Fort Ethan Allen March 19, 1913, at 8:05 A. M. Both horses were very soft, having been exercised but little during the past nine months. In places the roads were heavy as they always are at this season of the year with the

frost coming out of the ground. In places the river had overflowed the roads a few days previous leaving them blocked with heavy cakes of ice piled up to a height of six and ten feet all of which had to be cleared by gangs of workmen. We passed through a lane of this ice continuing for nearly a mile. The south exit to this tunnel had been blasted out by dynamite a few minutes before we got there, our horses being the first to pass through. In other places the road was covered with smooth ice making the going very slow and dangerous. We were forced to make a detour of three miles to avoid a bad piece of road. This made the total distance traveled a long fifty-five miles. The total time in making this ride, including all halts, was nine hours and twenty minutes, which is a remarkable performance for horses that have had practically no exercise during the past nine months, and over roads as difficult as those I have just described.

The horses were caked with mud from their ears to their fetlocks. The day was unusually warm for this season of the year causing the horses to sweat before they had been a hundred yards on the road. This in itself must have been a severe handicap as the sudden rise of temperature in the early spring has a tendency to lower ones vitality, causing a decidedly lazy springlike feeling totally different from the invigorating effect of the days of early October. These horses were normal next day, and have been ever since.

A year ago Major George L. Byram rode this same horse Halim from Providence, R. I., to Fall River, Mass. The Major, with his equipment, caused the horse to carry a total weight of two hundred pounds. The total distance traveled was twenty-six miles, six of these miles at a walk over paved streets. He walked the first two and seven-eighths miles over paved streets in twenty-five minutes; the twenty miles from there to Fall River bridge the horse covered in one hour and fifty-five minutes. At the bridge he lost a shoe and had to be pulled to a walk for three miles. When he recognized the neighborhood of his home he could not be restrained covering the three and one-eighth miles in thirty-five minutes; making the twenty-six miles just inside three hours—six miles at a walk.

Halim has now gone to Arizona with Lieutenant Winfree, 9th Cavalry, for a campaign test in actual service.

One more test of horses from the same stud has been reported to me by the owner.

Shahzamin, ch. s. six yrs., Sire Kahled (Sire of Major Barrett's Artillery) dam Imp. Shabaka (dam of Segario and Sinbad) was shown at the Charity Fair, of the Park Riding School in Boston, with the b. m. Imp. Nessa eight yrs., whose Sire was Huaran, son of Hagar; Nessa's dam the famous mare Raschida.

Their class was called at ten o'clock p. m., Saturday April 19, 1913. Sunday morning at 6:15 they started over the road for their home, fifty-three miles distant. The first thirty-five miles were covered in exactly five hours, without hurrying. Rested and fed, they made the remaining eighteen miles in two hours and forty-five minutes, covering the last mile in six minutes. The stallion is a much faster walker than the mare, and could have considerably reduced the time, but had to be restrained to keep her company.

These experiments have convinced me that the Arab horse is the horse for the cavalry service. The hard service peculiar to cavalry in active campaign requires a horse low on his legs, of strong bone, full form, a horse that when even in thin flesh does not show it, one whose muscular development, energy and reserve power are denoted by a certain balance and uniformity not often seen in horses above 15.2. The Arab and Morgan horses are easier kept than the horse over 15.2; they can therefore do more service on short rations than their larger brother, and in active service during the midst of a strenuous campaign they will be up and doing when the type of horses our officers are now exhibiting in the Horse Shows, will be down and out.

NOTES ON THE INTERVENTION IN MEXICO, 1861-7.

BY BRIGADIER GENERAL JAMES PARKER, U. S. A.

IN the year 1861, in consequence of a long series of disorders, Mexico had defaulted in her public debt. As a result of a convention between Great Britain, France and Spain, intervention was decided upon, and a force of troops and marines of the three nations was dispatched to Vera Cruz.

Owing to differences of opinion among the allies, France took upon herself the entire task, the other nations withdrawing their troops. A full account of this expedition is given in a book, entitled "Expédition du Mexique, 1861-1867, Recit Politique et Militaire, par G. Noix, Capitaine-d'État Major." In writing this account, Captain Noix has had access to the best sources of information, as well as to the archives of the French Government, and the Ministry of War.

In best informed military circles, the Mexican Expedition was regarded as being due to the desire of Napoleon III to augment his prestige, and that of his dynasty, by sustaining the Catholic Church, which at that time, had suffered much loss of property in Mexico, as a result of the policy of President Juarez. This was more probably correct than the idea, that the invasion of Mexico had, for its principal object, the establishment of a monarchical form of government. This action of the Emperor of France was opposed, not only by the United States, but by the sentiment of a large majority of the French people.

In 1861, the railroad from Vera Cruz to Mexico City had been commenced, but was finished for a few miles only, as far as La Tejería. The French had been convinced by their friends in Mexico, that only a very small force would be necessary, and that large numbers of Mexicans would join them, as allies, to fight under their banner. As a consequence, the first ex-

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pedition was composed of seventy-three hundred (7,300) men only. It was commanded by General de Lorencez.*

These troops, on arrival at Vera Cruz, were forwarded in detachments to Córdoba, at the foot of the ascent which leads to the Plateau of Anahuac. The objective of the French troops in marching from Córdoba, was first, Orizaba, next, Puebla, and next, Mexico City. The effective of this marching force was about 6,000 men.

Marching from Orizaba, April 27, 1862, the French Army reached the Cumbres of Acultzingo, being a pass leading upon the plateau on which Puebla and Mexico City are situated. In this strong position the Mexican General Zaragoza attacked them, having about 4,000 men. After a three hour fight, the Mexicans were driven off with considerable loss.

On May 5, 1862, the French Army, arrived in front of Puebla, defended by General Zaragoza with 12,000 men.

Puebla was then a city without walls, regularly constructed, largely built of stone or adobe, streets barricaded, and walls of the houses and convents pierced for rifle fire. The various houses of each block thus formed a kind of square fortress connected by covered ways. The enemy had formed, in the center of the town, a large redoubt heavily armed. The city was commanded on the northeast by the Cerro Guadalupe 300 feet high, on which was a fortified convent. This ridge extended toward the west, where there was a little square masonry fort called Loreto.

Having reconnoitered the place for one hour and a-half, only, General Lorencez, against the advice of his Mexican allies, determined to attack the heights, and put his design into execution at once. The force of the French was about 6,000, consisting of three regiments and two brigades of infantry, one squadron of cavalry, two batteries of artillery, and one battery of mountain artillery, and one company of engineers. After an hour and a quarter of cannonading the signal for assault was given, but the French, arriving at the convent on the heights, were unable to cross the ditch by which it was surrounded, and were driven back, losing 476 men killed and wounded.

* It is possible too that the French thought they could accomplish with 7,000 men what the Americans in 1846 did with 1,000 men.

The news of this victory, known as the "Cinco de Mayo victory," was received with great joy by the Mexicans, elated greatly the supporters of Jaurez, and correspondingly depress the ardor of those who favored the French. The French Army was unable to maintain itself in front of Puebla, and retreated back to Orizaba, where it was joined later by Mexican allies to the number of 2,500 horsemen under General Marques. Arrived at Orizaba the troops were cantoned there and at Cordoba, and it became necessary to establish communication with and obtain supplies from Vera Cruz until reinforcements could be forwarded. For, while it is quite possible, in Mexico, to subsist a large foreign army on the interior plateau, the country between the edge of the plateau and Vera Cruz, contains very little cultivated land. This task was made more difficult by the ravages of sickness and yellow fever among the troops which had been left at Vera Cruz, and on the line of communication between Vera Cruz and Orizaba. The French line of communication had to suffer the attacks of numerous parties of guerrillas who very seldom gave quarter when successful.

On the 13th of June, 1862, took place the combat of Cerro Benego, remarkable in some aspects. This mountain rising about 1,000 feet above Orizaba, was thought to be inaccessible to the enemy, and therefore was not occupied by the French outposts. At ten o'clock in the evening, noise being heard in the mountain, a French company of infantry was ordered up to reconnoiter. Arriving in contact with the enemy, fire was opened. The Mexicans were 2,000 men strong with a reserve 4,000 strong. The French being ignorant, in the darkness, of the number of the enemy, held their ground, while the Mexicans, for the same reason, were afraid to advance. After several hours another company of French infantry arrived, as reinforcements. The French, making a determined attack drove the Mexicans from the heights, the Mexicans losing 250 killed and wounded, 200 prisoners, three mountain guns, and a number of flags. The whole Mexican Division, comprising 6,000 men fled in disorder. The French engaged numbered 140 men, and lost 34 killed and wounded.

On the 9th of September, 1862, the French advanced troops having suffered much privation for want of food and supplies, the second French expedition began to arrive under General Forey. This reinforcement raised the strength of the French up to about 30,000 men, the army being now organized into four brigades of infantry, and one brigade of cavalry. There was included, two batteries of Field Artillery, one battery of mountain guns, two of siege artillery, making fifty guns in all, and including 19,000 infantry, and 1,500 cavalry.

In his instruction to General Forey, Napoleon III said: "It is not our wish to impose upon the Mexicans a form of government to which they will object, but it is rather to help them in their efforts to establish a stable government. Nevertheless, if the Mexicans prefer a monarchy, it is in our interest to help them, and in this case you may nominate Arch Duke Maximilian as our candidate. We are interested in having the Republic of the United States of America powerful and prosperous, but we do not wish her to take possession of the Gulf of Mexico, and dominate the Western Hemisphere. *If Mexico should acquire a stable government under our protection, we will have interposed between the United States, and countries to the south of her, a barrier which cannot be crossed.*" The Emperor Napoleon insisted in believing that the large majority of Mexicans were supporting his cause.

On October 27, 1862, General Berthier, with 5,400 men was sent from Vera Cruz toward Jalapa, on the road to Mexico taken by the Americans in the year 1846. The various defensive positions along this road had been occupied by the enemy. The first of these positions, Puente Nacional, was taken without resistance. At Rinconada the French and Mexican cavalry had an engagement, fifteen Mexicans being killed.

At Cerro Gordo the Mexicans had a force of 3,000 men and some artillery, but two companies of French infantry, having turned the position, the enemy abandoned it. Jalapa was taken without resistance.

In December, 1862, the French sent an expedition to Tampico. It was taken without trouble, but it was found that the occupation was so difficult that the French later evacuated it. Later in the war, it was again occupied. No particular advantage resulted from the occupation.

At this time the Mexican allies of the French consisted of 13,000 infantry, 1,100 cavalry and 50 artillery. The French and Mexican soldiers did not show much liking for each other. Nevertheless the Mexican cavalry was of much service.

On the 18th of February, 1863, at San Jose, two platoons of French cavalry, forming an advance guard, became engaged with 500 Regular Mexican cavalry. Although their numbers were as one to six, they did not hesitate to charge them, and finally ran against a company of entrenched infantry. The French drove the enemy back, and pursued him ten miles. The French lost three, the Mexicans thirty-nine killed and wounded. This shows good work with the sword.

In February, 1863, the French army, now numbering over 30,000 men, again took up the march on Puebla, and at once the difficulties as to the supply of the army disappeared. "Supplies found on the plateau," says the author, "sufficed for the daily consumption, permitting the commanding general to maintain on hand a reserve, in wagons, of twenty days food." Puebla was invested on the 16th of March, 1863, the city having been much more strongly fortified since the year before. It was surrounded by eight forts and many smaller works. The siege of this town reminds one of the siege of Zaragoza in Spain, in 1808, in that the fighting after the city was entered was of the fiercest description, from house to house, using the mine, the pick, the shovel, the French forcing their way from one quadrangle to another in spite of fierce resistance.

On April 7, 1863, the French had made so little progress, that a council of war was held to determine whether to wait for more artillery or whether to abandon the investment of Puebla and march on Mexico City. The Commanding General resolved to maintain the siege. At that time the French had had about 540 killed and wounded. In this connection, it may well be asked whether, instead of attacking Puebla, the French might not have better marched on Mexico, thus drawing the enemy out of their fortifications and forcing the fighting in the open.*

*It has been claimed, that, during the war of 1846, General Scott would have done better had he turned such positions as Chiribusco, Molino del Rey, and Chapultepec, instead of taking them by assault.

On April 25, 1863, the French after a long bombardment made an assault on the convent of Santa Inez, and after great heroism, were repulsed losing 330 men, of whom 130 were captured by the Mexicans. After this assault, the French concluded to invest the place without further attacks. On the 8th of May a large Mexican force, from Mexico City, made an attempt to introduce a convoy of supplies into the place. They were attacked and beaten back in several combats in which the Mexicans lost about 1,000 prisoners and 800 killed and wounded. On the 17th of May, the Mexicans, running out of supplies, and, despairing of being able to withstand the siege, surrendered, to the number of about 13,000. The loss to the French in the siege was about 1,300 killed and wounded.

On the 10th of June, 1863, the French Army, under General Forey, entered the City of Mexico without resistance. By a decree of the 18th of June General Forey designated thirty-five citizens to form an "Assembly of Notables" of two hundred and fifteen members, elected or chosen, by them. On the 18th of July, 1863, the "Assembly of Notables" presented a report recommending that the country adopt a monarchical form of Government, and that the Imperial Crown be offered to the Archduke Maximilian of Austria. A number of minor combats took place about this time.

The end of the summer of 1863 found the French Army was master of Mexico City, of Puebla, and the country for sixty miles around these cities. Its detachments occupied the line from Mexico City to Vera Cruz. The coast of Mexico was blockaded. In the different localities visited by the troops, the population appeared rather sympathetic than hostile. They often asked for protection by French garrisons, to escape the guerrillas, but beyond that point the French received very little assistance. Juarez was still the recognized chief of all the country, not occupied by the French. The French from this on, obtained food supplies from the country, equipments and munitions of war from France.

The government of Mexico as organized by General Forey was sadly in need of funds. The Mexican allies were lacking in enthusiasm. The enemy, on the contrary, showed great energy.

They dominated the country by terror, they recruited their forces everywhere, even in the cities occupied by the French.

About this time, dispatches were received by General Forey, which indicated that the Emperor Napoleon was disagreeably surprised by the news that the monarchy had been proclaimed, and by the manner in which it was effected, and that he hardly considered the voice of the "Assembly of Notables" sufficient guaranty of the will of the people of Mexico.

Later, General Forey was relieved of command and General Bazaine appointed in his place. General Bazaine showed great energy. He had, then under his command 42,000 armed men, not counting the allies, the army being in fine condition. The Mexican allies numbered about 13,000 men. In the fall and winter of 1863, and spring of 1864, Bazaine organized numerous expeditions which, without much resistance, occupied the country generally within one hundred miles of Mexico City.

On the 10th of April, 1864, Archduke Maximilian received a commission of Mexican Deputies, at Miramar, Austria, and announced that, being assured that he was the choice of the Mexican people, he accepted the crown. He embarked on the 14th of April, 1864, and arrived at Vera Cruz, on the 28th of May. After an enthusiastic reception in the towns through which he passed, he arrived at the City of Mexico on June 12, 1864. His role as Emperor, however, was complicated by the lack of Government funds, and by the unreasonable demands of the officials of the Catholic Church. And while the French Army had succeeded in driving the forces of Juarez to points far distant from the City of Mexico, the opposition to the monarchical government continued, being largely fostered by aid given by the United States Government. President Lincoln wrote to Juarez: "We are not in open war with France, but you can count on us for money, cannon, and on our favoring voluntary enrollments of our citizens in your army." On the 4th of September, 1864, the House of Representatives of the United States, unanimously voted for a resolution against recognition of the monarchy in Mexico. To Juarez the problem was, therefore, to resist and live until the triumph of the Union was assured, when the United States, freed from other preoccupations, could aid him in a more effective manner. At

this time the northernmost detachment of the French troops were stationed as follows: One brigade at Zacatecas; one brigade at San Luis Potosi; the Mexican Division in Tula, Tamaulipas, and a detachment at Tampico.

During the year 1864, France made a general advance toward the north, occupying the states of Sinaloa, Durango, Chula, Nueva Leon and Tamaulipas. Satisfactory results were obtained in the central provinces by the dispersion of guerrillas. Other operations too numerous to mention took place toward the south. When the year 1864 was finished, the French army had caused the Imperial authority to be recognized over the greater part of the immense territory of Mexico. The seat of the Juarez government was then at Chihuahua.

In 1865, the French columns were pushed still further toward the north and the French force was greatly increased by volunteers from Austria and Belgium. The occupation extended to the northern boundary of Mexico. A determined effort was made to drive Juarez across the border but without avail.

At the beginning of 1866, urgent demands were made by the United States that France should withdraw from Mexico. These demands were almost menacing, and on the 6th of April, 1866, the French minister to Washington stated that the Emperor had decided to withdraw the French troops, in three detachments, the first detachment in November, 1866, the second, in March 1867, and the third in November, 1867. At the demand of the United States these dates were afterwards advanced.

It was expected that after the departure of the expeditionary force, the Mexican Imperial government would retain, as a active force, about 8,600 men of the Mexican regular troops, 27,000 Rural Guards, 8,000 foreign troops, 6,400 Austrian volunteers, 1,300 Belgian volunteers, or in all, about 50,000 men with sixty-two pieces of artillery. But the Mexican Government was in financial distress and the Mexican troops, being poorly paid and supplied, were not reliable.

In the fall of 1866 the withdrawal of the French commenced gradually, moving toward Vera Cruz, leaving the Mexicans.

Imperial forces in charge of the towns which they evacuated. But the Imperial forces seem to have lost heart, and one by one these towns fell into the hands of the enemy. From this moment commenced the long and drawn out tragedy, which finally ended in the execution of Maximilian. The foreign troops employed by Maximilian, fought nobly, but the Mexican forces of Juarez were full of enthusiasm and patriotism.

The army of Maximilian received no quarter. In addition, the Mexican troops, according to the statements of the author, were reinforced, in numerous engagements, by discharged Union and Confederate soldiers, who came across the border and fought under Juarez. The insurrection became general throughout the country. Bands of guerrillas sprang up everywhere. Even the French troops had difficulty in making their way to the coasts. Maximilian was also deserted by his Austrian and Belgian volunteers, who insisted upon returning to Europe. Maximilian meditated abdication, and started for Europe, but was dissuaded by the clericals.

On the 11th of March, 1867, the last French soldier left Mexico. On the 19th of June, Maximilian, having been captured by the insurgents, was shot. But more terrible than the death of Maximilian was the fate of his Mexican supporters, especially of the higher officers of his army. Those who were not killed at once, were hunted from place to place, until found and executed.

CONCLUSIONS.

A study of Captain Noix's work would seem to bring out the following facts:

1. The excuse for the French Intervention was the failure to pay interest of the public debt and the general disorder in Mexico. This disorder was due, primarily to peonage, poor wages, poor food of the laboring classes, cheap drink, lack of education, and heavy taxation of the poor; taxation of necessaries, exemption from taxation of luxuries; exemption from taxation of land, resulting in the territory of the nation being parcelled out among a few great land holders, who were thereby enabled to maintain feudal conditions among their tenant farmers. "Owing

to these conditions the normal condition of Mexico from 1820 to 1877 was almost continuous warfare."^{*}

2. The French occupation was not a conquest but an intervention. Its primary object was to restore order, and to establish a protectorate. Mexico was to retain her autonomy under the suzerainty of France. Incidentally, a monarch form of Government was adopted, and the clerical party, and the Catholic Church upheld.

3. In spite of many obstacles, including the opposition of the United States, the invading French forces obtained the active assistance of many of the best men of Mexico in the work of government.

4. Similarly they were able to enlist as allies, a force of over 30,000 Mexicans. These troops were usually faithful and for many purposes, efficient. That they were not more so, was due largely to lack of pay, the government being at times impoverished.

5. The establishment of the new government was primarily dependent on the ability of the French, to occupy, with their army, the City of Mexico.

6. The military problem of the occupation of the City of Mexico virtually became the problem of the translation of 30,000 men through the deadly and barren regions of the coast, to the fertile and healthy plateaus of the interior, where supplies were abundant. The French army could then practically cut loose, as far as food supplies were concerned, from its base at Vera Cruz.

7. Behind fortifications, the Mexicans fought bravely, in the open, poorly. For this reason it was often of advantage to turn fortified towns, occupied by the enemy, instead of attacking them. In the open the Mexicans were no match for trained troops of Europe. The Mexican army, in no one engagement, numbered over 15,000 men.

8. A large proportion of the Mexican forces were mounted. They were able to make long marches, strike quickly the communications, depots, and detachments of the French. To op-

^{*}For this expression see *Encyclopedia Britannica*—Article on Mexico.

pose them, extraordinary marches were often made by the French infantry.

9. The French cavalry, small in numbers, but highly trained, were of enormous value in this war. Charging with the sword, they often decided the combat before the supporting infantry and artillery could come up; with the carbine they were defensively, as well as offensively, the best of infantry, and their mobility made it possible to reach quickly, important points, to cross, with facility, mountain ranges and deserts, making marches which would be difficult if not impossible to infantry. The proportion of mounted troops in the French eventually became very large, as, in addition to the Mexican Allied Cavalry which numbered many regiments, the French organized a large contingent of "Contre Guerrillas" being a kind of mounted infantry, mounted on native ponies and used for partisan warfare.

10. The most formidable enemy the French had to encounter were the guerrilla bands, some serving through patriotism, some through hope of plunder, which infested the whole of Mexico. These bands were mounted, lived off the country, seldom gave quarter, made war on the wagon trains, the depots, and the outlying detachments of the French, persecuted the French sympathizers, and forced the inhabitants into the hostile army. To oppose these guerrillas, the French had to use large numbers of mounted troops operating in small detachments.

11. The French attempt to establish a protectorate and bring about law and order throughout Mexico, would without doubt, have succeeded, had it not been for the opposition of the people of the United States to the French occupation, and the "aid and comfort" extended by the American Nation to the Mexican Insurgents.

CONDEMNATION OF PUBLIC ANIMALS.

BY VETERINARIAN GERALD E. GRIFFIN, THIRD FIELD ARTILLERY.

ALTHOUGH many changes for the better have taken place in the service during the past few years, no improvement in the method of selecting public animals for condemnation has been considered.

It may be proper at this time to bring this subject to the front with the object of attracting the attention of the military authorities, but to do this intelligently it will be necessary to refer to the shortcomings of the system now in vogue.

As it would be unfair and unwise to criticize an established custom without suggesting, what is thought to be, an improvement or a good substitute, both are offered here with the hope that they may be of benefit in regulating the number of animals to be submitted to the action of an inspecting officer.

The average commander of a unit in possession of public animals is not, as a rule, sufficiently acquainted with the animals in his charge, therefore, it necessarily follows that such an officer is dependent to some extent on the opinion of the stable detail when the time comes for the weeding out process and very often the opinion given is influenced by prejudice, and perhaps sentiment.

In nearly all organizations the animals selected for condemnation may be divided into four classes, viz.:

1. Old age.
2. Disability.
3. Unsuitable.
4. Unmanageable.

To these there may be added a supplementary class which for want of a better name will be designated as "All bunged up and played out."

The old age class, a too numerous one, contains among others those which have given faithful service, often for fourteen or more years, and although still sound in wind and limb yet they lack the robustness of youth. As a consequence such animals are only fitted for the light work of a garrison. In this class are very frequently observed animals ranging in age from eleven to fourteen years, although the figures given on the cards of identification may show these animals to be as high as seventeen years old.

At present the ages given on the cards are not reliable as many of them were originally placed there by those who apparently had little knowledge of the age as indicated by the teeth.

It is nonsense to assert that the age of a horse cannot be determined with accuracy up to twenty-five years. The age of the horse may be as readily determined after nine as before it, but it will be admitted that the information furnished by the incisor teeth of the mule is not very reliable after the animal has passed ten, due, in great measure, to the extreme hardness of his teeth and their slowness of growth.

In the disability class are found animals rendered unserviceable and often useless by incurable diseases such as adhesions of the lungs, paralysis of a portion of the larynx, fractures, laminitis, disease of the navicularis, blindness, hernia, spavin, "heaves," etc., etc., but the animals presented in this class are less in number each year, due to an improving veterinary service.

The unsuitable class, generally horses, present defects of conformation, mostly of the back, withers and shoulders, that often render them entirely unsuited to the work assigned them. As a rule they are considered either too light, too heavy, too small or too clumsy.

In the cavalry, considerable stress is placed upon the undesirability of too high a withers, whilst in the artillery absence of well muscled shoulders on which to seat the collar is considered a sufficient reason for placing a particular animal on the "I and I" report.

The unmanageable class is invariably composed of animals designated by the generic name of "outlaws" which it is stated cannot be trained to the peculiar class of service to which

they, at the time, pertain. It is a difficult matter to regulate this class as often times the officer responsible for the spoiling of a good horse may have been promoted or transferred long before the spoiled animal is placed before the inspecting officer. The only fair method for handling cases of this kind is to place the responsibility for the proper training of remounts on the Post Commander.

This supplementary class referred to as "All bunged up and played out" is so designated for the reason that this is all the explanation forthcoming when the inspector asks "What's the matter with this animal?"

This supplementary class offers animals of low vitality which readily go to pieces under stress of hard work, yet they show no defect of wind or limb although, as a rule, the *tout ensemble* is not suggestive of endurance. Such animals as these might improve if proper provision was made for giving them a run at grass in the spring season.

On account of the scarcity of the active, light type of horse and the admixture of his blood with the heavier and more sluggish strains, the number of unsuitable horses submitted to the inspector is slightly on the increase, whilst the number of unmanageable horses, due to the beneficial influence of the Mounted Service Schools, is steadily decreasing, but to offset this decrease in the unmanageable class there appears to be an increase in the supplementary class designated as "All bunged up and played out."

The type of cavalry horse now being furnished is not quite as good in quality as it was six years ago, and this is undoubtedly due to the effect of the usurpation by the automobile of the function of the light, active, well bred animals so desirable for pleasure and light delivery work.

There is a noticeable improvement in the type of light artillery horses now being furnished and upon this improvement the interest taken by the farmer, in recent years, in breeding active draft horses from Percheron and Clyde sires has had a beneficial effect. It is predicted that little difficulty will be encountered in horsing light field artillery in the future.

The mules now being furnished were never better. They appear to wear better, last longer and do better work than those

of fifteen years ago. The improvement in these animals is influenced by the keener market demand for first class animals and the efforts of the breeders to meet it. Their prolonged usefulness is certainly the result of more humane and intelligent handling, feeding and watering, and a realization at last that these animals are as intelligent as horses—which, by the way, is not saying very much for them—and respond as quickly to kindness.

It is conceded that an organization commander will not part with a fairly good animal for the sake of replacing him with a young, green one but this is not proof that he will decline to present serviceable animals, objectionable to him in some particular, to the inspector.

It has been said that the fact that an officer puts up an animal for condemnation ought to be in itself sufficient guarantee to the inspecting officer that said animal is useless. That the Inspector General's Department does not believe in this theory is evident to anyone who has witnessed a condemnation function. From start to finish the inspector is on the defensive whilst the responsible officer and his aides are as aggressive as they dare be. The sole object of the responsible officer seems to be to "put through" his animals by hook or by crook whilst the object of the inspector appears to be to defeat him, for in the few seconds in which the animal is before him it must be demonstrated beyond the shadow of a doubt that the animal in question is unserviceable, and very often then the inspecting officer is not open to conviction, although in many instances a good talker invariably takes the odd trick. In struggles of this character truth would indeed appear stranger than fiction.

Many inspectors lean upon the veterinarian present for strength and comfort in bearing up against the attacks of aggressive organization commanders and their aides, but it too often happens that the veterinarian knows as little as the inspector about the animals presented. This lack of knowledge on the part of the veterinarian is due to the fact that he had not been consulted at all when the animals were selected, and the first intimation he may have had of the condemnation proceedings was when he received a telephone message directing him to meet the inspector at a definite time and place.

In a great many cases the veterinarian is expected to aid the organization commanders in getting rid of undesirables and should results not be as anticipated a fair share of the blame for failure falls to the lot of this unfortunate and ill considered individual, who being officially a nonentity and without voice on all other occasions is, now, when the inspecting officer is to be cajoled and placated, solemnly marched to the front and center and expected to be a Daniel come to judgment.

The foregoing being considered a fair exposition of the present method of selecting and condemning public animals it is scarcely necessary to state that it needs readjustment; one that will render it fair to the service, the remount department, the inspector, and the organizations.

To the writer's mind the remedy offered has a tendency to eliminate the unproductive sparring between the inspector and the responsible officer at the place of inspection, while keeping within reasonable bounds the number of animals submitted for the inspectors action.

Scheme:

1. Designate the maximum annual percentage of animals which may be condemned, exclusive of those dying of disease and accident.

2. For cavalry, signal corps and similar horses

	10% per anum.	
For field artillery horses	9%	"
For mountain artillery and pack mules	8%	"
For draft and riding mules, M. G. P., inclusive	7%	"

3. No unmanagable animals to be condemned and none to be transferred except by mutual consent.

4. Heavy, unsuitable animals of cavalry are rarely, if ever, suited to light artillery work—shoulders undeveloped.

5. Horses not to be transferred to Quartermaster Corps except upon request.

6. Animals to be condemned and sold but once a year, preferably between August and October.

7. Remounts to be furnished only in the fall.

8. The Post or other Commander to appoint a board to select animals for condemnation, said board to submit a report in full giving reasons for selection and a short, concise history of each animal selected. Animals approved of by the Post Commander to be branded with an "S" under mane. The history of each animal to be furnished the inspector and at least one member of the board to be present at the inspection point to give reliable information in each case.

9. Enlarge and make more complete, as to the history etc. of the animal, the identification card.

10. Direct all veterinarians to make a quarterly report of all hospital cases on a proper form.

11. Publish to the service the number of animals condemned in all organizations, with cause, when the number of such animals reach the maximum percentage allowed.

PRESSING NEEDS OF OUR CAVALRY.

BY CAPTAIN LE ROY ELTINGE, FIFTEENTH CAVALRY.

THE writer's only excuse for perpetrating this article is that we have a board in existence for the consideration of the needs of the cavalry and though that board probably has no need for an exposition of the views of a rank outsider, yet it will do no harm to start a discussion as to what we really do need most.

There has been some talk as to whether or not we need certain things, but so far, I have not seen a statement of what any one officer thinks we need and should expend our energies in working for—a constructive policy in outline:

We need:

1. Men.
2. Horses.
3. Arms.
4. Supplies.
5. Other things of lesser importance.

1. MEN.

Whatever organization may be best suited to a cavalry regiment, we have, on a peace footing less than enough men to make fifteen regiments of cavalry for war.

Should war be declared suddenly, we would lose so many men by details, promotions to volunteer rank in other arms or corps, left behind for one purpose and another, etc., that those now on the rolls would not make fifteen regiments of any organization that has been suggested.

How are these men to be replaced? How are the casualties of concentration camps and of the war to be replaced?

Untrained men thrown into the ranks in campaign lose or spoil their arms, kill their horses and hamper the instructed

men that are afflicted with their company. As someone recently said, "You would not give a butcher a transit and expect him to be a surveyor. He would accomplish nothing except to ruin the instrument. Why then give arms and a horse to an East Side garment worker and expect him to be a cavalrman."

To bring our organization up to even their present peace strength with trained men and horses and to keep them there for even a short campaign is beyond our present resources.

There is no use in inveighing against the condition that confronts us unless we can point out the plans and specifications that can be practically used to remedy the condition.

The recently inaugurated reserve system is a start. Perhaps it will be strengthened in time. The points of weakness as they now exist are: (a) No men yet available thereunder; (b) no surety that the men of the reserve will be forthcoming when wanted; (c) total lack of organization of those composing the reserve.

To be available these men's addresses must always be known, they must be permanently assigned to regiments, preferably those in which they have served and their uniform and equipment packed and stored with their regiment.

Unless they can be counted on in a specific and accurate manner, they had better be left out of the calculation.

It is not improbable that the War Department contemplates handling these reserves in just the manner described. It will be nearly three years before it will be of any practical importance how they are handled.

Another way of adding to the reserve, that I have never heard mentioned, is simple and could easily be accomplished. Annually we are discharging by purchase a considerable number of men. These are in the main excellent men. If, instead of selling a man his discharge the War Department would sell him an indefinite furlough from his organization without pay, make him pack and store his uniform with that organization and remain subject to call to serve with it, in case of war, until his enlistment expired, a considerable available, useful and efficient reserve would soon be created, and *it could begin to be formed now.*

Both methods together will probably never be sufficient but they are all we have in sight and together they may in time go a long way toward accomplishing the desired result.

In case of war on our own soil, cavalry will be needed at once, its losses will begin almost immediately and will continue throughout the war.

Untrained cavalry is nearly useless and it is criminal to ruin what little trained force we have by mixing with it untrained men and green horses. The endurance of cavalry is measured by its weaker horses, its reliability by the training of its poorer men.

First we need capable trained men enough to insure that our organizations will be filled when war breaks out and an available supply of the same kind to replace the losses of campaign.

During the Civil War the cavalry regiments soon ran down to mere skeletons. The same defect is potentially with us now, just as it always has been.

Organization is unimportant unless there is something to organize.

After a month of a war that called for all our resources we would have left 15 cavalry organizations of 200 to 350 men each of trained cavalymen, and less serviceable horses. We might increase the numerical strength, but it would be no increase in fighting efficiency, rather it would for some months be just the reverse.

(2) HORSES.

With respect to horses our situation is worse than for men.

The peace strength in horses is not complete. Many of those now in service are unfit for campaign, being kept on because they will do for garrison work, if it is not too hard.

We have no available reserve of horses and no organized system by which one is expected to be materialized.

Could we, in event of war, procure suitable animals, they would be untrained, their weight carrying and jumping muscles would yet have to be developed, their backs hardened and their minds taught to obey the rider's signals.

The enormous losses in horses during the Civil War have been frequently noted, but the fact that these poor animals, green, soft, undeveloped, put suddenly at hard and unaccustomed work, for which many were unfitted by conformation, were ridden by men as green at the work as themselves, is seldom noted as the reason for these large losses.

Those who saw the horses that went to the Philippines in 1899 and 1900 will testify that the few horses that were needed for that occasion were obtained by accepting animals of inferior quality. Conditions in this respect have not improved since 1899. Our unorganized reserve of horses is of no better quality and even less available than then.

Our remount system does not supply enough horses for time of peace. In about five years the efforts of the Agricultural Department to supplement our remount system may begin to be seen. Whether these efforts will be of any great service to us depends on the manner in which we organize a remount system based on the supply of horses that it is hoped will be produced.

The question then arises, is there anything that can be done now?

There are quite a number of suitable horses (and mares) on which the government could, for a small sum, secure options.

If properly employed, a system of government options on suitable animals could be made to accomplish the following results:

(a) Have each troop commander furnished with a list of the particular selected animals that are to fill his troop up to war strength on twenty-four hours notice.

(b) Have every regimental commander in possession of a list of the particular animals that are to be used to begin the remount depot that is to keep up the supply of at least partly trained animals for replacing the first losses of campaign.

(c) Have the Quartermaster's Corps in possession of options on enough selected animals suited for cavalry purposes to organize some volunteer cavalry and also to replace losses during the war.

(d) Have arrangements made as to where regimental and quartermaster remount depots are to be established.

(e) Have the details of shipping, feeding, shelter, care and training of remounts for war organized and capable of being put in operation in a week.

(f) Add a decided stimulus to the breeding of horses suitable for cavalry use.

The cost of a suitable mount, *delivered at the place where he is to serve* is now about \$200.00.

Taking the average usefulness of a horse as six years, we may estimate roughly that his total expense to the government will be:

Original cost.....	\$200 00
Shelter, 6 years at \$15.00	90 00
Forage, 6 years at \$108.00	648 00
Medicine, etc.....	12 00
	<hr/>
	\$950 00

Just as suitable an animal, selected with as great care after examination by the very same veterinarian could be kept under option to the government for the same length of time for probably, \$50.00. (Amount graded according to the age of the animal.)

To form an efficient and readily available reserve of horses by this method of options requires, the same as with the reserve of men, that they be reserved for a particular organization and subject to call of the organization commander whenever he receives notice that war is imminent and that he is directed to mobilize his command in readiness therefor.

It will be perfectly possible to denature an option system on horses so that it will be a good graft without benefit to the government, but it can and should be so organized as to insure a supply of good animals being always available and at the same time help make it profitable for the farmer to raise cavalry mounts.

(3) ARMS.

Arms and equipment we have. There may be and is, difference of opinion as to whether or not those we have are the most suitable, but they are of good quality, and serviceable. The most crying need is not here.

(4) SUPPLIES.

Supplies that will do we can obtain. For a big war there will be fortunes made out of inferior supplies that will be furnished the government at high prices, but something that will serve is within reach of the big depots that can be formed at any suitable railroad points. How are these supplies to be forwarded from the depots to the troops in the field?

First, no doubt, they will go by commercial lines to the point where, due to active operations, commercial traffic ceases. From there to where the wagons of the supply trains can reach them there is an hiatus. This hiatus is properly bridged by a railroad battalion. We have none, even in contemplation. When one is needed and it fails to rain railroad troops we will detail some more or less suitable men from the troops and get along some way. This depletes the fighting strength of the troops and gives inferior results but is all there is to hope for.

The supply trains as well are nebulous. We have wagon companies in the Field Service Regulations but real men and horses can not subsist on the theoretical supplies that these theoretical wagon companies carry.

The Quartermaster's Corps is composed of a miscellaneous assortment of clerks, school-teachers, bakers, carpenters, paper-hangers, blacksmiths, teamsters and jacks-of-all-trades, but we have no organized wagon companies and very few pack-trains.

We have a moderate supply of wagons and harness. We lack some mules of having enough transportation to complete a peace footing. These latter would be more than used up for regimental trains. There is no reserve of either draft or pack-animals for the organization of the supply and ammunition trains.

Here it is thought that the Quartermaster's Corps might improve its organization by organizing the personnel of wagon companies. Teamsters, laborers, clerks (checkers) corral bosses etc., should be members of wagon companies first. If, after they know their duties as such, they can be utilized in time of peace for other useful work about the posts, so much the better.

Animals for forming these trains could be held under option the same as for the additional cavalry horses that will be demanded at the outbreak of war.

Each wagon-master should have the personnel of his wagon company organized at all times, have his wagons and harness packed, marked and stored and have his own particular draft animals under option within twenty-four hours call, so that on orders from higher authority he can within forty-eight hours produce a complete wagon company ready to take the field.

When cavalry divisions are to be formed for war, they will need supply and ammunition trains at once. (By the way, what is your conception of what our ammunition trains are expected to be like?)

Cavalry divisions need good transportation, capable of doing hard work. Improvised transportation for this purpose will be a cause of annoyance, delays, loss of sleep and food for the troops, loss of forage for the horses, and, finally they will cause so much hardship, lead to so much sickness and produce such slow movements that they greatly reduce the fighting value of the force. These things are what lead to a force being out maneuvered and out fought by a force of half its size—and our cavalry will get the blame for the inefficiency. The people will demand the results, even though they have not furnished the tools.

(5) OTHER THINGS.

Like the minor considerations of organization, the particular pattern of arms and equipment and the exact components of the ration, all other things than those considered above are non-essentials. Conveniences and aids to efficient work they are, but, save proper instruction, which will not be considered here, they are not essential.

A hasty and incomplete estimate of the cost of the policy outlined above indicates that it would cost five per cent. of what we now pay for fifteen regiments of cavalry to get our cavalry on a footing such that we would have available for war a sufficient reserve of trained men, suitable horses and appropriate transportation to enable our cavalry to look forward to being able to give a good and satisfactory account of themselves.

War strength in time of peace in men and horses would vastly improve the situation, but as long as our country must hug the delusion that it is saving money by keeping up a peace establishment unsuited to war, we might try to persuade them to make the necessary preparations for the transformation to a real fighting force when war becomes necessary.

Fully thought out and efficiently executed the above plan will more than double the fighting strength and more than quadruple the fighting value of our cavalry. Is five per cent. additional cost too great a price to pay for such results?

Note.—Please notice that this plan does not call for the appointment or promotion of any officer.

THE QUESTION OF THE PISTOL.

BY CAPTAIN H. S. HAWKINS, FOURTH CAVALRY.

THE time has come apparently, when the cavalry must decide, or some one must decide for it, whether it is to lose or retain the pistol as part of its armament. The ordnance department has issued the new automatic pistol to the field artillery and to certain elements of the infantry, but is waiting as far as the cavalry is concerned to learn whether or not we are to retain this weapon as an arm for the trooper. Thus far has the campaign against the pistol progressed.

It is time therefore for any pronounced ideas on the subject to be heard before it is too late.

I have always been in favor of retaining the pistol and if I had been inclined the other way my recent experience with a French cavalry regiment would certainly have arrested any such inclinations and confirmed me in my former views. This not because the French cavalry have the pistol but because they have not.

The subject of the saber versus the pistol and *vice versa* has been discussed for many years in our cavalry service. This paper, however, has nothing to do with that question nor is one against the saber but is one favoring the use of the pistol. We need both.

It is unnecessary at the present time to defend the saber as it does not seem to be in danger. But with the pistol it is otherwise, and it is intended to show herein that sometimes the saber is nearly useless and the pistol a necessity, in spite of European opinions on the subject.

At the outset, it must be remembered that the pistol is a national weapon with us and that our men have confidence in it. This will remain true for many years in spite of immigration, unless we take it away from our troopers and deliberately

throw it into disrepute. This is an important fact; for a weapon in which men have faith is a moral asset and the question of morale is a preponderating one.

It is a mistake for us, Americans, to view the matter through European eyes, because our cavalry more than any other in the world is liable to be used in various sorts of small wars against savages or semi-civilized people, or in small operations as a police force. Furthermore, it is intended to argue that even in war against a modern army of a civilized nation our cavalry, in its smaller operations, its service of security and of information, and even in its participations in the battle itself in combination with other arms, needs the pistol.

Contrary to the views held in some quarters, a prolonged study of the use of cavalry in war leads one to believe that its principal usefulness is not in reconnaissance and screening, but will be found, by a general and a staff who know how to use it, in the battle itself in combination with other arms. There is not room here to demonstrate this fact, but the history of modern war amply establishes it. In the light of our present information about the war in Manchuria the absence of great cavalry operations or of great cavalry successes, instead of indicating the decline of the usefulness of cavalry in modern war, as was believed or asserted by some at the time, now accounts for the failure of the victorious army to win a single decisive victory. All victories may be said to be decisive in that they are definite and lead to some end, but the Japanese failed, even at Mukden, to inflict a defeat sufficiently decisive to paralyze the further effective operations of the Russian army. And it is now realized that the Japanese had shot their bolt and that the treaty of Portsmouth possibly saved them from an ultimate defeat.

Who can doubt that a powerful and numerous cavalry would have made Mukden the last stand of the Russian army in any formidable force? The Russian cavalry itself was the only obstacle.

The usefulness of the pistol in the battle will therefore be first considered.

We can divide the subject into five parts under five heads convenient for discussion, viz:

1. The pistol for cavalry in the battle in combination with other arms.
2. In the combat between masses of cavalry.
3. In the service of security and of information.
4. In minor warfare with semi-civilized people or savages, or in partisan or guerrilla warfare.
5. In duty as a police force.

I.

In the battle cavalry must take advantage of opportunities to attack the hostile infantry and artillery. Opportunities for cavalry to have attacked exhausted, much shaken, or retreating infantry can be found in the history of every war of the last one hundred years, by merely searching for them. Now I, for one, certainly do not believe that cavalry charging with the saber against infantry even in the condition in which infantry is supposed to be vulnerable, can effect anything but disorder and a further increase in the latter's demoralization. Infantry has merely to lie down and to shoot at the cavalry as it approaches and again after it has passed over them. And this is the most natural thing to do even for infantry in the condition stated. It is this condition of the infantry which allows the cavalry to approach close enough to ride over it. But after it has reached the infantry the cavalry can do nothing with the saber, or almost nothing, in the way of casualties. Such attacks by cavalry should always be backed up by infantry and the hostile infantry thus halted and put completely out of hand by the cavalry should be easily captured or routed by the supporting infantry.

But often there will be no supporting infantry ready at hand.

Now the hostile infantry has been much shaken, defeated, reached perhaps its limit of endurance, and lost its morale by *fire action*. The moment it is charged by cavalry this fire action ceases. And while charging cavalry undoubtedly has a great moral effect in itself this cessation of fire may allow the hostile infantry to catch its breath and to almost welcome the cavalry charge as a relief from the terrible fire to which it has

been exposed. Under certain conditions, however, the cavalry is able to reach it. And now this cavalry in order to have any permanent success must renew this fire action and empty its pistols into the disordered and broken mass. Thus it may induce such infantry by a slight increase in its losses and the moral effect of the charge itself to absolutely quit and surrender in all haste:

Cavalry charging infantry with the saber, can effect scarcely any losses and will not have the same measure of success. It must be remembered that there is no shock action against infantry lying down.

In pursuing retreating infantry cavalry will undoubtedly make use of its fire action on foot, as in the case of Sheridan at Five Forks, but that phase of the matter we are not discussing.

At Vionville on the 16th of August, 1870, the famous charge of Bredow's brigade of German cavalry passed completely through and over the 93d Regiment of French Infantry. The men of the latter command threw themselves flat on the ground and the horses passed over them, scarcely touching any of them, and but few were cut by sabers. Had the cavalymen been armed with pistols, and leaning far down, had they fired into the backs of the prostrate infantry, certainly that regiment would have suffered losses and been more demoralized than they were. Even as it was they could not be gotten in hand for some time.

The saber is always at hand after the pistol is emptied, and with fewer opponents to combat.

Our artillery has been armed with automatic pistols. Imagine a cavalry force only slightly superior in numbers to the artilleryman, succeeding in reaching a battery. The artillerymen placing themselves behind the guns, the limbers, the caissons, the wheels of the different carriages, will if properly trained, wait till the cavalymen are fairly upon them and then use their pistols to good effect. They can scarcely be reached by the sabers of their opponents. Such opportunities to the cavalry are always fleeting. And unless support comes to the cavalry before it comes to the artillery the latter will escape. To make the artillery surrender will be the only hope that the cavalry may have to capture the battery. But will the artillery

surrender? Not at all. They will probably drive the cavalymen off. The latter, to be sure, may run off a few of the artillery teams and this may or may not be disastrous. But even this is doubtful, and certainly here, the cavalry man would curse the day which had separated him from his pistol.

II.

In cavalry charges of masses of cavalry against cavalry the case is different. Here the saber and the lance might be the most effective. However, the assertion that the pistol in this case is as dangerous for friend as for foe has never been proven.

Should we have to meet a cavalry armed with the lance the pistol would certainly be useful if we adopted suitable tactics. Certainly for small bodies capable of maneuvering the pistol should prevail. For large bodies we still have our sabers.

Those who argue against the pistol for cavalry combat always have in mind the charge of cavalry masses and base their arguments on the assumption that that side which is armed with pistol and saber will charge at raise pistol, will empty this pistol in the mêlée and then draw saber. Indeed this is the usual idea. Thus, it is argued, the pistol will be emptied at the moment of the greatest excitement, after the shock, in a wild confusion. And under such conditions many shots will miss adversaries and hit friends. Then the trooper must stop fighting to draw saber, and in the meantime the opponents, who have been fighting from the first with the saber, will have gained an ascendancy.

Possibly this might happen; but why confine ourselves to this order of procedure? We cannot prescribe a fixed rule, but usually I would reverse the order and commence with the saber instead of the pistol. The pistol should be reserved for either of the two following contingencies, one of which is certain to happen. If we gain the upper hand in the combat the enemy will turn and run, and, by escaping attempt to rally or reassemble after our pursuit is finished.

Now, the moment the enemy breaks and ceases to offer offensive resistance the pistol becomes to us invaluable. We should not pursue with saber in hand but should draw pistols and use them. There would not be time to return the sabers

into the scabbards, so they should either be allowed to hang by the saber knots for the few seconds necessary, or clutched in the bridle hand, or run through the strap attached to the saddle for the purpose and looped sufficiently large to render it easy to insert the point of the saber. The losses to the fleeing cavalry could thus be made serious. Such would not be the case if we were limited to the saber.

Again let us take the other case, that in which we commence to give way, either outfought or overpowered by numbers. It is at this moment when our troops give way that the pistol should be drawn and used. (Our men should be practiced in thus changing from the saber to the pistol, both in the pursuit and in the retreat. In a fight they would then always remember it as a last resort. Otherwise they will be sure to forget it altogether.) Nothing is so easy as to fire to the rear, our morale would thus be restored, if not the victory itself, and the ardor of the enemy in his pursuit would receive a rude check.

A trooper with saber or lance pursuing a trooper armed with the pistol is at the mercy of the latter if he retains his morale, his head. Both moving at the gallop, the pistol man has only to allow the swordsman to gain upon him until the swordsman is within a distance making a pistol shot almost certain, but just too far for the reach of a sword.

As a preservation of morale the pistol under such circumstances would be incomparable. It might even turn the retreat into a resumed offensive attack with saber in hand, and the defeat into a victory.

Who, then, can assert that our cavalry, in its part in the great battle, combining with and assisting the other arms, or alone in deadly combat with masses of the hostile cavalry, has no need of the pistol?

III.

The duty of patrols and scouts and messengers in the service of security and of information is often extremely hazardous and leads to delicate situations. The journals of cavalrymen who have participated in this work in any of the wars of modern times are filled with accounts of stirring experiences, numerous

combats, skirmishes, and small affairs quite large and serious enough for those engaged.

If the patrols are to accomplish their missions, and who can tell how much may depend upon the success of a single patrol, the troopers must be bold and confident in their ability to hold their own against the enemy. A high state of morale must exist, and for this to be so and to continue so the troopers must be successful in their first encounters with the enemy's small detachments. It is for this purpose that we must carry the pistol, if for no other. A cavalryman in patrol duty without a pistol is the victim of anybody with a fire arm. The history of the German cavalry in the war of 1870-71 shows conclusively to the student, the timidity of the small patrols in advance and in a hostile country. A good pistol and the knowledge of how to use it would certainly have added to their sense of security to their independence, their boldness, and therefore, to their efficiency.

It is obvious that the circumstances of the case will often forbid the scout or patrol to dismount in order to use his carbine, and he cannot use it to advantage mounted. He must have a quick and handy weapon because his encounters must nearly always be in the nature of surprises.

If we imagine two hostile patrols meeting, one armed with sabers or lances, the other with pistol and saber, what is to be expected? The European cavalry is taught, under such circumstances, to charge immediately and that that party which charges first will succeed against the other. But if we imagine the other side armed with automatic pistols and with room to maneuver so as to surround the lancers, keeping just out of reach of the latter's weapons, who can doubt the result?

In a narrow road bounded by walls or fences preventing the proper amount of dispersion for the above maneuver the pistol men would only have to turn and pretend to flee, allowing the others to gain upon them till within a sure range for their pistols but just out of reach of lances or sabers. Then still remaining, at the gallop, they turn in their saddles, and in a few moments, the combat is finished.

These maneuvers are always possible for small patrols. Under any condition where they are impossible the saber is the other alternative.

The question as to whether to begin with the pistol or the saber must always rest with the chief. But with small bodies the conditions are not the same as with large masses on account of the former's ability to maneuver. The pistol would generally be for them the logical arm with which to commence the combat, and it will generally be sufficient to end it.

While accompanying platoons of French cavalry in their practice and instruction in this kind of work, called "Service en Campagne," I have been strongly impressed with the helplessness of these men, scouting saber in hand, should they suddenly meet our cavalry patrols armed with automatic pistols, or even the old Colt's revolver. Our cavalry armed with such weapons would soon have the advanced elements of the enemy's cavalry completely cowed, and our patrols could go anywhere. Even if the enemy gained the ascendancy over our cavalry by defeating it in open battle our patrols would still keep the upper hand and the hostile patrols would never dare to go far from support. The history of the German cavalry in reconnaissance in the war of 1870-71 amply justifies such an assertion.

In our Civil War, General Forrest had many fierce personal encounters with Federal cavalry. On one occasion he and his escort were caught and surrounded by Federal cavalymen who attacked with sabers and made strenuous efforts to get at the General himself. But those who did so were very unfortunate for he killed several of them with his pistol, and he and his escort after discouraging the cavalymen considerably by means of their pistols cut their way through without pursuit, although the Federals were in superior numbers. Those pistols caused the Federal saberers to lose interest.

Then again, in a hostile country the small patrols may be much annoyed and seriously threatened by the inhabitants. As they ride through small villages this may be a serious matter, and they may need a handy fire arm. In the Franco-Prussian War the German cavalry had many experiences of this kind. Depending upon their sabers and lances they were often seriously annoyed, fired at from windows, held up by men with pitchforks behind barricades, and sometime threatened, even in as large bodies as an escadron, with very grave dangers. The details of all these small affairs convinces one

of the inestimable boon the pistol would have been to these German horsemen.

Two examples will suffice.

After Sedan a brigade of German hussars were sent to ascertain if a force of French infantry reported at Rheims was still there. The brigade arrived at l'Ecaille and pushed an escadron forward on Rheims, September 3, 1870. The following is the account of a Lieutenant of this escadron.

"The escadron advanced straight on Rheims, through the fields, avoiding inhabited places. Several hundred paces in front of the town the Captain halted the escadron behind a little rise in the ground. At this moment a military train was in the act of leaving the railway station. The inhabitants stated that this was the last echelon of the Corps Ninsy.

"Immediately patrols were sent to the station, around the town, and even into the town; the inhabitants showed themselves very hostile. The Captain then went to the entrance of the town accompanied by several hussars, explained to the Mayor that the escadron was going to go through it and that if it showed hostility it would be bombarded by the artillery which was following.

"During the conversation many of the inhabitants had drawn near shouting and gesticulating. The Mayor then explained that he did not answer for the inhabitants and that the latter could not suffer their large town to surrender to a single escadron. The Captain reported to the brigade asking the support of at least a regiment.

"He then broke into column and entered the town in spite of the effervescence of the population. At the beginning of the march the streets were so broad that we were able to remain in column of platoons. Everywhere the crowd recoiled frightened before the compact mass which marched at the trot.

"Suddenly before the first large square was reached some shots came from several houses. While continuing the trot the hussars fired into the windows. One of the inhabitants received a shot in the head; he was the only one hit. It was necessary afterwards to file into a narrow street which led to the square of the mayoralty.

"Once arrived the escadron deployed halted, at advance corbine, watching all the movements of the inhabitants who flocked around us. The Captain then passed the command of the escadron to Lieutenant Droste, with orders to occupy the square and to defend it if need be while he himself went to announce the occupation of the town. The first rank of the escadron was maintained opposite the mayoralty; the second rank made a half turn and sought to hold as completely as possible the square and the issues of the neighboring streets. The inhabitants, who in spite of urgent warning, refused to move on were trampled under the feet of the horses. This example produced its effect and in spite of the imprecations which rose on all sides against the escadron, nothing serious happened to it.

"After an hour and a half of impatient waiting the escadron was delivered from its dangerous situation by the arrival of the regiment."

A French officer who uses this incident to illustrate the necessity for firmness and clear headedness in conducting reconnaissance among hostile inhabitants, adds:

"The situation of the squadron in a large town like Rheims was delicate and could not be prolonged without danger. In remaining mounted it could cause the square to be cleared but it would have been impotent against shots coming from the windows. In order to watch them and because of the intimidation which the menace of fire arms produces, it seems that the dispositions taken should have been completed by several groups of troopers on foot ready to use their carbines."

An examination of this incident shows the impotence of this cavalry troop when the population was really aroused. They were able to clear the streets in front of them but they were not able to protect themselves against people taking shelter in doorways and windows, and throwing missiles or using fire arms. They did attempt to use their carbines while marching but one can imagine how inconvenient and difficult this was. They did not dare risk moving through the streets again and the French officers' solution just quoted, to dismount several groups of men and deploy them ready to use their carbines, would perhaps have been the wisest.

But if all these one hundred and fifty troopers had been armed with automatic pistols and had taken up a suitable formation, they would undoubtedly have been able to march wherever they chose without such grave danger. By severe punishment here and there, if necessary, they would have intimidated the population, and to remain mounted would not have been so dangerous.

In fact under these circumstances to remain mounted would have been best, for, by dismounting, a troop in such a situation loses not only its mobility, an important thing to preserve here, but also that moral ascendancy which mounted soldiers have over undisciplined crowds.

With pistols, then, their situation, delicate in any case would certainly have been improved.

Another instance in the same war is the experience of the 17th and 18th Uhlans, in the town of St. Quentin, on the 16th of January, 1871.

These troops had been quartered in St. Quentin for eight days. On the approach from the north of the first elements of the infantry of the French Army commanded by General Faidherbe, these regiments which formed part of a detachment covering the extreme right wing of the first German Army, were ordered to evacuate the town and fall back on Ham. The order was not given till 8:00 A. M., and at this time the French brigade of Isnard had taken possession of the outskirts of the town. They were held in check by a battalion of German chasseurs, which, with a battery of artillery, had also been quartered in the town.

The Uhlans and the battery were ordered to a place of assembly for the detachment on some heights southwest of the town.

"On account of the excited state of the population," says the history of the 17th Uhlans, "no signal was given; the orders were carried by orderly officers.

"The streets were soon filled by hostile inhabitants over-excited by the approach of the French Army, listening to the fusillade which drew nearer and seeking to impede the movements of the Saxon troopers who were obliged to trample several of these under the feet of their horses.

"Cannon balls fell here and there on the troopers hastening towards their points of assembly.

"Some men threw themselves against the great gates which had been closed; on their appearance in the streets many were stopped and separated from their horses.

"Several fell with their mounts on the ground heavily covered with sleet and groups of the inhabitants, uttering loud cries, sought to take them prisoners.

"The escadrons had much trouble in getting out of the town; they went pell mell with the batteries whose horses fell on the sleet. The shots of the enemy who were drawing near increased the disorder; men and horses were killed or wounded. They lost three killed, eight wounded, twenty-five prisoners, thirty horses—of which ten were those of officers."

This incident shows the necessity of evacuating a hostile town in plenty of time. The Germans had information of the approach of the French in ample time, but, through failure to calculate the time necessary under the difficult conditions to evacuate this town, the result had all the nature of a surprise.

Under these conditions a few well directed pistol shots from the harrassed troopers would have made the inhabitants keep their distance, and the bold attempts to capture individual troopers here and there would have ceased. With their horses struggling to stand up on the icy ground, to use the carbine was impossible, and likewise the saber was of little value, against a population armed with crude weapons.

But pistols could have and no doubt would have been used to a very good purpose.

IV.

In warfare against savages or semi-civilized people in which cavalry is very useful the pistol is indispensable. Such people will never meet us in mounted charges except possibly in very dispersed order. The difficulty will always be to get close enough to them to use the saber.

The Indians rarely met our cavalry in hand to hand encounters close enough for the saber, although they did sometimes charge mounted in dispersed order using fire arms as their principal weapons.

The Filipinos never allowed us to get to close enough quarters to use the saber although we did on several occasions use the pistol with great effect.

The Boers never gave the English much opportunity to use the saber, although on rare occasions they did use their lances.

The Moros, indeed, will often come to close quarters; but where is the man who wants to meet a Moro with a saber?

Partisans and guerrillas will never come to meet us in shock action or within the range of cold steel. Operating in small numbers they can maneuver individually and use pistols effectively.

The pistol for our cavalry in such warfare is a necessity and it needs no further argument to establish the fact.

V.

On police duty our cavalry without pistols is liable to be treated as were the 17th Uhlans in St. Quentin.

The saber is often extremely useful and has a fine moral effect in riot duty. But there will be times when the mounted trooper will need a fire arm and will need to use it quickly. He must, therefore, have the pistol. Anyone's imagination can present to him the circumstances, and an example is not necessary here.

Finally, take away our pistols and the morale of the cavalry will be impaired. Occasions will arise when its impotence will make it the laughing stock of its comrades in the other arms. Its proud spirit will suffer, and the American cavalry will have lost its distinction.

Europeans say that they cannot teach their men, drawn mostly from the peasant class, to use the pistol. I do not believe it. They are afraid of the pistol—we are not. That it is dangerous is admitted, but that it is more difficult to use than the saber or the lance is not admitted.

European cavalymen extol the lance but at the same time admit that it requires very good horsemanship and much practice to use it with good effect. We ourselves know that the same is true of the saber. The pistol is no less difficult but no more so

I repeat that this is not an argument against the saber. There is no question in the mind of most cavalymen as to the need of the saber. But the pistol is the compliment of the saber, and especially for American cavalry it is indispensable.

Reprints and Translations.

THE ARAB HORSE.*

BY COLONEL SPENCER BORDEN.†

It was the fashion a few years ago to claim that the Arab horse did not exist, excepting as a figment of the imagination. Scientists, later, were compelled to acknowledge that there was such a horse, and that he differed from all others even in his anatomy.

Then a claim was put forward that what was called an Arab was really an African horse, originating in Lybia, the country lying between Egypt and Tripoli, on the shores of the Mediterranean.

These wise people even asserted that the horses we had always called Arabians, were never in Arabia until after the beginning of the Christian Era, some going to Egypt, others sent from Cappadocia, north of the Taurus mountains, on the Black Sea. The fact that no such horses remain either in Lybia or in Cappadocia, although they are numerous in Arabia, caused no embarrassment to these pundits.

Had such special pleaders gotten their Xenophon or Herodotus from the upper shelves of their book-cases, certain embarrassing facts might have caused them to modify their contention.

*From "Our Dumb Animals," for April, 1913.

†Colonel Spencer Borden, of Interlaken, Fall River, Massachusetts, is a life-long lover of horses. His Arab stud contains some of the choicest Arab stock ever imported into this country. To his study of the horse he has brought many rare qualities of heart and mind.

They would have learned that Semiramis, who succeeded her husband, Nimrod—builder of Nineveh—had an army in which were 300,000 cavalry, with which she invaded India, before she started to build Babylon. Nineveh is perpetuated by the present town of Mosul, built on its site, in the northeastern part of Arabia, on the Tigris river; and the ruins of Babylon are near Bagdad on the Euphrates, both these points being in the heart of Arabia.

We are forced to believe therefore, that there were some horses in Arabia, at least 3500 years B.C. Not only is this certain from the written record, their representation is preserved by bas-reliefs in stone uncovered by Layard, when he explored the ruins of Nineveh, in the middle of the nineteenth century. These show horses of the Arabian horse size and type, ridden by men making use of them in a manner such as no horse but an Arab was ever known to stand up to. The riders are hunting lions, with spears and arrows. It is notorious to this day that no horse but an Arab has the courage to face a lion or a wild boar.

If these would-be scientists still claim the proofs insufficient to establish our contention, we turn to the history of Cyrus the Great, as written by Xenophon. When Cyrus fought Croesus, King of Lydia, it is plainly stated that part of his cavalry were Arabians. In arranging his forces to meet the enemy, Harpagus suggested that he put the camels he used for transport animals, in front of his cavalry. And when they came up to the contest, the Lydian horses, terrified by the sight and smell of the camels, became unmanageable; while the horses of Cyrus' army, having been brought up with camels, and partly nourished on camels' milk, were not afraid, but dashed after the Lydians and completely routed them.

Later, when Cyrus captured Babylon—the night of Belsazzar's feast—he celebrated the event by a grand review of all his army. This was 500 B.C., 3000 years after Semiramis. In that review Xenophon tells us Cyrus paraded 120,000 cavalry (more than all the cavalry in Europe today) besides his chariots drawn by four horses each.

This parade was in the heart of Arabia; and the empire ruled by Cyrus extended from the Indus river on the east, to the

Red Sea, the Mediterranean, and Aegean on the west; from the Black and Caspian Seas on the north, to the Indian Ocean on the south.

In the days of Darius the Younger, the Medo-Persian empire had an enormous horse-breeding establishment in the plain near Mt. Corone. From this source alone Darius drew one hundred thousand horses to oppose the Macedonian invasion, and still left fifty thousand in the pastures which Alexander saw in his march through the country.

It would appear safe to claim therefore that there were horses in Arabia before they were sent there from Lybia. Is it not more probable that the horses of Lybia were some left in that country by Cambyses, son of Cyrus, who conquered Egypt and Lybia and Ethiopia, to add to the possessions left him by Cyrus?

The Egyptians had no cavalry, any more than had the Persians until the time of Cyrus. Horses in Egypt came after the time when the Shepherd Kings were driven out. Four hundred years after the days of Joseph, when Pharaoh pursued the Hebrews who went out with Moses through the Red Sea, we are told that he followed with 600 chariots—"all the chariots in Egypt"—according to the Bible statement. Horses were so scarce even then that each Egyptian chariot had but two horses; and all these were destroyed in the Red Sea.

And now in our day and country, certain "progressive" Americans suggest that though there may have been Arab horses, and they may have been good enough a long time ago, they are not such as would be suited to our modern conditions and American climate. The greater part of such people probably never saw an Arab horse.

In other lands the Arabian is sought after and valued at his true worth. The Hungarian Government has a stud of Arab horses at Babolna, established in 1790. In their official account of this stud, the Hungarian Department of Agriculture tells us,—“The original purpose for which the stud at Babolna was established, was that it might breed foundation stock (*animaux reproducteurs*) that could contribute a progressive element in raising the quality of its horses.”

In France the government also uses Arab blood for "raising the quality of its horses." In 1906 the Republic had 579 such animals, purebred or half-breds, in its government stud.

In Austria, the famous Lippizan horses, the oldest established breed next to the Arab, have been bred carefully to a type at Lippiza, near Trieste (from which place the breed takes its name) since that stud was established in 1585. As Austria and Hungary, however, are joined under a common ruler, Emperor Francis Joseph, most of their cavalry horses come from Hungary. Baron Slatin—brother of the famous Slatin Pasha—told the writer of these lines, in 1911: "We believe the horses bred in Hungary are the best cavalry mounts in the world. They are not too large, and have a great proportion of Arab blood in them."

In the great Russian Imperial Strelski stud, devoted to horses of Eastern blood, they had 408 breeding animals, 81 of them pure Arabs in 1889.

Italy, since the days of Giovanni de la Bande Nere, the greatest of the Medician generals, has never missed an opportunity to secure Arabian blood. Christopher Hare, in his "Romance of a Medici Warrior" tells us that Giovanni, writing to his agent Fortunati, from his camp at Pesaro, under date of April 14, 1517, says: "And besides, I am badly mounted. You must send me the best and finest Arab horses that you can get in Florence, for mine are all out of condition."

Of him Hare tells us: "In this war he would replace the heavy cavalry, the cumbrous armor, the slow massive horses which it required, by light, active Arab horses, easily managed and full of spirit, ridden by agile men lightly equipped."

We also learn that at Vaprio, "He was riding that splendid white Arab horse, Sultan—who was to survive him and never suffer another rider—and he turned his head toward the rushing torrent; the noble animal leaped into the river and swam across, his master sitting firmly on the saddle with his lance at rest."

So today also, the Italian Government secures every pure Arab they can lay hands on, having agents in the East at all times to procure them. In 1903 they had fifty-five pure Arab stallions in the Italian royal studs.

Turkey had, in 1900, four studs of horses, for producing cavalry horses, one at Schifteler (where were fifty-five purebred Arabs, eleven half-breeds, thirteen Hungarian, and eleven Russian stallions, with 600 brood mares), another at Sultan Lou, in the province of Harpoot, one at Tchou Korova, province of Adana, one at Vezirie, near Bagdad. The *raison d'etre* of the last, especially, is plainly asserted: "The object of this stud is to promote the breeding of the best Arab strains."

Can it be that all these people are mistaken, and only those Americans are correct who assert that in these days Arabs are not good horses, they lack in endurance? Many great soldiers would differ with them, some in bygone days, some in our own times.

Washington rode a son of the Lindsey Arabian through our own war of Independence. Bonaparte pinned his faith to the white Arab, Marengo, that carried him through his campaigns in Egypt, and the freezing retreat from Russia. His stuffed skin is still preserved in Paris. Wellington would trust himself to nothing but an Arab horse. Kitchener and "little Bobs," Field-Marshal Lord Roberts, will ride no others. The picture of the last named famous soldier accompanying this writing is of surpassing interest.* Lord Roberts in sending the photograph, told the writer that the horse Vonolel, as he appears in the picture at the head of Queen Victoria's jubilee procession wore on his breast two medals presented to the horse by Her Majesty, one for the Afghan wars, another for his service in Africa. At the time the picture was made Vonolel was twenty-seven years old. He carried Lord Roberts for twenty-two consecutive years, through all his campaigns in Afghansitan, India, Burmah, South Africa, had covered in his campaigns 50,000 miles and never once been lame or sick. We are told that Sysonby is the greatest of all thoroughbred horses. His skeleton stands besides that of the Arab horse Nimr in the Museum of the American Society of Natural History, in New York.

Sysonby is said to have won \$170,000 for his owner, the late James R. Keene, and to have died an unbeaten race horse. Yet Sysonby reached the end of his career when *four years old*. In winning \$170,000 the total distance he ran, in all his races

*Unfortunately we were unable to reproduce this picture.

added one to the end of the other, was *twelve and one-half miles*. How does this great race horse 16.1 high, compare with Vonolel the Arab, 14.1!

The history of the XIXth Dragoons (English) who went with Kitchener to Kartoum, is familiar to all modern soldiers. They had to abandon their big English horses at Cairo, were mounted on Syrian Arabs, averaging 14.1, and these carried them nine months through the desert, sometimes for seventy hours without water, with an average loss of but twelve per cent. of the horses.

Colonel Gore of the Inniskillen Dragoons, rode a pure Arab through the whole South African campaign. It is reported that "this horse was never sick nor sorry, lasting out four picked horses which his master brought with him from Ireland."

Many other instances proving the sagacity, endurance, and soundness of these wonderful horses must be omitted that this paper go not too far beyond the limits set for its length. A single one nearer our home may interest readers of *Our Dumb Animals*:

Captain Frank Tompkins, of the Eleventh Cavalry, U. S. A., Superintendent of Military instruction at Norwich University, Northfield, Vermont, tried a little Arab he has, on the thirtieth of October, 1912, over the hills of Vermont.

Having occasion to go to Fort Ethan Allen, Burlington, Captain Tompkins rode the five-year-old Arab horse Razzia fifty miles in the morning, attended to his business at Fort Ethan Allen, and rode him back to Northfield the same day. The horse carried one hundred and seventy-five pounds on his back; the entire time on the road was fifteen hours thirty minutes; and he was never distressed. The next morning he was in condition to repeat his feat. As he had no special preparation for the test, and several showers during the day made the road slippery, it would surely seem that this is the kind of horse that might contribute something useful to the breed of American horses. He would appear to measure up to the description Captain W. A. Kerr, V. C., gives to Arab horses, as animals "whose blood (no matter in what channel directed, or with what plebeian puddle mingled) has ever brought improvement in some shape or other, but mainly in respect to quality, stamina, nervous energy, ivory-like bone, tough hoof, and hereditary soundness."

THE THOROUGHBRED — THE BEST TYPE OF THE CAVALRY HORSE.*

BY COLONEL P. M. DOBRYNIN, V. S., RUSSIAN VETERINARY CORPS.

It is superfluous, according to my opinion, to enumerate the qualities of the thoroughbred. Who knows not his superb strength, his wonderful endurance, his splendid gaits and the gallant spirit with which he enters upon all that is demanded from him? I wish only to express my view which is shared by the majority of Russian officers.

It was supposed until the last war with Japan that the thoroughbred, in spite of his excellent qualities as a cavalry horse, had lived too long under civilized surroundings, to possess adaptability to new climatic conditions, coarse food and lack of proper care. The war, however, proved that these apprehensions were not well founded. The gallant charger bore like a gentleman, that he is, all the hardships of the campaign. He stood equally well the extremes of heat and cold. Picketted in the open in the rain he suffered no more than his humble brother—the horse of the Kirghiz steppes. As to his feed, he showed no caprice and assimilated all that was laid before him and anything eatable, in case of need, was readily accepted without his losing anything of his energy, his strength or his endurance. The only difference in this respect between the thoroughbred and the uncultured Kirghiz horse lies in the enormous amount of food needed by the former a thing easily explained by his greater size and his nervous temperament, necessitating constant motion and greater combustion; likewise in cold weather his thinner skin and finer coat constituting a less warm covering, a larger bulk of material is necessary for the heating of the organism. This, however, is no drawback as the amount of work he can do far exceeds that of his common brother. Even the slowest gait—the walk of the thorough-

*From the Russian. Translator unknown.

bred, thanks to his wonderful levers, (propelling mechanism, front and rear) is incomparably faster than that of the rough smaller horse.

In former times when the cavalry, during war, had constant encounters with that of the enemy, the qualities most highly prized in a charger were his force of impact and quickness in wheeling. It was considered that this latter quality was not sufficiently developed in the thoroughbred. This might be just for the thoroughbred has been trained for centuries in moving in a straight line and acquiring the greatest speed attainable. In the present conditions of war, the cavalry performs mostly reconnoitering service in which rapidity of movement is of the highest importance and encounters with the enemy are rare, so that this defect of the thoroughbred may be left entirely out of consideration.

The only service that a thoroughbred can not perform is service in the mountains, where the native mountain horse and the mule are at home. On the steep ascents and inclines, on the trails where great boulders often constitute serious obstacles, the mountain horse is in his domain, sometimes literally crawling over the heaps of rocks.

It has been admitted by everybody in Russia that the thoroughbred is the true type of the cavalry horse. The highest price for a remount—a thoroughbred—is 650 roubles. Unfortunately, the number of thoroughbreds is limited and only the corps of officers is provided with such mounts. It must likewise be said that 650 roubles, the highest price paid for remounts, is far too small for thoroughbreds, taking into consideration the conditions in which the breeder must keep a colt for three years and a half, in expensive surroundings, also that in Russia a horse stays nine months of the year in the stable and demands excellent care and liberal feeding with oats. Consequently, the best individuals do not reach the army.

THE THOROUGHBRED AS A PRODUCER OF HALF-BLOODED REMOUNTS.

In the foregoing I stated my opinion on the ideal cavalry horse which I consider the thoroughbred. The ideal half-blooded army horse must be as close as possible to his sire—the thoroughbred. The thoroughbred, developed for centuries

by careful selection, artificial training in one direction, became so typical that even the least experienced eye will recognize the thoroughbred among a hundred horses. This type is the same in Europe, in America, in a word all the world over. All climatic conditions which bring about the complete loss of the primeval type in other races (the Arab in Russia is not the Arab in Africa as may be observed at the Bielovodsk Government Stud) have but little influence upon the thoroughbred. This alone tends to show that his is the strongest race in the transmission of its personal qualities as I have had occasion to observe. He is extremely persistent.

Having come to the conclusion that by his race and his personal qualities the thoroughbred is the ideal sire, it is necessary to consider the selection of the dams.

The cheapest way of obtaining a half-blooded horse is to mate a carefully selected sinewy, steppe mare of good temperament, with a strong thoroughbred stallion of good bone and substance, keeping the young horses on half cultivated forage allowance (oats in winter). In Russia where the steppe horse is rather small, size and bone is increased and the type is improved by first mating the steppe mare with a half-blooded stallion of excellent bone and substance, while the progeny is mated with a thoroughbred. The first progeny, sold for a higher price to the remount depots and partly for other purposes, highly encourages the owners. The Government comes to the aid of the breeders by obtaining stallions for them, placing them at their disposition often gratis, leasing lands to them at very small rent and on very favorable conditions. The Government requires, however, that no colt or fillies three years and a half old be sold to private parties before having been inspected by remount commissions. The breeding of remounts in the District of the Don is placed on the same footing and such brilliant results have been obtained there that at the Moscow Exposition of 1909, of the First Meeting of the Horse Breeders' Association the Don breeders had placed on exhibition several hundred head of such splendid remounts that the representatives of foreign powers, invited as experts, expressed their admiration as shown by a perusal of foreign literature on this subject.

The same mode of improvement of the steppe horses for remount purposes is being carried on during the latter years in the Almatine district with the Kirghiz horse and in the Government of Tomsk in Siberia with the Altai mountain horse. This work was founded and is being finely developed by Colonel Burago, President of the First Siberian Remount Commission, a thorough connoisseur and enthusiast, whose heart is in his work. Under his zealous care and supervision a large number of studs have risen among the mountains, the steppes and the woods of Siberia, in some of which the number of dams reaches 300 head. Eight years only have elapsed since the foundation of the first stud and the improvement of the steppe horse has progressed to such an extent that in 1912 about 1,500 excellent remounts were in that region for the army.

The importation of the heavy horse took place in the Black Belt of Russia. These were mostly the Clydesdales, the Belgians, the Brabancons and Ardennes, the Percherons and some Suffolks. At the present time the Government of Poltava, Tambov, partly Orlov and Kursk are the nurseries of these draft horses. The Clydesdales were due to the demand the Moscow market for large, showy, massive horses with enormous fetlocks. The wealthy Muscovite firms chose them for their appearance and paid very high prices. With the adoption of automobiles, the demand for such horses has somewhat decreased. A horse with lighter gaits than the latter was required for agricultural purposes and preference was given to the Percheron and the Belgian. The breeding of remounts did not take root in this belt. The peasant horses, as already mentioned have acquired such substance and type that, mated with a well bred draft horse, a typical and valuable animal is obtained, selling for 800 to 1,200 roubles and more. The remount commissions do not pay such prices and therefore it is of no interest to the peasant. The gentlemen farmers of this belt alone are interested in breeding of remounts, not for gain but for their own knowledge—mating the thoroughbred stallion with a draft mare. Observations made in that connection revealed the following:

The cross with the Belgian gave very poor results, the progeny being a Belgian of the old type with sloping and cleft loins and a bad back.

The cross of the thoroughbred with the light type of Percherons gave excellent results, thanks to the energy, easy action, and fairly regular conformation. It is to be regretted, however, that the Percherons often transmits her gray coat which is undesirable for the army. The transmission of this color may be easily understood since the Percheron has a good deal of pure Arab blood and the typical color of this breed is gray. The heavy Percheron gives to heavy a horse in the first generation, more massive even than the horses required by heavy artillery, but it makes an excellent horse for agricultural work.

The cross with the Clydesdale is most interesting. The first generation is lighter than the latter, but the type of the thoroughbred can scarcely be detected and it is not available for the army on account of its massiveness. The second generation from a half-blooded mare and a thoroughbred sire is excellent, having the type of the thoroughbred, but with incomparable bone and substance, with fine gaits, the lighter type being available for the cavalry and the heavier for the artillery.

I have made a most interesting observation at the stud of General Zvegintzeff, a great admirer of the thoroughbred and the Suffolk. Such predilection for horses of opposite types seems strange, but observing carefully the better type of Suffolk, especially among the dams, a great many similarities may be seen with the thoroughbred—magnificent withers, a fine long shoulder, a strong back, superb loins, a long croup and admirable levers. What could not be reached if energy should be infused into that inert mass? This has been achieved by General Zvegintzeff by breeding the thoroughbred to Suffolk mares.

In conclusion, I would say that I consider the thoroughbred a true wealth of the nation and none ought to be allowed to leave the country. As to the thoroughbred dams they ought to be guarded and cared for for the perpetuation of only this wonderful breed, and I consider her mating with any other race a crime against this beautiful creature and her mating

with a Jack, be it for the production of a superlatively excellent male, nothing short of a sacrifice.

Notes:—The above article was received from Lieutenant Colonel Henry T. Allen, General Staff, with the following comment:

"This article contains some valuable suggestions as to breeding. In the matter of this work of the thoroughbred, it has been demonstrated on the Montana range that when the thoroughbred horses get the same treatment as do the other horses, they become equally hardy as the others. It is unfortunate that thus far few persons have bred thoroughbreds for any other purpose than for racing or to be sold for racing. When a systematic effort is made to produce these animals for general utility, it will be found that in all respects they will, thanks to their great intelligence and courage, equal other breeds as to temperament."

CAVALRY IN THE RUSSIAN-JAPANESE WAR.*

By F. HERSCHELMAN.

EVERY new war must be a source of manifold studies, investigations and conclusions in the sphere of military science, especially in our time, when the rapid technical and industrial progress is exercising such a great influence on the action of the armies. Many studies have been made of the Russian-Japanese War and many conclusions drawn from its experience, on cavalry action particularly, but the lately issued official description of this campaign gives a new and rich material for its study and for a detailed analysis of cavalry action. In connection with many private descriptions and statements which appeared in the private press, the official edition allows us to draw very definite conclusions on cavalry action during this war.

* Translated from a series of articles from the *Voennyi Sbornik* by Captain N. K. Averill, U. S. Cavalry, Military Attaché.

It is unfortunate that we are unable to reproduce the maps that accompany this translation but it is believed that the operations can be followed by referring to the maps that can be found in any of the official reports of the Russo-Japanese War.—*Editor.*

Without touching the general question of the importance of cavalry in modern wars, without any theoretical discussion on the possible utilization of its service in modern battle conditions because much has already been said on this subject, I will confine my study to the development of independent activity of the cavalry during the Russian-Japanese War, to the analysis of its general tendency and to the general character of this activity, mentioning the means and ways of executing service duties only inasmuch as the material obtained will allow and as will be necessary for the aim in view.

Much has been written during the last decades on the independent action of cavalry, on the aims it has to pursue in a war, on its possible achievements, on what must and can be expected from it in the whole sphere of war operations as well as in battles, yet the practical results of these writings have been next to naught.

The American War of 1861-65 has given as example of a very extensive activity of the cavalry and all armies tried to utilize the lesson, our army perhaps more than any other. But the following wars proved that an independent activity of the cavalry remains an unattainable ideal, though the importance of this force was fully appreciated.

During the French-Prussian War of 1870-71 the German cavalry action was feeble, chiefly by reason of bad organization of its service in the sphere of high command and also by lack of fire arms.

During the Russian-Turkish War of 1877-78 our cavalry had often to execute independent action on the scene of military operations and proved to be unfit for such work, also by reason of total unpreparedness to such activity during peace time.

During the last Russian-Japanese War our cavalry had again the same problems to solve on Manchurian battlefields and proved again very feeble, though the long period of peace (since 1878) ought to have been better utilized.

However, though nothing has practically been done during the last fifty years in order to develop the activity of the cavalry in a new direction, according to new fighting conditions, the evident importance of independent cavalry work kept all military professors and writers keenly attentive to the necessity

of introducing proper reforms in the organization and training of the cavalry; an energetic propaganda of this idea went on in all European armies and in all military journals.

For a more graphic development of the subject, I find it useful to compare the activity of the cavalry during the Russian-Japanese War (negative results) with the (positive) examples of former times, for instance of our cavalry under the command of Count Roumiantzew during the Seven Years War (1758) and of the French cavalry, under Napoleon, in the Ulm period of the War of 1805; these examples will for ever remain as striking instances of model activity of cavalry on the theater of military operations.

This comparison will show the feeble points of organization as well as the reasons thereof.

I. ACTIVITY OF THE CAVALRY DURING THE RUSSIAN-JAPANESE WAR.

The Russian-Japanese War offers no sufficient instances of the developments of independent cavalry activity, notwithstanding favorable conditions for such, as open and even ground on the whole western part of the scene of action; a very profound rear of the enemy; the difficulty of supplying the army by means of only one railroad line, other ways of communication absolutely lacking; and, chiefly, a considerable superiority in number of the Russian cavalry over the Japanese cavalry. Anyhow this campaign gives examples of all kinds of cavalry work. We will examine the work of Russian cavalry, as the Japanese was numerically too feeble to do anything worth recording.

(a) *Period before the battle of Liao-yan.*

As we know, towards the middle of March our army was concentrated near Liao-yan having Kuroki's army, which landed in Corea, before our front; other armies were expected to land presumably at Daghushan, Budzevo and in the Yinkou region. Under these conditions we had to keep two vanguards: First the 9th Rifles division was posted on the line Tashichao—Yinkou, and, second the 3rd Rifles division—on the right bank of river Yalu, near Turenchen. The observation over the eastern coast of the Liau-tung peninsula from Budzevo to

the mouth of Yalu was entrusted to the Transbaikalian Cossacks brigade under General Mischenko; and over the western coast—to the Ussuri cavalry brigade, posted near Haidju and Senuchen.

The Transbaikalian Cossack brigade of General Mischenko reinforced by a third regiment, left one regiment for watching the coast, and with the rest, the regiments of Chitinsky and Argunsky, with a six gun horse battery invaded Corea, intending to reconnoiter Kuroki's army, which landed on the Korean shores. Two strong patrols were sent in advance; four days later the vanguard advanced, three sotnias; then followed the rest of the brigade, ten days after the departure of the patrols. Certainly this extension of the detachment in depth was not a well combined movement. The vanguard parts, unprotected, could not do any good work; they had to be content with what information they obtained from local population, very unreliable of course. The progress was slow; penetrating to a distance of 150 versts from the border, the vanguard sotnias could, however learn nothing on the enemy's movements. Local conditions also impeded the scouting: the left flank of the Japanese was protected by the sea, their right was lost in a hilly country, with no roads, not even paths. Moreover, the scouting action of the detachment was impeded by the instructions received. General Lenevitch sent orders to "spare our cavalry and not allow its dispersion from the very beginning of the campaign," and General Kutropatkin simply called the detachment back to Ychju.

Supporting the vanguard sotnias, General Mischenko's main forces advanced as far as Parchen, but having come in touch with the enemy, remained inert and then, apprehending a surprise in its unprotected rear, retreated.

In their advance north the Japanese progressively occupied the lines of rivers Taidonchan, Chinghanchan and Pakchenchan by dense infantry reinforced patrols, so that our Cossacks could not penetrate the region of movement of the main forces either on the flanks, or from the front. Seeing the impossibility of secret scouting and having received from the Imperial Lieutenant Admiral Alexeiw an order to proceed decisively, General Mischenko executed an energetic reconnaissance, advanced

to Chichjou, on the presumed line of march of the Japanese, where their cavalry vanguard was reported to have halted, and found there only some feeble vanguard detachments of infantry. After an useless firing on both sides, losing three officers and fifteen Cossacks, the detachment, seeing that the enemy received reinforcements, retired with very poor information.

Having penetrated almost as far as Penian, Mischenko's detachment could only ascertain the general direction of the enemy's advance toward the south of river Yalu and had to return thus putting an end to this expedition; soon after, General Kuropatkin ordered this brigade to occupy the right bank of the Yalu.

In general the scouting gave poor results as to the number of troops landed and the direction they took; information was obtained almost exclusively through spies, or from inhabitants, and gave no proper knowledge of the disposition of the enemy's troops in Corea; yet, this detachment could have obtained better and fuller details, if it had not been called back just when its work in Corea was most needed. On the 20th of March the brigade crossed the river, losing connection with the Japanese; then it was quite uselessly sent to the right flank of our forces and therefore could not, at the right moment, watch and oppose the Japanese outflanking movement of the left side of our position in the Turenchen battle.

The work of General Mischenko's brigade in Corea was cavalry work in front of the army at a distance of 150-200 versts, which is a sufficient advance; but being very much dispersed in depth, the brigade could not well support its advance parts, the action was very poor; besides, every independent impulse was checked by the retreat movement of the main forces. All that influenced the brigade's work and made it dull and without result.

During the Turenchen battle, the cavalry remained on the right flank of the infantry battle disposition and took no part in the fight which went on chiefly on the left side.

Towards the end of April a small cavalry detachment under Lieutenant Colonel Madritov, made a little diversion in the rear of Kuroki's army near Anju, destroyed stores, attacked

patrols, tried to obstruct the enemy's communication line, but was finally repelled; being numerically too feeble (200 Cossacks and 2 scouting parties), it could do no good; and as, towards that time the communication line was transferred to Antung the Korean region lost its importance.

After the battle of Turenchen, this so-called, Eastern detachment moved back to Fynhuanchen and further to the mountains passes Fynhuanchen and Moduln. General Mischenko's cavalry with three infantry battalions protected its right flank and the direction line Daghushan—Suan-Haichen, as a possibility of Japanese troops landing near Daghushan was in view; the detachment, 1,000 horsemen and 2,000 rifles, had to watch over a protection line of 80 versts in length and keep close observation of the sea coast.

The cavalry detachment of General Renenkampf (twenty sotnias, twelve guns and three battalions of infantry as protection) protected the left flank of General Mischenko's detachment and watched over the line Fynhuanchen—Saimatzy—Mukden, thus protecting the left flank of the region of concentration of the main army.

The Laohe detachment (ten sotnias, eight guns and one and one-half battalion infantry) had to protect the right flank of the concentration region in the valley of river Laohe.

Most writers of records of this war state that cavalry scouting was insufficient and gave little useful information. As to independent action, with the aim of impeding the enemy's advance, there was none during this period of the campaign.

In the first days of May, the Manchurian army had completed its concentration; the main forces camped in the vicinity of Liao-yan, protected by the First Siberian corps (south) and the Eastern detachment (east). The vanguards of the First Siberian corps occupied the line Yin-kou—Tashchao—Dalin Pass—Pkanlin Pass, an extension of 120 versts. The vanguards of the Eastern detachment occupied the passes Fenshulin 2d—Modulin—Fynssaolin, on an extension of 210 versts. In front of this long vanguard line were posted the cavalry detachment of General Samsonov (Primorsky dragoons) a scouting company and six guns with several border guard sotnias and, later, the Eighth Siberian Cossack regiment near Sunechan;

the cavalry detachment of General Mischenko (nine sotnias and six guns) near Djandjapoodza, on the left flank of the Southern vanguard; the cavalry detachment of General Renankampf (fourteen and one-half sotnias and six guns) near Saimadry.

Thus, in the expectation of the advance of the enemy, our cavalry (forty-four sotnias) was protecting the strategic front of the army on an extensive line of over 200 versts and engaged exclusively in scouting and in watching the expected landing of the Japanese. Although executed constantly, by small patrols and strong detachments, the reconnoitering during this period of the war gave very poor results. General Kuropatkin several times had to send to the chief of his staff orders for more energetic scouting, as he wanted information of the enemy's main forces and not only of their vanguards.

After the landing of the Japanese near Budzevo, the fate of Port Arthur caused much apprehension and the intention of sending help there. Leaving a strong block in front of Kuroki's army (east), the First Siberian corps and a brigade of the 35th Infantry Division, under General Baron Stakelberg, moved off south.

Whilst this detachment was preparing to depart, General Samsonov's cavalry, being forty versts ahead of the front line, had constantly skirmishes with the cavalry brigade of General Akiyama near Wa-fan-gou; yet no real scouting in the enemy's rear was executed, notwithstanding General Kuropatkin's order.

On the 25th of May, the cavalry detachment sent out to Vafandian was enforced to fifteen sotnias; General Simonov (just arrived) commanding. An infantry brigade was, on the 28th of May, sent to Vafandian for support of the cavalry detachment, the army corps, preparing to depart south, was in the mean time forming (under their protection) in Wa-fan-gou.

But on the 31st of May Oku's army took the offensive, pushed off the vanguard, sent two divisions to our front and a third to outflank our right flank, General Akiyama's cavalry with one battalion as support, protecting the Japanese right flank.

The open advance of two Japanese divisions was easily perceived by our cavalry, but the movement of the outflanking column was noticed only on the 31st of May, and a report of the advance of an infantry brigade with cavalry to Fudjow was made on that day. However, later the Russians seem to have lost sight of it and no further information came, although this Japanese detachment passed the night of the 1st of June near Tendiatum, at a distance of three versts from our advanced outposts at Chudiakow. This may be explained by the fact that the scouting was directed chiefly to the east, watching the advance of the main detachment, to meet which General Stakelberg prepared himself on the fortified position of Wa-fan-gou.

General Samonov's cavalry, fifteen squadrons with six guns, approached near the right flank of the position and was ordered to protect the same. Mounted reinforced patrols protected the left flank.

On the 1st of June the Japanese developed their front line before our position and executed reconnoitering. They decided to outflank our right flank, but sent at the same time a brigade against our left, where a hot fight took place that day.

On the 2d of June Baron Stakelberg intended to make an offensive advance, encircling the right flank of the enemy, but General Oku outwitted him and attacked the Russians, outflanking their right flank.

Our cavalry instead of being constantly hanging on the Japanese left flank and executing extensive scouting, obedient literally to the disposition given, went off north too soon and shut itself up in the hilly, stone-stack of Lunkoo. In the evening of the 1st of June the cavalry received orders to make a reconnaissance on the left flank and rear of the enemy, but put off the execution until the next morning and went two versts back north for the night's rest. Misunderstanding in the action of the cavalry is explained by the illness of its chief, General Simonov and the great strain and exhaustion of the two weeks service in constant touch with the enemy. Only on the 2d of June, towards night General Samsonov arrived and took the command.

On the 2d of June the cavalry moved ahead and early in the morning, intending to scout on the flank and rear of the enemy,

but was fired at from a wood south from Tafanshin. Part of the cavalry dismounted and began firing also; having ascertained the presence of considerable forces, the scouting detachment withdrew to Loonko, from which place they continued to watch the enemy and sent a report of the outflanking movement which the Japanese were executing. At 10.00 A. M., the detachment noticed that a fresh Japanese brigade appeared near Loonko from the west, from Fuchjow; thus the enemy succeeded in executing the planned outflanking movement perfectly hidden until they reached Loonko. The cavalry detachment retreated towards the main forces and discovered Japanese infantry forces approaching the rear of our position on the railroad line. Upon receiving this information, Baron Stakelberg ordered a retreat movement.

In the action of our cavalry in the Wa-fan-gou battle, we must mention first of all, the unsatisfactory reconnoitering, which did not detect in time the outflanking movement of the Japanese and allowed them to encircle our troops; the cause of it was, *First*, the posting of the cavalry too near to the position of the main detachment on its flank, behind the flank of the infantry, instead of being in front of the latter; *Second*, an insufficient reconnoitering, bearing only on one side, instead of clearing the locality on all sides from the main detachment; and, *Third*, their whole attention was directed towards the advancing enemy's troops, the fighting units, instead of having a watchful eye on the reserve parts, posted behind, which certainly could have been expected to execute some operation on the sly. The fighting units were operating so that the adversary could always see their movements; therefore, their scouting should have had for its object the enemy's flanks and rear. During the enemy's advance, the cavalry, retreating, lost touch with him and received no further information; moreover, on discovering the said outflanking movement instead of trying to impede the same, stop it, even for a short time, by an attack on the flank or dismounted on its front, the cavalry retreated under the plea of an intention to protect the battle order of the main detachment.

In the meantime the cavalry detachment of General Mischenko, posted much in advance on the road to Daghusan

and (reinforced by the Seventh Siberian regiment) counting seventeen sotnias, three battalions and four guns reconnoitred between Suan and Daghusan, where on the 17th of May the Fourth Japanese army (Nodzu) began landing. When this army, backed by a brigade of Kuroki's army, began advancing towards the south flank of Baron Stakelberg's detachment, after some skirmishing near Suan, Mischenko's detachment was obliged to leave this point. In the last days of May, Mischenko's detachment, enforced again by a brigade of the Orenburg Cossacks, moved off to the road to Haichow, for the protection of this line. The information supplied by the detachment during this period was very poor and not definite.

Cavalry detachments of General Rennenkampf and Colonel Kartzev continued protecting the left flank of the Eastern detachment and the road to Mukden, continually scouting on their respective fronts. Yet, General Count Keller, the Chief of the Eastern detachment, was complaining of insufficient information procured by the cavalry, though the same did nothing but reconnoiter.

The success of the Japanese at Wa-fan-gou opened the way for a further advance as well on the southern and eastern front. Oku advanced immediately to Sunanchen, followed by Kuroki and Nodzu; towards the middle of June they occupied the passes on Fenshulin crest, which the Russians left without fighting. Then the Japanese continued their concentration on Liao-yan and, after the battle near Tashichao with a group of our southern army corps, and a series of persistent fights on the whole eastern front they advanced to Liao-Yan, which the Russians had fortified. Our cavalry protected the rear of the troops, clearing their advanced positions and gathering on the main one. During this period the cavalry detachments of Mischenko, Rennenkampf and Samsonov, backed by infantry parts, had constant skirmishes with the enemy, executed scouting on the army front, but were unable to penetrate through the outposts lines of the Japanese and therefore gave only poor information as to the situation of the enemy's forces.

During the battle of Tashichao the Russian cavalry protected the flanks of Russian positions, but took no active part in the fight.

After the concentration of the Russian army on the Liao-Yan ~~backed and fortified~~ position, cavalry detachments were posted on the right flank. General Mischenko with ~~twenty-one sotnias~~, twelve guns and two battalions, occupied the village of Uluntay; General Samsonov, with nineteen ~~sotnias~~ and six guns, was ordered to the general reserve and posted behind the outer right flank of the position. General Grevov, with one battalion, fourteen sotnias and twelve guns, was to keep distant watch on the flank from the right bank of river Taitzykhe; General Kossagovsky with six battalions, nine ~~sotnias~~ and sixteen guns had to watch over the river Laoke.

On the left flank of the Russian army Prince Orbeliani with two battalions, eleven sotnias, two machine guns and fourteen guns, had the nearest watch; Colonel Romashevsky, with one infantry regiment and one battery, was stationed in the village of Bensihoo; General Lubavin, with seventeen sotnias and four guns, observed the river Taitzykhe from Sakang to Siaossyr.

General Mischenko had not yet reached the place he was to occupy (Uluntay), when on the 17th of August, in the morning, the Japanese cavalry of Akiyama, followed by infantry, encircled the right flank of the First Siberian corps. Mischenko's detachment; under the fire of the Japanese cavalry, occupied Tanchuandy and, dismounting, began fighting; soon the Ural brigade arrived and reinforced the detachment to twenty-four sotnias with twenty-four guns.

On the left flank the crossing of Japanese main forces to the right river bank was perceived in due time by patrols of the Niejm dragoons; but, at the first news of the Japanese crossing the river near Sakan, the Commander ordered Colonel Romashevsky's detachment to leave, in Bensihoo only the cavalry and move to the north in the direction of Mukden for the protection of the roads. General Lubavin with eight sotnias and four guns occupied Bensihoo, posting two sotnias along the river. When the Japanese began executing the crossing, on the 17th opposite Bensihoo, General Lubavin moved off to the north, Sanshantzy, reporting from there the advance of important Japanese forces crossing the river, though General Bildering explicitly ordered him to attack the crossing troops from

the rear. Thus this important point (Bensihoo) was left bare at first by the infantry, then by cavalry also, just at a moment when the presence of our protecting troops on this shore was most necessary; so, the cavalry did not properly execute the watching duty.

Finally, we must state, that the big cavalry detachments, backed by infantry units, which had to protect both flanks of the army, executed only poor-work, as well in watching the enemy's movements, as in impeding his encircling our main forces.

As to the right flank cavalry, would it not have been more useful instead of dismounting and opening a resultless feeble fire on the front, to execute a mighty attack with twenty-one sotnias on horse back in the rear flank of the enemy, which would have had many chances of success?

General Lubavin, with his seventeen sotnias, could also have done more than ride off to the main forces and report that the Japanese are crossing the river. This might have been done by some small patrol parties; a big detachment should have done better work.

On the 18th of August violent attacks of the Japanese on the whole front of our army were renewed. They were all repelled. General Mischenko tried an attack near Tanchu-antzy and later near Uluntay, but had no success; anyhow, he made a diversion and somewhat eased the First Siberian corps, that was hard pressed by the enemy.

In the meantime during the night of the 18th, a part of Kuroki's army crossed the river Taitzyhe and the crossing continued during the following day. Our troops made no active effort to impede this crossing and on the 19th Kuroki himself began an offensive movement on the right bank of the Taitzyhe.

With the first tidings of the crossing, General Samsonov's detachment was moved from Liao-Yan to the Yentai mines, for the protection of the left flank of the Seventeenth Army Corps and of the Mukden road. The 54th Division of General Orlov received also orders to move in the same direction; Prince Orbeliani's brigade kept posted south from the mines, protecting the nearest flank of the 17th Corps. General Kurapatkin, intending to block the Japanese on the south front whilst he will attack Kuroki's main forces, ordered that General

Zarubayev's two corps should defend the main Liao-yan position, and the other four corps should develop on the right bank of Taityrha, on the line Yentai—Sykvantun, and attack Kuroki's troops. General Orlov's 54th Division was to protect the left flank of this detachment and advance to Hvanlkufen. General Samsonov's detachment was to scout in the direction of Bensihoo; General Mischenko's detachment remained in reserve behind the right flank.

On the 19th and 20th a violent fight took place on the right river bank between the 17th Army Corps and General Orlov's division on one side and Kuroki's troops on the other; other troops, in the meanwhile, crossed the river and joined in the rear. General Orlov's attack was a failure and his division turned back in disorder. General Samsonov, posted on the left flank of this division, seeing the retreat and appreciating the importance of the Yentai position occupied the same by dismounted men of his detachment and succeeded in repelling the adversary during the whole day.

General Mischenko's detachment advanced nearer to the left flank but received General Kuropatkin's order to establish connection between the 17th and the First Siberian Corps. This was the whole action of a detachment of nineteen sotnias with twelve guns in this fight.

On the 21st General Samsonov's detachment protected the left flank of the army, and Mischenko's detachment continued to maintain connection between the army corps.

In this case General Samsonov's actions show an independent activity of our cavalry corresponding to the general situation; they contributed in a large measure to atone for the consequences of the unlucky retreat of General Orlov's division. General Mischenko's detachment remained inactive during the last two days; the order received (to keep connection service between the two army corps in battle order) was not in proportion to the numerical strength of this detachment, nor to the real destination of cavalry. The concentration of thirty-eight sotnias horsemen on our left flank did not prompt this mass to any active part. The losses were three officers and fifty-four men.

General Lubavin's detachment of four battalions, eighteen sotnias and twelve guns, had a conflict with the vanguard of Umesava, who crossed the river near Bensihoo and retreated to the North, even though Umesava, leaving only one battalion as shield turned with the rest of his detachment to west towards the Yentai mines.

During the above described period of the Russian-Japanese War, the Russian cavalry was constantly employed for scouting and protecting the strategic army front; therefore, it had always to be in advance and was spread over a large front.

In May, our cavalry, thirty-seven sotnias, had to cover a front of more than 200 versts in extent; being, by 100 squadrons, superior to the Japanese cavalry, it could execute independent work, but receiving constantly binding orders for action, the chiefs could not display their own initiative. This wrong organization led to the passivity which marks the action of our cavalry throughout this war. Reconnoitering is made only on the front, no thorough scouting in the region of the enemy's concentration. Poor information obtained from suspicious sources (Chinamen) gave no proper ideas on the enemy's movements and led to an exaggeration of his forces. In general, the scouting was highly unsatisfactory.

Neither the difficult conditions of locality, nor the exhaustion in a six months constant work, can excuse or explain the passive character of such cavalry work. Similar conditions are repeated almost in every war, yet they generally are surmounted in some way or other.

In the great conflicts of this war (Turenchen, Wa-fan-gou, Tashichao, Liao-yan) we find the same passiveness; the cavalry is occupied exclusively in protecting flanks and watching; moreover, its disposition is generally wrong, either too near to the respective positions so as to be unable to detect an outflanking movement, or on the same line as the infantry; with the development of the outflanking movement the cavalry moves back, leaving room to the infantry, taking no active measures to impede the enemy's advance; sometimes, several sotnias dismount and open rifle fire, then remount and move off.

Only in the Liao-Yan fight was this procedure followed corresponding to circumstances, viz., the Yentai mines had absolutely to be saved; General Samsonov's horsemen dismounted, occupied this important position and held firm during a whole day. But we see no attacks on horseback on outflanking troops, nor violent firing at them from the rear at the decisive moment in a word, no brilliant action.

(b) *Period of the Sha-Ho Fights.*

After the retreat from Liao-yan to Mukden the Russian army took the following disposition: Six army corps were posted on the right bank of the river Hoonhe; two corps (10th and 2d Siberian) protecting the main forces, remained on the left bank, the 10th in front of Mukden, the 2d near Fanshen, on the road between Bensihoo and Fooshoon, protecting the left flank of the army.

The front vanguards were posted on the line Kuanlipoo—Linshinpo Midia—Tendzaio. In front, at a distance of about ten versts, was extended a dense cavalry screen from Chau-guanpoo to river Hoonhe, through Shilihe and further to the east, the road from Fooshoon to the Dalin pass; on the right flank stood General Grekov's detachment, then General Mischenko's, General Samsonov's and General Rennenkampf's; the front of this cavalry screen extending about eighty versts.

The Japanese army centered on the line Liao-yan—Yentai mines—Vaniapooza; its vanguards were just in front of our cavalry; seven cavalry regiments, one regiment infantry and three battalions occupied the left flank of the Japanese disposition, between Tootaidzy and Tadasampu; the Japanese line of advanced posts extended from Vaniapooza to Sandespo (at a distance of two to three versts in front of ours); the main forces of both armies were separated by a distance of forty versts.

During four weeks both armies were absolutely inactive; it was a forced rest after the great strain of the Liao-yan days; munition stores were renewed, order was reorganized, fresh reinforcements arrived. Both armies stood face to face, as stated above; our whole cavalry was pressed into the narrow passage of two to three versts distance between them and had

no space for moving, not even for executing proper scouting, which required time and free space. It was doomed to passivity to a mere screening on a front of eighty versts in length, which could have been done much better by the infantry, especially because the locality was very hilly to east of the railway, on the greater part of the front.

The Japanese cavalry (General Akiyama) was, in consideration of this circumstance, concentrated on the left flank of its army, on an even open space between the river Scha-Ho and Hoonhe.

Thus, we must not wonder that our cavalry displayed no activity having no space free for action.

On the 3d and 4th of September the Commander-in-Chief, desirous to verify the information received by him of an increase of the enemy's forces on a point to the east of the railway, ordered that a scouting in force be made in the region of station Yentai—Vaniapooza, at the junction of the roads leading to Mukden and Fooshun.

General Mischenko moved off in the direction of Yentai with eight sotnias and four guns. The Japanese outposts retreated, but, on approaching the station Yentai, our vanguard was violently fired on and turned back; one scouting party, approaching the station to a distance of 500 yards, found out that it was occupied by only two companies of infantry and a small number of horsemen; but, it being already dark, the main forces of the detachment did not attack. General Mischenko limited the hostilities to a heavy gun and rifle firing. The villages around the station showed no trace of the enemy.

General Rennenkampf's detachment made a scouting raid with eight sotnias, twelve guns and four battalions in the region of Vaniapooza near Fanshen, pushed off the Japanese outposts, occupied the heights near Fanshen and opened fire, the Japanese answering.

At the same time General Samsonov's detachment of five sotnias, scouts and two guns, going from Fandiapoo to the east by mountain roads, occupied the village of Tzoghov (four versts distance from Vaniapooza to the north) and also opened fire.

At 2:00 P. M., General Rennenkampf, being satisfied with the results of his scouting, left his position and retreated;

General Samsonov did the same. Our losses were one officer and twelve soldiers, this reconnaissance proved that the Japanese had strongly fortified the position near Vaniapooza and had occupied it by a brigade of infantry with twelve guns, receiving later a reinforcement of about 500 men; more troops joined these forces on the 5th of September.

Thus, says the official edition "Russian Japanese War," the scouting operations did not sufficiently clear the circumstances of the enemy's massing his troops to the east of the railway; the nearest region, near station Yentai, was occupied very feebly, although it being a very important concentration point of several railway lines, it could be presumed that a considerable part of Kuroki's army would be grouped there. The scouting discovered only the vanguard posts of the enemy at the station and a small detachment at Vaniapooza; the troops to the east of the railway, their quantity, their position had not been ascertained.

It must be presumed that General Kuropatkin, sending out three detachments for a reconnaissance in force, expected better results; the scouting was made from the front, examined only points which have been indicated as occupied by the enemy and made no attempts to outflank these positions and examine their rear. The detachments utilized their forces only for pushing off the advanced outposts and sending them back to their nearest supports and nothing more. That was very little work for three cavalry detachments with eighteen guns; they ought to have further penetrated the enemy's position, provoked an attack, which should have disclosed the enemy's forces on this point, and contrived to see as much as possible. Limiting the scouting to one day it was perhaps difficult to achieve more, but there was no necessity for such haste; moreover, the loss of only fourteen men proves also that the work was not very extensive, nor daring.

Later in September the Russian headquarters decided to execute an advance movement and attack the Japanese in their positions, first of all occupying the right bank of river Taitzyhe. This movement was executed by two groups.

(a) The Western detachment under command of General Baron Bilderling, 10th and 17th army corps, a Cossack divi-

sion (64 battalions, 184 guns, 40 squadrons, 6 horse-artillery guns), was to advance along the river Scha-Ho in a straight direction to the south, on both sides of the railway track; this movement was to have a demonstrative character, in order to attract the enemy's attention.

(b) The Eastern detachment of General Baron Stackelberg, 1st, 2d and 3d, Siberian corps, General Samsonov's cavalry detachment, a Cossack division and parts of the Fifth Siberian corps (73 battalions, 130 guns, 16 mountain guns, 6 mortars, 34 squadrons, 12 horse-artillery guns), was to turn the right flank of the Japanese army in the direction of Bensiho and attack the enemy along the river Taitzyhe.

The general reserve, First Army Corps and Fourth Siberian (76 battalion, 222 guns, 9 sotnias) under the command of General Zarubaew, was to follow at a 20 versts distance from the interval between both detachments.

General Mischenko's detachment of eleven sotnias, and eight mountain guns was to keep connection between both groups and protect the interval, advancing in the direction of the Yentai mines.

The protection of the flanks was entrusted; on the right to General Dombrovsky, with thirteen battalions, thirty-two guns and eleven sotnias and General Kossaghovsky with six battalions, twelve guns and nine sotnias; the latter had to protect the extreme right flank along the river Laohie; on the left flank to General Rennenkampf with thirteen battalions, thirty guns and sixteen sotnias in the direction of Dalin, and to Colonel Madritov with one battalion, two sotnias and two guns.

Thus the decisive blow was to be delivered at the right flank of the enemy and the success of the whole operation depended upon the success of the east detachment's action.

Here we must note first of all that the distribution of the cavalry between the detachments did not correspond to local conditions. The east detachment had thirty-four squadrons, although it had to work in a hilly country, accessible only along the roads and the valleys of mountain rivulets where the presence of such a cavalry mass was only an encumbrance and an embarrassment. On the contrary, the western part of the Scha-Ho region, where the west detachment had to operate, has an even

and open character, where operations in masses had the necessary space for action. If the mass of our cavalry had been concentrated there, it certainly could have executed the task assigned with the greatest success.

Shortly before the beginning of this advance operation, on the 21st of September, General Mischenko's detachment of twelve sotnias and four guns executed a reconnaissance in force in the direction of the Yentai mines; after some firing at small advanced outposts, the detachment advanced to a distance of five versts from the mines, discovering on the whole space near the latter only four squadrons and three companies. This led General Mischenko to report that the east detachment would, in the whole region of its advance, meet with no serious resistance. However, the information, obtained by the east detachment's scouts, was very different stating that the Vaniapooza region was already occupied by strong Japanese detachments. This contradiction is by itself an indication of insufficient and unreliable scouting, and the necessity of executing anew a whole series of reconnaissances before advancing further, which caused a delay, proves it undeniably.

The east detachment moved off on the 21st of September in three columns; the right, First Siberian Army Corps and part of the Second, went in the direction of Vaniapooza; the middle, Third Siberian Army Corps, to Impan-Kaotaitzy; the left General Rennenkampf's cavalry and General Ekk's mixed infantry division, to Bensihoo.

Thus the columns were to encircle the Japanese positions of Vaniapooza from the right flank, eastwards, the left column appearing in their rear, from Bensihoo; at the same time part of the cavalry was across the river Taitzyhe and to operate on its left bank.

In this advance movement General Rennenkampf's cavalry formed the left column of the eastern detachment, and general Grekov's cavalry detachment continued scouting on the front Saliphetzy—Vaniapooza, in order "to study the approaches to the position Vaniapooza—Nanshanpooza and keep connection with the cavalry of the west detachment."

General Samsonov's cavalry detachment scouted in the locality between Huanlin—Chaohuanzai; having for its object

"to find out roads in the western direction, towards the line Vaniapooza—Sanchanzzy, and secure connection with General Rennenkampf's detachment." Later he received the order to "advance towards Shapintaitzy, and to scout between this point and Bensihoo, keeping connection with the neighboring detachment and protecting their flanks."

On the 22d and 23d of September a new reconnaissance of the Vaniapooza positions was made, causing only loss of time to the enemy's profit.

Thus, during this advance operation, the cavalry was in front and had to execute scouting work.

The same object, scouting, was given to the cavalry on the following days, viz: General Samsonov's detachment had to move towards Bensihoo and execute scouting to the south, southeast and southwest; General Rennenkampf was to protect the left flank of the whole detachment and execute scouting to south and southeast.

When we remember that at the moment of starting the adversaries were separated by an interval of only forty versts, it is presumable that on the next day they ought to have come to a conflict. There was no time for the cavalry to be preceding the army and to be scouting, especially in mountains; there was neither time nor space for such activity; moreover, always remaining in front, the cavalry was constantly entangled in battle actions of its own infantry, the scouting work passing to the divisional cavalry and to infantry scouts. The general scouting task entrusted to the cavalry, could not be executed simply by reason of lack of time; it was already too late at this period of action; reconnoitering should have been done during the four preceding weeks, when the enemy's troops stood still in expectation.

Such inadequate employment seems to indicate that the commander did not know what to do with the cavalry, how to employ it.

On the 24th of September along the whole front our troops came in contact with the enemy; skirmishes began; the Japanese left the Vaniapooza positions without fighting and concentrated the defence on the mountain crest, encircling Ben-

silence from north and east; fighting went on over the whole front, and the cavalry, dismounting, fought with the infantry.

On the 28th General Samsonov's cavalry detachment twelve sotnias, one battalion, and one battery, was ordered on the left flank for action against the rear and flank of the Japanese, from the left bank of the Taitzyhe, to help the troops fighting on the front. This was fully corresponding to the conditions of the fight, only it should have been done sooner.

General Rennenkampf's column, thirteen battalions, and sixteen sotnias, was directed to support the attack on the mountain passes on the front and to keep menacing watch on the rear of the Japanese troops near Bensihoo.

Yet these were only attempts at action in the enemy's rear; no serious intention of executing an outflanking march and help the frontal attack by a violent blow direct at Bensihoo in the rear, seems to have existed; at least, when General Rennenkampf proposed to execute such a movement, the commander of the third Siberian army corps, to whom he was subordinated refused to sanction this plan; an outflanking march was thought to be too risky in view of the proximity of the enemy's positions, and General Samsonov was ordered only to secure the river crossings and to scout towards the south and along river Taitzyhe, helping the detachment of General Lubavin, who was operating with five sotnias, on the flank of the Japanese positions, again a half measure.

The Lubavin detachment occupied at first an advantageous situation, having the enemy's position, his pontoon bridges and even his rear under gun and rifle fire; however, the Japanese forced him to move back. General Samsonov tried to support him, reinforced him by 700 horsemen, stopped the Japanese attack, but could not help him to regain the first position and Lubavin was limited to gun action only against the flanks, not the rear of the enemy. The latter contrived to send support to his companies, posted on the left bank, by others which crossed the river in haste and thus they impeded the advance of the Cossacks. Towards evening it was reported that a Japanese detachment of all arms was moving on thirteen versts south. On the 29th of September on the flank of Lubavin's detachment appeared the second Japanese Cavalry brigade of

Prince Kanin, which opened a violent fire at the Cossacks from the rear.

This caused General Samsonov to lead the whole detachment back, to the bridges, and later on to the right shore of the Taitzyhe; but the Japanese battery took General Rennenkampf's detachment in flank and forced it to move back also.

During these two days (28th and 29th) the Russians had a series of bloody and resultless fights on the front, attacking the passes to the east of Bensihoo, and towards the evening of the 29th it became evident that the planned aggressive advance had turned to mere defensive actions and on some points even to retreats. Finally the east detachment, numbering 86 battalions, 50 sotnias, 198 guns, thus being numerically much stronger, proved unable to crush the enemy numbering only 19 battalions, 12 squadrons, and 48 guns.

In the meanwhile the west detachment advanced (on the 23d of September) his main forces to the river Scha-Ho, sent advanced outposts six to seven versts ahead to the river Shiliho and waited during two days for news from the east detachment; on the 26th the detachment received orders to move on and occupy the line of the river Shiliho, which was executed after a fight with the advanced outposts of the Japanese.

This detachment advanced in two columns: the right (17th army corps) to the west of the railway; the left (10th army corps) to the east of the track. General Grekov's Cossack division advanced on the right flank, between the railway and Hoonhe; the Ural Cossack brigade protected the front of the 10th army corps.

Apprehending that the Japanese may tear through between the west and the east detachments, General Kurapatkin sent to fill the interval, from the general reserve, the 4th Siberian corps of General Zarubaew with the cavalry detachment under General Mischenko. These troops formed the middle group.

In the general reserve remained the first army corps, behind the center of the main army and the Sixth Siberian, behind the right flank.

The Fifth Siberian corps, under General Dembovsky protected the right flank in the Hoonhe valley, on the right bank of which was posted the horse brigade of Prince Orbeliani.

Thus again here also, our cavalry was extended on the whole front line.

Having received information of the arrangement of our forces, Marshal Oyama decided, to execute a counter attack and, leaving the right flank troops at Bensi-hoo to their own forces, directed his whole army against the west detachment to strike a heavy blow at the center of our positions, in the interval between the two groups of our advancing troops, as the feeblest point, at the same time attacking the right flank by an encircling movement. Therefore he sent two divisions of Kuroki's army and Nodzu's army against General Zarubaew's troops. Oku's army was sent along the Mandarin road.

On the 27th of September the Japanese army began advancing and on the next day there was violent fighting along the whole front. Almost without interruption battle after battle lasted until the 3d of October, but nothing could move away our valorous troops and they kept their positions on the Seha-Ho to the last. Skirmishes went on until the 6th of October along the front and then began the cessation of hostilities for the winter.

During the cavalry actions on the front of the west detachment, General Mischenko's cavalry detachment also had to operate in mountains, where like the cavalry of the eastern detachment, he could not develop his activity freely. He had to protect infantry flanks, to secure connection between the columns, to executing small scouting in the sphere of action of the infantry, always having some specially commanded infantry companies, following, impeding and slackening the cavalry action. This limited the service of General Mischenko's cavalry to a close dependance on the infantry action in dismounted formation, fighting on foot against the enemy's infantry; such an activity is not even a divisional cavalry service, as the latter has not for its special character to fight in dismounted formation together with infantry.

The cavalry detachments of General Grekov, Colonel Stakhovich, Prince Orbeliani and the Ural Cossack brigade

were in better condition as they had to work in a plain open terrain and therefore could freely develop their special cavalry activity. But these detachments also received first of all inadequate orders. Thus General Grekov's detachment had to "watch on the front to the west, from the Scha-ho to Hoonhe and protect the flank." The Ural Cossack brigade: "to watch and execute scouting along the front," duties of an exclusively passive character, a kind of sentry service that caused this mass of cavalry to be loitering about between the infantry and sometimes to do some firing in dismounted formation in common with some infantry unit, instead of largely executing independent and special cavalry work. Having no special chief, this mass was not united under one commander and was nothing else but a lot of single detachments; no wonder if its activity had no proper general aim.

This great blunder—to have pressed our cavalry in a narrow space between both armies—was a sacrifice of our 102 sotnias to inadequate work of small scouting, foot fighting, connection service, and flank protection; the marked superiority over the Japanese cavalry proved of no avail; on the left flank, at the news of the approach of Prince Kanin's detachment, our cavalry moves off to the bridges, bares Rennen-kampf's flank; crosses the Tiatzyhe and abandons an advantageous situation near Bensi-hoo from which it could paralyze the flank and rear of the enemy; on the right flank Grekov's and Stakhovich's detachments were paralyzed by Akiyama's cavalry, whilst the rest of our cavalry detachments could not move at all and was doing infantry work. Then why have horses? During the whole two weeks period of constant fighting our cavalry had losses of one officer and fifteen soldiers only, on the average per regiment.

Attacks of the Russian Cavalry on the Rear of the Enemy.

The cessation of hostilities which took place on the theater of war after the battles on the Scha-Ho, while our troops were awaiting the arrival of reinforcements from Russia, continued until January, 1905, and was only broken sometimes by small encounters among the scouting parties. The Japanese were using all their efforts against Port Arthur, intending after the

fall of that fortress to move the army of Nogi to the north, so as to attain the numerical superiority necessary to them for active operations. The proximity of both armies created collisions at the advanced posts and, when searching for small detachments of volunteer scouts, these were nearly of daily occurrence.

After the battles on the Scha-Ho the exhausted combatant parties did not carry out any active operations for some time, but busied themselves with the reinforcing of their positions and remained near each other at a distance of some hundred paces. In such a position the cavalry was useless at the front and the idea arose to use it on the flanks. During the period of inaction the line Haitchou—Tashitchaou—Haitchen—Layon served for the transport of provisions for the Japanese.

In the beginning of November the idea arose in the Russian general quarters to carry out an attack on the rear of the Japanese army for the purpose of diverting part of the troops from the front for the protection of the rear and thus to give the Russians facilities for carrying out the proposed offensive operations; to destroy the railway so that the regular transport of provisions to the Japanese army would be stopped and, lastly, to destroy the stores in the rear of the army, especially the considerable supplies at Inkou.

With the fall of Port Arthur, December 20th, the Russians proceeded to carry out this idea for the purpose of detaining the arrival of Nogi's army which was moving on to reinforce the troops disposed on the Scha-Ho. General Mischenko was charged to carry out this attack and a detachment was formed for him, consisting of seventy-two sotnias and squadrons, four mounted volunteer detachments and twenty-two guns; the detachment had a pack transport consisting of 150 pack horses attached to it.

The direction of the attack was to be along the Liaokhe. The task imposed on the detachment was the destruction of the magazines and storages of the Japanese especially those at Inkou (where it was said they had provisions worth several millions of roubles), and the blowing up of the railway bridges.

The region where the raid was to be carried out was densely populated, very fertile and not devastated by the war.

The line of communication of the Japanese and the rear positions were protected on the left flank by the river Liaokhe and its affluent streams. Although the rivers were frozen at that time of the year, they had very steep banks and high ramparts against their over-flowing which made them very difficult to cross.

At the time of the attack on Inkou the Japanese were protecting their left flank by occupying a defensive line on the Noonhe and having three regiments, eight squadrons and four guns at Siaobeikhe—Beida-gou; the vanguards of this detachment consisting of one battalion, one squadron and two guns each, were disposed at Mamakai—Tchitaitzy, having in front of them a line of pickets. In the space between the Liaokhe and the Hunhe 3,000 Chounhous were observed. The passage on the line Outzyatou—Lidiaza was protected by an outpost picket. Newchuan was occupied by a Japanese detachment of 250 men.

The railway was strongly protected by Japanese troops, the stations and bridges were fortified and guarded by sentries.

The necessity of taking possession of Inkou obliged General Mischenko to direct the movement that way choosing the shortest route Kalikhe—Lidiaza—Newtchuan.

On the 26th of December, the detachment was concentrated at Suhudiapoo and on the same day marched on to Syfontai, a march of thirty versts where the Liaokhe detachment of General Kossagoffsky, eight battalions and three batteries, was disposed and destined to serve as support to Mischenko. On the following day the detachment reached Davan, thirty versts distance. On the 28th the detachment continued to move in three columns on the left bank of the Liaokhe. The columns moved on at a foot pace, maintaining a regular contact between themselves. From this day the movement continued under constant collisions; the enemy had to be dislodged from the villages on the way and the passages across the river had to be forced. After going twenty-eight versts the detachment arrived at Kalikhe, where it halted for the night, having routed, after a hot fight, a considerable band of Chounhous. On the same day two parties were sent out to destroy the railway. They did not succeed in blowing up any of the main construc-

sions, but only managed to damage the line near Haitchen, the repairing of which, however, required only six hours' time.

On the 29th of December the detachment moved on in three columns to Newtchuan, had an encounter by the way with the outpost picket at Udsiatuy after which it avoided encounters with the Chounhous, which were occupying the villages on the way, but proceeded further by circuitous roads.

According to the information obtained Newtchuan was occupied by 250 Japanese, Inkou by 2,000 men, and Haitchen by 1,500, and a strong force was occupying Tashitchao. At about noon the detachment crossed the Taitsykhe near Kaolifan at one o'clock it came to Newtchuan. The Japanese outpost picket detained its vanguard but for a short time only, was partly destroyed, and part fled towards Haitchen. The detachment disposed themselves in the town which the Japanese had abandoned, destroyed the telegraph, burnt two stores and a transport of 300 wagons.

In the night between the 29th and the 30th patrols were sent out to the railway line, but they only succeeded in causing but a slight damage to the line near Tashitchaou and on the Inkou branch.

After this Mischenko moved on not towards Haitchen and the railway line, but towards Inkou. This decision was called forth by the above mentioned instructions of the Commander-in-Chief.

After a march of forty-two versts the detachment reached Liansiatoon where it halted for the night. From this point officer patrols were sent out to the railway line, which they damaged in several places. On the 30th of December, at 4:00 o'clock in the morning, the detachment set out for Inkou, but reached the town only at 11:00 o'clock owing to the dense fog and icy roads. The troops were allowed to rest until 4:00 o'clock, after which with the fall of darkness it was decided to attack the town from three sides. Inkou was occupied by two battalions with a few guns and machine guns. The above mentioned delay ruined the whole plan. The Russians did not destroy the communications between Tashitchaou and Inkou in time, the regiment of Colonel Count Shuvaloff having been charged therewith only just before the attack, thus enabling the Jap-

anese to transport to Inkou two battalions under the very eyes of the Russians.

After enfilading the stores near the station with fire, twenty-four dismounted sotnias attacked the town, but in the darkness they got into barbed wire entanglements and were met with a strong fire, which showed the impossibility of carrying the attack. The losses during this attack were twenty-four officers and 269 men, and the task imposed on the detachment of destroying the station and blowing the stores up was not accomplished.

At the same time information was received regarding the movement of the Japanese infantry from Tashitchaou to Inkou and from Haitchen to Newtchuan. Fearing that he would be cut off, General Mischenko gave the order to stop the attack and retreated towards Liansiatoon, where he halted for the night. On the next day the detachment continued to retreat along the right bank of the Liaokhe, crossing the same near Doonheiyan, so as to avoid Newtchuan which was occupied by five battalions. Owing to the fog, and icy roads, encounters with the enemy and delays occasioned by the presence of the wounded and the pack transport, he only reached Tabetoon towards 10:00 o'clock in the evening. On the way the Japanese forced the detachment to move on, pursuing it with their infantry.

At day break on January 1st, they attacked Teleshoff's column near Sinyupootchenza. On the 1st of January the detachment made only thirty versts from 9:00 o'clock in the morning until 10:00 o'clock in the evening and halted for the night at Yaotzytchany. On the 2d and 3d the movement was continued. At Davan the detachment passed over to the right bank of the river, and moved along the same until it reached Kalama. On the 4th the troops were given a rest and on the 5th the detachment was dispersed. The losses of the detachment were 39 officers and 434 men.

The idea of carrying out an attack on the rear of the enemy with such a strong cavalry force deserves full commendations and approval most assuredly. It was one of the very few important and in theory most efficient enterprises of the cavalry during the whole war. But the proposed attack was unfor-

unately so unskillfully organized and carried out, that the results attained proved to be nil.

The reason of such a failure was the complete disregard of the principles of the affair, as regards the organization and the execution.

In regard to the former we must first of all point out the mistakes in the organization. In the formation of the detachment a complete improvisation was admitted, which made the command of the same extremely difficult. Further it was entirely a mistake to hamper the detachment with a pack transport of 1,500 horses, accompanied by dismounted leaders moving along at a speed of from two to two and one-half versts per hour, thereby impeding the movement of the whole detachment.

A complete absence of secrecy prevailed during the formation of the detachment. The conditions under which the raid was to be carried out were discussed during the course of over two months. Having decided upon the attack in October, the Commander-in-Chief hesitated for two months and then ventured upon it only in December when the operation had already lost the chief condition for success, its suddenness, and when, besides, with the fall of Port Arthur, the circumstances had changed. Meantime, the proposed attack was being discussed so openly, that even Oku, in his field order issued in November, warned his troops of the possibility of its being attempted. The formation of the pack transport, its concentration at Syfontai and the concentration of the different parts of the detachment at the place of assembly were carried out quite openly and could not have remained unnoticed by the Japanese.

The object of the attack was set erroneously; the main forces of the detachment were charged with the execution of the secondary object, the destruction of Inkou, indicated by the Commander-in-Chief, whereas, for the carrying out of the chief object, the destruction of the railway, only six sotnias were commanded and dispatched in parts to blow up parts of the line. The destruction of Inkou, even in case of success, did not promise any results, as in November the port was frozen and Inkou could not serve as base for the Japanese. After

the fall of Port Arthur they had free access to the excellent port of Dalny, from where all supplies were transported by rail, and it was the destruction of the railway line that should have been the object of the attack, and not the destruction of Inkou.

Moreover, for the success of the attack in the sense of influencing the march of events, a certain connection with the principal operations was necessary. Without this connection, although the attack could have been successful, the results could not have any serious importance. The connection of the attacks with the principal operations must be understood in the sense of their being carried out in due time, in a certain region and their being executed in dependence with the march of the principal operations, with the objects pursued by the main army. In the case described the attack was executed by itself, as a separate event, without any connection with the operations of the army, which at that moment was wholly inactive and had no operations in view for the immediate future.

Hence this attack should be pronounced as having been carried out at a wrong time.

Lastly the commander of the detachment was not allowed a free hand in the organization thereof and was deprived of the necessary initiative in the choice of the region of action by the instructions of the Commander-in-Chief regarding the stores at Inkou and the time for action.

Such were the errors in the organization and general command over the operation.

In the execution of the attack the absence of rapidity of action and secrecy strike one before anything else. The detachment moved on at a rate of only thirty versts per day. Instead of taking measures for keeping the movement secret, by carrying out far and constant reconnoitering, by moving in zigzags, while spreading false information as to the direction of the movement, by demonstratively sending out detachments in different directions, by keeping the halting places secret, and lastly, by moving first in a wrong direction from the point of concentration and subsequent halting places, but, on the contrary, openly concentrating at the point of assembly, the detachment proceeded directly to the object of the operations without attempting to dissemble or hide the same. The in-

formation concerning the enemy was highly insufficient as the scouting parties were sent out to only an half-hour or even a quarter of an hour distance from the front. During the first two days the detachment attacked several villages occupied by the Japanese, instead of moving on and avoiding them. Naturally, the detachment drew attention to itself and towards the end of the movement and the Japanese had time to send their troops after the detachment from different sides.

The aggressive operations themselves were also not of a nature corresponding with such partisan attacks.

Such attacks must first of all be *sudden*. Consequently, their chief characteristics must be a *secret approach* to the object of the operations and a *rapid energetic* attack, so as to keep up the powerful moral impression caused by the unexpected appearance and the first furious onslaught, which increases by tenfold the force of the aggressive party at the moment. During the attack on Inkou, the detachment having stopped at a distance of ten versts from Inkou, made a halt of four hours, as if on purpose to give the enemy time to take the necessary measures for parrying the attack. The halt was made for the purpose of making the attack during the night. But this reason does not justify it. In such a case the last march should have been calculated so as to approach Inkou in the night and attack it suddenly, but not to stop in view of it and await the fall of darkness. Lastly, the attack itself in a place wholly unknown and unreconnoitred, could only lead to failure. It was led in dismounted order from the front where it was expected, and where the troops met with barbed wire entanglements and trenches, and in very unfavorable battle order. After the unsuccessful attack on Inkou, it was hardly right to halt for the night at Liansiantoon. It was too near to Inkou and in the sphere of operations of detachments of the enemy, which could easily prevent the detachment from crossing the Hunhe.

On the way back, the detachment encumbered with the wounded and the pack transport *crawled* along, pursued by the infantry of the enemy, and in accordance with the instructions given to General Mischenko could only act as *cover* to the transport with the wounded, without undertaking any active operations.

Thus the only important aggressive operation on the communications of the enemy during the whole war was a complete failure, owing to the disregard of the chief principles of such an enterprise, both as regards the organization and the execution thereof.

Besides the attack on Inkou our cavalry carried out two more attacks against the rear of the enemy, which deserve attention. These were the raid of Colonel Gillenschmidt on Haitchen between the 5th and 10th of October, and a second attack of General Mischenko's detachment on Fakoomyn, in May, 1905.

The aggressive operation of Colonel Gillenschmidt with four sotnias, having for its object the blowing up of one of the larger railway bridges, may be considered as the most successful one, not only as regards the results, as well as the way it was carried out. In this case the detachment was concentrated and formed in complete secrecy as to its intentions. The object of the operation was defined clearly and precisely, leaving to the commander of the detachment the initiative in the choice of the bridge to be blown up along a considerable distance of the line. The execution of the attack, as to the choice of direction, the order of movement, the rapidity and secrecy of the same, do not deserve a single word of reproof. The movement was executed in secrecy owing to the reason, that the troops moved in the sphere of observation of the enemy mostly during the night, avoiding roads and villages, and likewise, owing to the rapidity of the movement and the way they eluded all pursuits, by changing the direction from Sidiakoshen to the west thereby enabling the detachment to escape from the enemy's patrols, which had followed them during the first day's march. During the long halt at Tava, from half past four in the evening until 7 o'clock in the morning, on the 7th of February all measures for guaranteeing secrecy were observed. The village was surrounded by dismounted sentries and the whole detachment secreted in four farms. During five days the detachment moved along, covering seventy-four versts per day. One day, when there was a skirmish and a bridge blown up during a march of 26 hours, 130 versts were covered.

This attack may be considered as a model one by the way in which it was executed.

The result of it was that a large railway bridge was blown up and consequently the communication along the main line of communication of the enemy was interrupted. The duty imposed on the detachment was fully accomplished.

The losses of the detachment were two officers and thirty-four men.

In the attack of General Mischenko on Fakoomyn in May, the detachment was composed of forty-five sotnias, six guns and two quickfirers. The task set was: "To pass to the rear of the western group of the Japanese armies and to detain their taking the offensive by destroying their stores and transports and by damaging their ways of communication, especially the railway line." This attack was called forth by the desire to detain the offensive operations of the Japanese until the reinforcements which were expected to arrive between the 5th and the 20th of May. This obliged the detachment to develop their action in the rear of the enemy during the course of three weeks, which was impossible for it to do as large detachments can only pass through the rear of the enemy periodically, without remaining there. Note how raids were carried out during the American Civil War. The development of partisan operations in the rear during a continuous period of time is only possible, under favorable circumstances, for small parties which may remain a long time hidden in the rear of the enemy as was the case during the war of 1812 and the German War.

On the first day, the attack was directed in the neighborhood of Keipintcha on the left flank of the enemy's position, where the Seventh Infantry division was stationed. On the next day the detachment passed to the rear of this division, but owing to encounters with detachments of Japanese infantry and the Chounhous, it was obliged to change the direction three times. The unlucky choice of the direction led to the loss of the third's day march, destined for the turning of Fakoomyn, which was occupied by an independent force and only on the fourth day the movement was directed to the communication line Shifoozy—Fakoomyn.

This raid, as well as the first one, was also undertaken under a complete absence of secrecy. The object of the detachment was known on the 25th of April. At Liaonvan the detachment was being formed during several days nearly in view of the Japanese, attracting attention to itself by sending out patrols and by skirmishes with the Chounhous and the Japanese cavalry. The choice of the direction was an unlucky one also as it led constantly to encounters with the Japanese troops. The Japanese evidently expected the detachment to turn their flank. It was important for them to ascertain the direction of the detachment, that is to say, whether it was directed to the rear, or the far rear, and the detachment by its movements clearly pointed out to the Japanese the direction and the object of its operations, so that by degrees as it moved further to the south, the Japanese moved out small parties which detained their progress.

As regards the rapidity with which the attack was carried out, it must be said that the whole movement was executed all the time at a foot pace with an average speed of only thirty-five versts per day, during which time the horses were kept under saddle ten to twelve hours. The detachment was considerably detained by the engagements called forth by the storming of the villages occupied by the Japanese.

The contact during the movement was kept up very unsatisfactorily. Parties for carrying out scouting at a distance were sent out very irregularly, unskillfully and they were made to do work which hindered them from accomplishing their direct object. Hence, they could not inform the Commander of the position of affairs in due time.

Owing to this, the detachment moved on blindly and the result was an unexpected encounter with the Japanese at Tchaobaoopa. On the 6th the detachment was obliged to stop and change its direction three times. On the 7th, the detachment was unexpectedly met by the fire of Japanese infantry with quick firing guns from the front, the east, the right and partly from the left. Thus, owing to the absence of reconnoitering, the detachment was driven into a corner out of which it had to break through to the south, with engagements at Tsin-saigao, Don-Siza, Tasiatoon, and others.

The protection of the movement was carried out in a singular way, very irregularly and at too near a distance, so that it could not save the detachment from the unexpected meeting with the enemy on the 4th.

The three mentioned engagements in which the detachment was forced to take part and which only delayed and detained the movement onward, were perfectly useless in themselves, in regard to the task set to the detachment, and even brought some advantage to the enemy by detaining the movement of the detachment.

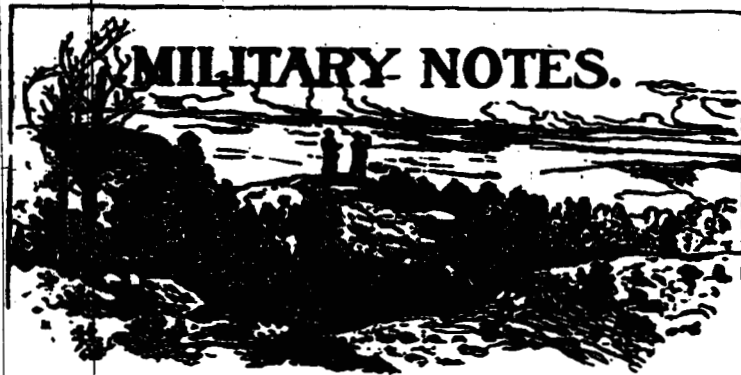
The battles themselves were conducted unskillfully, unconnectedly, with a complete disregard of the requirements of tactics, mostly in dismounted order and without the direct guidance of the senior commanders. The results of the three engagements on May 7th, were only the hampering of the detachment with the transport of the wounded and a great expense of artillery cartridges which stopped the movement along the line of communication of General Nogi. This line was occupied by strong parties of Japanese infantry and artillery, which by gaining a whole day's time they were able to move from Fakoomyn and Mukden. The Russian troops were obliged to desist from the movement towards Sinmintin for the purpose of destroying the enemy's stores.

The result of the attack executed by forty-five sotnias was the annihilation of two Japanese companies, the capture of 234 prisoners and two quick firing guns, the destruction of the telegraph and telephone lines in several places, the destruction of several transports and the capturing of 200 horses and mules. The losses were 14 officers and 187 men.

Thus, of the three attacks two were unsuccessful and one a perfect success. In examining the conditions under which they were carried out the failure of the first two must be explained, on the one hand, by the faulty organization of the business, the erroneous instructions given to the detachments by the chief authorities. On the other hand, by the manner of their execution, which showed a total lack of desire and ability to apply the methods recommended by theory, gained by past experience and guaranteed to bring success, that is to say, a complete disregard of the elementary principles of the business

and besides a complete absence of the cavalry spirit in the execution of the attacks. They were distinguished by a special slowness of action and produced an impression of heaviness and clumsiness. On the other hand, the thorough knowledge of the business evinced during the attack on Haitchen, the skillful application of the methods based on examples from the history of war, gave brilliant results, and proved that this attack bore the character of an enterprise carried out with the daring spirit worthy of the name of cavalry.

(To be Continued.)



A PISTOL MATCH.

WE have received a copy of an order issued from the Headquarters of the Eighth Cavalry which sets forth the conditions under which a competition in mounted pistol practice will be held in that regiment. The object of this competition is so commendable that it is hoped that similar matches may be held in other of our cavalry regiments. It matters not what the prize may be or by whom offered, such a competition in each of our cavalry regiments each year would be of immense benefit in stimulating an interest in this very important part of a cavalryman's instruction.

It is to be regretted that the mounted pistol competition was ever abolished.

The order is as follows:

GENERAL ORDERS, HEADQUARTERS 8TH CAVALRY,
No. 1. Augur Barracks, Jolo, P. I.
February 11, 1913.

For the encouragement of mounted pistol practice in the regiment the Commanding Officer desires to have a competition to be known as "The Colonel's Match" which shall be held

before June 1, 1913, at those posts where troops of the regiment are stationed. The prize shall be a Colt's Automatic Pistol, suitably inscribed, of the latest model and one hundred rounds of ammunition, or a cash prize.

The conditions of this match shall be the same as the Record Practice for the Mounted Course as prescribed on page 164, Small Arms Firing Manual, 1909, with modifications as follows: A strip of yellow target paper four inches wide shall be pasted over the vertical line shown in the pictures of targets "Q" and "R," on page 191, Small Arms Firing Manual, 1909, sixty-one inches long on R and forty-four inches long on Q; hits on this strip to count four, hits on other parts to count two; the targets to be six in number placed six yards from the track. The length of track occupied by the targets to be one hundred yards. The time for firing a score of six shots to be twelve seconds. The scores to be of six shots each, the total number of scores being eight as at present. The Colt's Revolver Cal. 45 shall be used.

This competition is to be open to all officers and enlisted men of the regiment present at one of the stations where one or more of the troops are stationed.

The senior officer present at a station is requested to arrange the details of the competition and to report the records made to Headquarters.

BY ORDER OF COLONEL SWIFT:

A. B. COXE,
Captain 8th Cavalry,
Acting Adjutant of the Regiment.

A REMEMBERABLE "MORSE" AND "INTERNATIONAL MORSE" CODE.

THE writer is indebted to the Executive Board of the "Boy Scouts of America," and to Mr. Ernest Thompson Seton, Chief Scout, for the following pictorial "Morse" alphabet taken, by permission, from "The Official Handbook of the Boy Scouts of America."

The pictorial "International Morse Code," (or Continental Code, as it is commonly known), shown herewith, has been devised by the writer, using certain symbols from the "Morse Code" in cases when the letters are the same in both codes and adding new symbols where the letters are different.

It is believed that the following rememberable "International Morse Code" should be of peculiar value to the line of the army, particularly in view of the fact that the International Code has now superceded the old "Myer Code" for all visual and sound signaling in the service, as well as being used for all radio telegraph signaling and on cables using the siphon recorder. (See Cir. No. 10, War Department, Office of the Chief Signal Officer, October 25, 1912). Par. 1584, Army Regulations, as amended by Changes No. 16, Army Regulations, War Department, 1912, says: "The Department Commander will supplement the operations of the Signal Corps of the Army by such instruction in practice in military signaling as may be necessary for the public service. He will cause each troop, battery and company commander to have, at all times, at least two available enlisted men able to exchange messages at short distances by flag, using the International Morse Code, which shall hereafter be known as the General Service Code."

In line with the above quoted paragraph of Army Regulations, nearly every Department Commander has in the past, also required that every company line officer shall be proficient in visual signaling.

Any one of us who has ever, in the past, wrestled with the problem of having "at all times, at least two enlisted men of the company available for signaling with the flag, at short distances" knows the primary difficulty of getting men to learn the alphabet and then to retain it in their memory from day to day. It is a well known fact that we remember things, through an association of ideas; the greater the contrast between these ideas, or the farther we get from the conventional, the greater will be the probability of our remembering the ideas with which other ideas are associated.

The symbols of these alphabets have been brought from rather "far afield" and with the view of making marked con-

REMEMBERABLE-ALPHABETS

MORSE	INTERNATIONAL MORSE OR CONTINENTAL
A •• •• A	A •• •• A
B ••••• Bunderbus	B ••••• Bunderbus
C ••••• Carriers Caring	C ••••• Country Couples
D ••••• Dog & Ducks	D ••••• Dog & Ducks
E ••••• Eyelans	E ••••• Eyelans
F ••••• France	F ••••• Funny Fruit
G ••••• Gay Goats	G ••••• Gay Goats
H ••••• Hop Hop Hop Hop	H ••••• Hop Hop Hop Hop
I ••••• I's	I ••••• I's
J ••••• Jim, Jam,	J ••••• Jug & Jacks
K ••••• Kids Kapering	K ••••• Kids Kapering
L ••••• Lance	L ••••• Lanterns & Lizard
M ••••• Ma Ma	M ••••• Ma Ma
N ••••• Nible Nig	N ••••• Nible Nig
O ••••• O's	O ••••• Oars
P ••••• Pussy's Prints	P ••••• Pyramids & Pins
Q ••••• Quails Toast	Q ••••• Queer Quirks
R ••••• Reverse of C	R ••••• Raging Ram
S ••••• Stones	S ••••• Stones
T ••••• T	T ••••• T
U ••••• U-u beest	U ••••• U-u beest
V ••••• V-v-v very	V ••••• V-v-v very
W ••••• Wolf & Wagons	W ••••• Wolf & Wagons
X ••••• Xtra Xpressions	X ••••• Xtra Xpressions
Y ••••• Yachts & Yawl	Y ••••• Yachts & Yawl
Z ••••• Z's	Z ••••• Z's

By this Method it is possible to learn either one of these Alphabets in less than one hour

trasts, and while they, may seem ridiculous, it is this very feature that causes them to be retained in the memory.

It is claimed that by this method of illustrating these alphabets, it is possible to learn either one *in less than an hour*, and in this age, anything that will save time, is of value.

If this method has proven of value to the "Boy Scouts of America," it certainly will be of value to we older "boys" in the service.

VERNON W. BOLLER,
First Lieutenant Second Infantry.

THE FEEDING, WATERING AND RESTING OF LIVE STOCK IN COURSE OF INTERSTATE TRANSPORTATION.

IN connection with the enforcement of the Twenty-eight Hour Law (34 Stat., 607), the Bureau of Animal Industry has made investigation of the feeding, watering and resting of cattle, sheep, swine, and other animals while in the course of interstate transportation. The results of this investigation and the conclusions based thereon are announced as an indication of the views of the Department of Agriculture as to the minimum requirements of the law.

FEEDING.

The amount of feed which should be given to different classes of animals varies with the length of time between feedings and the weights of the animals. For each twenty-four hours the ration for horses and cattle should be not less than one and one-fourth pounds of hay to each hundred weight of animal; for sheep, not less than one and one-half pounds of hay to each hundredweight of animal; and for hogs, not less than one pound of shelled corn, or its equivalent in ear corn or other grain, to each hundredweight of animal. For periods greater or less than twenty-four hours, the ration should be greater or less, respectively, in the same proportion.

UNLOADING.

The only practicable method for railroads to transport animals, other than hogs, without unloading during each period prescribed by the statute for rest, water, and feeding, are in "palace" or similar stock cars and with emigrant outfits. There are cases in which exceptional facilities complying with the law make unloading unnecessary; for instance, specially equipped cars conveying show animals and blooded stock. In such cases care should be taken to observe the law. In all cases, if animals are not unloaded, sufficient space to permit all the animals to lie down in the cars at the same time must be provided.

Hogs may be fed, watered, and rested, without unloading, provided (a) the cars are loaded so as to allow all the animals to have sufficient space to lie down at the same time, (b) the trains are stopped for sufficient time to allow the watering troughs to be prepared and to allow every hog time to drink his fill, and (c) care is exercised to distribute properly through each car deck sufficient shelled corn, or its equivalent in ear corn or other grain, for each hog.

UNLOADING PENS.

All pens into which animals are unloaded must contain adequate facilities for feeding and watering and suitable space on which the animals can lie down comfortably for resting. Covered pens should be provided for unloading animals in severe weather.

B. T. GALLOWAY,
Acting Secretary of Agriculture.

A CHIEF OF CAVALRY.

THE following decree from the Minister of War of France has attracted considerable attention in this country, where for the sake of uniform training and the higher development of cavalry the same office has been considered necessary:

On March 18th a decree was signed creating the office of Inspector General of Cavalry.

2. The officer selected must be a Major General, a member of the War Board (Conseil Supérieur de la Guerre) and must have come from the cavalry arm.

3. His duties are in general to assure to the cavalry unity of views and doctrine in all that concerns the application of the regulations special to the arm; to inspect with this object in view all the cavalry except that in Africa; to direct the technical instruction of general officers and colonels of cavalry; to direct the larger cavalry maneuvers.

His reports and recommendations are made directly to the Minister of War.

Under present conditions, with the regiments widely separated, commanded by officers of most diversified views, there can be no consistent and uniform training in our cavalry. Even with an Inspector-General of Cavalry, it is doubtful whether the best mounted results could be obtained, unless there were some given place wherein at least a brigade could demonstrate true cavalry handling.

There is no country which does not have a sufficient number of groupings of cavalry consisting of brigades or more, except our own. Before we can reckon upon the highest development of this branch, it would seem to be necessary to, not only have a head to it, but also to have places where the proper theoretical methods could be shown empirically to be right.

REGIMENTAL COST ACCOUNTING.

AN experimental system of cost accounting could be inaugurated in each regiment as follows:

ORDNANCE SUPPLIES.

1. A book, to be known as the Cost Account Book to be kept in each company.

2. The Post Ordnance Officer to figure the money value of each invoice of supplies. This invoice to be quoted as a voucher for the charge and the entry to be numbered the same as the voucher to the ordnance return.

3. When an article is dropped as charged on the pay roll, an entry is to be made on the credit side of the account. The abstract of charges on the pay rolls is to be quoted as a voucher for the credit taken. The article, when replaced, is charged as usual.

4. In case defective property or property broken in transit is received or property is lost in transit and charged against an organization, the charge is to stand until the articles are declared defective, broken or lost in transit by a Survey Officer or Inspector, when credit will be taken for the same.

QUARTERMASTER SUPPLIES.

1. A book, to be called the Quartermaster Cost Account Book is to be kept in each company.

2. The Post Quartermaster will furnish each organization with an issue slip for each drawing of supplies. These slips should be numbered consecutively for each organization and to show the cost of the articles issued. The receiving officer will enter only the total cost in the cost account book and will quote the number of the issue slip as a voucher for the charge.

3. Whenever an article is charged to an enlisted man who carelessly lost, damaged or destroyed it, credit will be taken for its money value. When the article is replaced, a charge will be made against the organization.

4. In case defective property, or property broken in transit is received or when property is lost in transit, it will be charged against the Company. This charge will stand until the property is declared by a Survey Officer or an Inspector to have been defective, or broken or lost in transit, when credit for the money value of the same will be taken.

REPORTS.

1. At the end of each quarter, the cost account thus kept in each organization will be totaled and reported to the Adjutant on forms prescribed from Regimental Headquarters.

2. These reports will be consolidated by the Adjutant and published in orders for the information of all concerned.

3. Defects found in this system could be corrected from time to time.

There would seem to be little doubt as to the potential value of such a scheme. It would cause company commanders to vie with each other in the care and saving of such supplies and beget a keen rivalry in economy that must increase efficiency and inure to the immense advantage of the government.

The system, of course, should be extended to include the property of the Medical Department used at a post. This would have to be done from above. But it could be extended to cover Engineer and Signal Corps property by the Post Commander.

Forms that might be used are enclosed. The word "company" is used to include troop or battery.

J. C. GRESHAM,
Colonel Tenth Cavalry.

FORMS.

QUARTERMASTER DEPARTMENT,

Fort.....

.....191.....

Voucher No..... to Cost Account.

Issued.:

.....	Cost: \$.....
.....	".....
&c. &c. &c. &c.
Total: \$.....	

REPORT OF COST.

"....." Troop, 20th Cavalry for the Quarter ended.....191.....

Ordnance.....	\$.....
Quartermaster.....	\$.....
Total:	\$.....

Kind of service.....

Number of days in the field.....

Number of days in the garrison.....

Remarks.....

I certify that the above is a correct report,

Captain 20th Cavalry, Commanding Troop.

CONSOLIDATED COST ACCOUNT.

For the..... Cavalry. For the quarter ended.....191.....

TROOP.	ORDNANCE.	ORDER.	QUARTERMASTER.	ORDER.
A				
B				
&c.				
&c.				
L				
M				
Band				

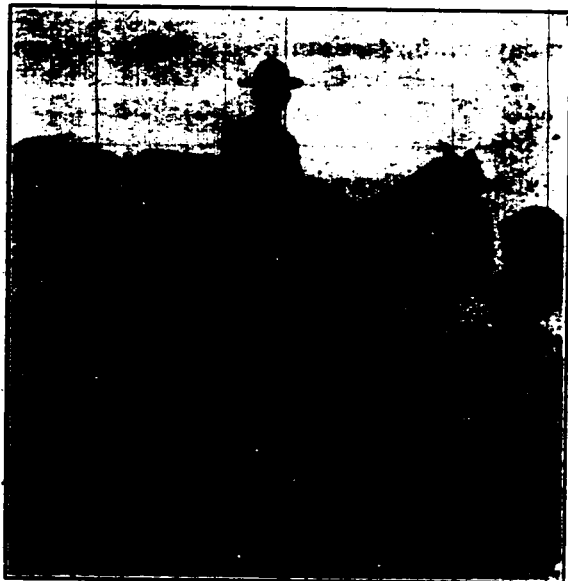
By order of.....

Adjutant.

TYPICAL CAVALRY MOUNTS.

HEREWITH are reproduced three photographs of horses which were furnished by Captain J. M. Burroughs, Second Cavalry. Regarding them he writes:

"I am sending herewith some photographs of my thoroughbred horses which I consider good types of mounts for officers.

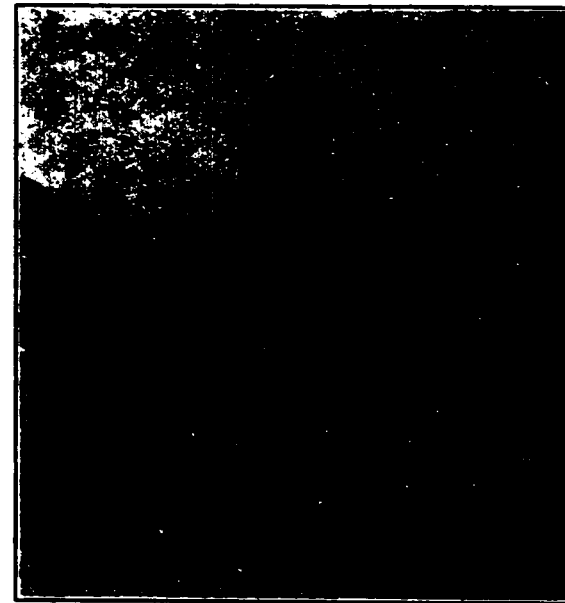


GEORGE GUYTON.

Chestnut gelding; six years old; sixteen and three-fourths hands; weight 1,100 lbs. A Kentucky thoroughbred that raced five furlongs at Jaurez, Mexico, meet in 1,041. By "Oomster Tamer," out of "Seething."

The racing meet just closed at Jaurez, Mexico, has done a great deal in stimulating the interest in good horses among officers who have been stationed in this vicinity and many have been purchased by them."

Notwithstanding the fact that the reproduction of photographs greatly increases the cost of publishing the JOURNAL, yet it is believed that the matter of interesting our officers in the subject of proper mounts for themselves and for their

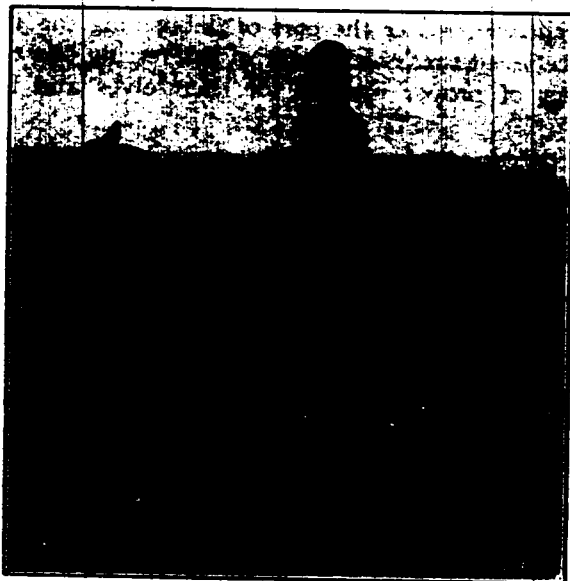


SECUGA.

Bay gelding; four years old; fifteen and three-fourths hands; weight 950 lbs. A California thoroughbred. By imported "Fort Lake," out of "Sidonia."

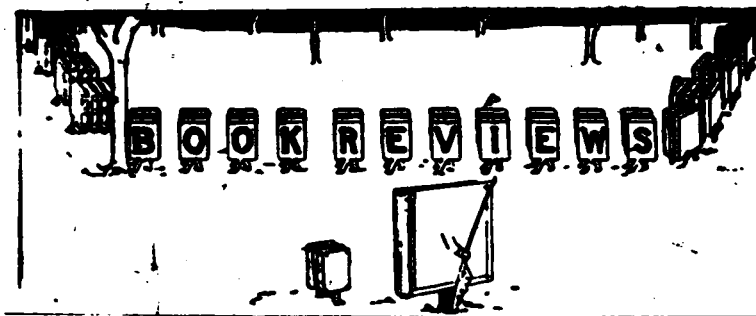
troopers is of such vast importance that the money expended for publishing cuts of what are considered typical mounts is well invested.

It is hoped that other officers will send in photographs of their horses and also that our cavalymen will report what they consider defects in the mounts so illustrated, this for the purpose of stimulating discussions on the subject.



MONTE.

Bay gelding; five years; fifteen and one-half hands; weight 980 lbs. Breeding unknown. Troop horse bought at Enckeater Mo. by Q. M. Department. In high state of training. Jumps five and one-half feet. A typical cavalry mount.



History of Cavalry *

This book of about 450 pages, in addition to a very complete index, is the second, but not revised edition of the original work published in 1877.

In the preface to this addition the author says:

"This book was first published in London in March, 1877. As mentioned in the Preface to that edition, it had been prepared to compete for the Emperor of Russia's prize offered for the best History of Cavalry. Permission was given me to publish the English edition without waiting for the decision.

"In September, 1877, I received notification from the Russian Authorities that it was decided that I should receive the first prize of 5,000 roubles, which was forwarded to me shortly after.

"Over thirty-six years have elapsed since the publication in London, in 1877, and for about thirty years the book has been out of print, and of late years very difficult to obtain. As it is I believe, the only general history of the Cavalry Service that has been published in any language, and as history does not

"A History of Cavalry from the Earliest Times, with Lessons for the Future." By Colonel George T. Denison, late Commanding the Governor-General's Body-guard, Canada. Author of "Modern Cavalry," etc. Macmillan & Co., Ltd. London and New York, 1913. Price, \$2.75, net.

change, I am having it reprinted exactly as it originally appeared without note or alteration. The concluding period on "The Organization, Armament and Employment of Cavalry in Modern Warfare," is the only portion in which comment need be made, and that can be dealt with in this Preface."

The author then goes on, in this preface, to comment upon the use of cavalry in the Boer War and the Russo-Japanese War, devoting about six pages to this and a discussion of the subject of *fire action* versus the *Arme Blanche*. Regarding this he writes:

"There has been in the last few years some interesting literature upon the question as to whether cavalry in the future should depend upon fire action, or upon the 'Arme Blanche.' Probably the most important work is by General von Bernhardt of the German army on *Cavalry in Future Wars*, published first in 1899, and a second edition in 1902, translated by Charles Sydney Goldman, and published in English in 1906, with an introduction by General Sir John French. This was followed by a very able criticism in *War and the Arme Blanche*, a book written by Ernest Childers, the editor of Volume V of the *Times' History of the War in South Africa*. This has a very interesting introduction by Lord Roberts and was published in 1910. Contemporaneously with the publication of *War and the Arme Blanche*, General Von Bernhardt published in Germany another book, translated by Major Bridges, under the title of *Cavalry in War and Peace*. This English edition also contained a Preface or Introduction by General Sir John French. This led Mr. Childers to write another critical work in reply, entitled *German Influence on British Cavalry*.

"These books with the writings of Colonel Henderson, Sir Ian Hamilton, and Count Wrangel enable one to gather the opinions of the best authorities of the day on the disputed question of the effect of the improved fire arms on cavalry in contrast with the principle of the *arme blanche*. When my book was published in 1877, almost all cavalry officers were opposed to the mounted rifle principle which I advocated so strongly. I wish now to show how the South African War and the Russo-Japanese War have modified the opinions of the foremost cavalry leaders and writers.

"The late Colonel Henderson, speaking of the German cavalry during the war of 1870-71, says: 'The troopers knew nothing whatever of fighting on foot. Their movements were impeded by their equipment and a few *Franc tireurs* armed with the chassepot were enough to paralyze a whole brigade.' And again: 'Should not the cavalry, confronted by new and revolutionary conditions, have sought new means of giving full effect to the mobility which makes it formidable?'"

"Lord Roberts, in his introduction to Mr. Childers' book, is also very clear and definite in his views about the rifle as the arm for mounted men. Speaking of the Boer War, he says: 'As, however, it was the first war in which magazine rifles were made use of and as the weapon used in future wars is certain to be more effective on account of the lower trajectory and automatic mechanism to be introduced, shall we not be very unwise if we do not profit by the lessons we were taught at such heavy cost, during that war?'"

The book has thirty-four chapters, divided into six periods, as follows: Period I.—To the Fall of the Western Roman Empire. Period II.—To the Invention of Fire Arms. Period III.—To the time of Frederick the Great. Period IV.—To the introduction of rifled Fire Arms, 1740 to 1854. Period V.—To the Present Time. Period VI.—Organization, Armament, and Employment of Cavalry in Modern Warfare.

The book is illustrated with eleven maps and plans; is well printed on good paper and bound in the usual style of all British military books.

With the Bulgarian Staff.* This work fails to fully satisfy the anticipations excited by its title. It contains no maps, no descriptions of military dispositions or operations and gives no insight into the routine of a staff controlling an army.

The author states that he joined the staff of General Savoff only eighteen days after the outbreak of the war; but it appears

*"With the Bulgarian Staff," by Noel Buxton, M. P., published by the Macmillan Company, New York. Price \$1.25 net.

that he saw nothing of the battles of Kirklisse or Loula Burgas and but little of the siege of Adrianople. In regard to Loula Burgas he says: "A few days after the great battle, and before the trenches, the debris, or even the dead had disappeared, we obtained facilities for riding over the field," etc.

The interest of the reader is sustained chiefly by recitals of "horrors," badly policed battlefields, the suffering of wounded men due to defective sanitary organization, painful operations performed by surgeons without using anaesthetics, women and children who had been disfigured or maimed by Turks, etc. There is a great deal of matter in regard to the work of the Red Cross hospitals, which gives the impression that the author saw more of them than of the army. The suffering, loss of life and waste caused by the war convince the author that war is a bad business and ought to be suppressed. However, he concedes that others do not agree with him on this point, for he says in conclusion, "The Balkan War has made converts to war in general. Its merit is seen in liberated nations. The allies, it is held, were justified in fighting. Of course they were but should the sacrifice have been forced upon them?" etc.

The book contains 163 pages of printed matter and twenty-two interesting photographs. The printing paper and binding are of the best quality.

The general reader can glean from it many interesting details in regard to Bulgarian and Turkish life and character.

F. S.

Ophthalmology This work is arranged in twenty-one chapters with forty-four illustrations.

For Veterinarians.* The chapter on Recurrent Ophthalmia—"Periodic Ophthalmia" or Moonblindness—is dismissed with two pages and a half in which the writer freely admits he possesses no knowledge on this, to the Veterinarian, important subject.

*"Ophthalmology for Veterinarians." By Walter N. Sharp, M. D., Professor of Ophthalmology in the Indiana Veterinary College. W. B. Saunders Company, Philadelphia and London. 1913. Price \$2.00 net.

The treatment of the whole subject indicates that the author is very little of a Veterinarian and nothing of a horseman.

The book is suited to the use of Veterinary College students for whom it is evidently intended. To the seasoned practitioner it will be a disappointment.

GERALD E. GRIFFIN,
Veterinarian Third Field Artillery.

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+

Editor's Table.

FORGOTTEN CAVALRYMEN.

It appears from a letter received from Colonel Swift, the author of the article, under the above title, that appeared in the January, 1913, number of the CAVALRY JOURNAL that something was omitted from the next to the last paragraph of that article. Regarding it, he writes:

"Something happened to the Harrison article. In the next to the last paragraph a line appears to have been left out. It was Harrison who was escort and that was why it was a reunion of the officers of the old regiment. If you can find the manuscript, please look it up and make the correction. In case it cannot be found, kindly publish a note to that effect. This for the benefit of history."

Unfortunately the manuscript of the article in question has been destroyed and therefore the paragraph as printed cannot be compared with the original copy.

CAVALRY REORGANIZATION, ETC.

Other replies have been received from Branch Cavalry Associations to the several propositions sent out for consideration by the Executive Council of the U. S. Cavalry Association, as set forth on page 1072 of the CAVALRY JOURNAL for May, 1913. They are as follows:

"1st.—That this Branch Association approves the General Staff plan for the Organization of the Land Forces of the United

States,' as published by the Secretary of War in pamphlet dated War Department, Washington, August 10, 1912, and recommends that the CAVALRY JOURNAL, through its columns, advocate its adoption.

"2d.—That this Branch Association recommends that the CAVALRY JOURNAL, through its columns, oppose any present change in the organization of our cavalry.

"3d.—For the following reasons, this Branch Association opposes the proposed bill set forth in the resolution adopted by the West Point Branch Association and introduced into Congress during the last session by the Honorable Dan Anthony, M. C., providing that officers shall be given relative rank according to the length of their continuous commissioned service in the regular army:

"This bill will disarrange the officers of each arm among themselves on the *relative* list. While the position of officers of any particular arm will not be changed on the *lineal* list of that arm, they will take rank on the relative list according to the length of their continuous commissioned service in the regular army. No provision is made for adjusting the relative rank of each arm in each grade of those officers who have lost rank by sentence of court martial, or lost rank by failure to pass examination for promotion, or lost rank by reason of voluntary transfer from one arm of the service to another or to prevent the loss of *relative* rank of those officers who gained rank through regimental promotion, or those officers who were given credit for commissioned service in voluntary forces in determining their lineal and relative rank.

"It is true that under the provisions of this bill, officers of each arm of the service will remain on the *lineal* list as now arranged but the lineal list does nothing more than fix the order of promotion, while the *relative* list, or in other words relative rank, is actual rank; that is, it determines the eligibility for command; precedence, and all other matters which go with actual rank.

"It is thought inadvisable at this time to attempt to do more than arrange the relative list in each grade in accordance with length of commissioned service, the length of commissioned service, or in other words the position each officer will occupy

on the relative list, to be determined as recommended in Chapter VII, General Staff plan for 'The Organization of the Land Forces of the United States.'

"4th.—In order that there may be no miscarriage of the General Staff plan for 'The Organization of the Land Forces of the United States,' this Branch Association thinks that all bills purporting to put into force the whole or any part thereof should emanate from the General Staff, and be presented at the instigation of the War Department, and that the Cavalry Association should discourage the introduction of bills relating thereto emanating from other sources."

1. It is the sense of this Branch of the Cavalry Association that the plan of the General Staff for the reorganization of the several arms of the mobile army be approved by the Cavalry Association, excepting "elimination" and "promotion by selecting," but that it is not deemed advisable to make any pledge along the lines suggested by the *Infantry Journal*.

2. That the Cavalry Association advocates the adoption of the bill proposed by the West Point Branch Association regarding the relative rank of officers.

3. It is the opinion of this Branch of the Cavalry Association that the present time is not opportune to even discuss a change in cavalry organization.

Since the issue of the May, 1913, number of the CAVALRY JOURNAL and the publication therein of the reports from the several Branch Associations on this subject, we have received many letters from cavalry officers, who are not on duty where these Branch Associations are located, and who most heartily concur with these reports as being against any change in our present organization for the cavalry. These letters are from officers of the rank of captain or above. The following are extracts from some of them:

"I judge from the text of the reports published as coming from the Branch Associations that the Executive Council of the Cavalry Association have a fairly unanimous bunch of cavalymen behind them, on the main points at issue.

"Hope that these reports will strengthen those of the Cavalry Board who are opposed to a change in our organization in their important work."

"The cavalry seems to be worked up over the proposed changes in organization, judging from the reports from them from all parts of the world.

"As far as I am able to learn, there are but a few who are desirous of a change in our organization and that all the others, some 800 in number, seem to be stubborn and refuse to fall in with the ideas of those proposing or desiring a change.

"Change in organization requires legislation but the habitual double rank that is being agitated and is now being tried out at Huachuca can be adopted by order. I understand that the Board, as now constituted, favors the double rank by a large majority.

"I believe that our present squadron is an ideal unit for mounted action and that our regiment is a real unit for battle with the rifle, its 900 dismounted men furnishing the equivalent of a German battalion of infantry.

"The Germans rate a dismounted cavalry division as being equal to one battalion of infantry. With them, it takes a cavalry corps to produce a firing line equal to one regiment of foot soldiers.

"In our service, two regiments of cavalry dismounts 1,800 men which is the equivalent of one regiment of infantry at war strength.

"Our cavalry regiments are worth something on the firing line which is more than can be said of the European cavalry regiments.

"Our drill and training can be and will be improved but our organization is all right. The troops should be a little larger."

"I heartily approve of your remarks about getting back to the cavalry carbine."

"I am glad to read in the CAVALRY JOURNAL which has just been received that the cavalry have taken the stand it has in reference to organization."

RELATIVE RANK.

It would appear from the report of one of our Branch Associations, given in this number of the CAVALRY JOURNAL under the head of "Cavalry Reorganization, etc." and also from some of the reports published in the May number, that a preference exists for the General Staff plan for the readjustment of relative rank over that provided in the bill advocated by West Point Branch Association.

We have received from one of our members a decided protest against the terms of this bill as introduced by Mr. Anthony as operating to the disadvantage of those who came into the regular service from the volunteers under Act of February 2, 1901. He writes in part as follows:

"If the officers of the Fort Leavenworth Branch did not have the same views as to the effect of the Anthony Bill, when it was approved by that Branch, as I have, I will appreciate it very much if you will consult the Law Department of the Schools, and any other officers that you may desire including, if possible, one or two officers who came into the regular service with prior volunteer service, and see what their views are on the subject, when they consider carefully the wording of the bill.

"The bill advocated by the West Point Branch and introduced during the last session of Congress by Mr. Anthony is as follows:

"Officers of the army below the grade of brigadier general shall take rank in their grade upon the relative list, according to the length of their continuous commissioned service in the regular army; *Provided*, that nothing in this act shall be construed to change the present rank of any officer on the lineal list of his own arm of the service, as at present determined according to the act of February 2, 1901; and, *Further Provided*, that nothing in this act shall be construed to change the present rank, on the lineal list of his own arm of the service of any officer who has lost rank by reason of sentence of a general court martial or through his failure to pass examination for promotion."

"This will bring about results entirely different from those contemplated in the General Staff plan, Chapter VII, 'The Organization of the Land Forces of the United States,' in that all officers will take position on the *relative* list 'according to the length of their continuous commissioned service in the *regular army*' without in any way adjusting the rank of the officers:

- (a) Who have lost rank by a sentence of a general court martial;
- (b) Who have lost rank by failure to pass examination for promotion;
- (c) Who have lost rank by reason of voluntary transfer from one arm of the service to another;
- (d) Who have gained rank by regimental promotion, and
- (e) Who, by the Act of Congress of February 2, 1901, were given credit for commissioned service in volunteer forces in determining their lineal and relative rank in the regular army.

"I cannot help but believe that the full effect of this bill is not fully understood by its author. Owing to the temper of the present Congress, it is believed to be a most inopportune time to attempt legislation, which will cause such an upheaval in rank with the attending bitter opposition which it is sure to meet by the great number of officers who came into the Army under the act of February 2, 1901.

"I think there is no doubt as to the interpretation of this bill. The first paragraph provides that 'Officers of the Army below the grade of Brigadier General shall take rank in their

grade upon the *relative* list, according to the length of their continuous commissioned service in the Regular Army.' The provisos in the next two paragraphs in no way affect the arrangement of the *relative* list as directed in the first paragraph. Therefore, all officers of the army below rank of Brigadier General in each grade must take rank on the relative list according to the length of their continuous commissioned service in the regular army. The fact that an officer may have lost rank by sentence of court martial, or failure to pass an examination for promotion, or by voluntary transfer to another arm of the service would not enter in the preparation of this relative list. Furthermore, all the officers who came into the regular army under the Act of Congress of February 2, 1901, must be placed on the relative list 'according to the length of their continuous commissioned service in the regular army,' thereby losing the benefits of their commissioned service in the volunteer forces given them by the Act of February 2, 1901. This, in the case of volunteer officers, would place them on the *relative* list in their respective grades below all officers who came into the regular army on or before February 2, 1901.

"Under the provisions of the second and third paragraphs of the proposed bill, all officers would retain the positions they now hold on the lineal list of their respective arms and as a result thereof would get their promotion in the order now provided. Under the most liberal interpretation, these provisos could possibly have no other effect. In other words, the first paragraph of the proposed bill fixes the *relative* rank of all officers, while the provisos in the second and third paragraphs do nothing more than fix the lineal rank of officers in their own arm of the service. *Relative* rank carries with it the right to command precedence in all matters, and all perquisites that go with actual rank, while the *lineal* rank determines nothing more than the right to promotion.

"Under existing laws, the relative rank of an officer is determined principally by his position on the lineal list of his own arm, (see pages 963-970, Digest of Opinions of the Judge Advocate General of the Army, 1912), but under the provisions of this proposed bill an officer's lineal rank would have nothing to do with determining his relative rank. For example, Captain

Bjornstad now stands 407 on the relative list and 203 on the lineal list of Infantry. He accepted his commission in the regular service September 18, 1901, to rank from February 2, 1901. Granting that it could be so construed, which is exceedingly doubtful, that he should take rank on the relative list from February 2, instead of September 18, 1901, he would be placed on the relative list probably behind the class that graduated from the Military Academy February 18, 1901 to rank from February 2, 1901, and certainly behind all officers who came into the regular service prior to February 2, 1901. Thus, while he would get his majority ahead of Connelly, 26th Infantry, who is 204 on the lineal list of captains of infantry, he would in so far as command, precedence and perquisites go, be behind all officers who are now captains or hereafter become captains and who came into the regular service on or before February 2, 1901, other than officers who came in as he did with prior service as commissioned officers in volunteer forces. In other words, this bill would not only rearrange the relative rank among the different arms, but it would change the relative rank among themselves of officers of each arm of the service. Is this the intention of the author of the bill and the members of the Fort Leavenworth Branch of the Cavalry Association?

"Chapter VII, 'The Organization of the Land Forces of the United States,' made provisions for adjusting relative rank of all officers who now occupy what may be termed anomalous positions on the lineal list of their respective arms. The letter which is made a part of the proposed bill sent out by the West Point Branch Association implies that the bill will have no other than this latter effect. It may be that this is their understanding of the effect of the proposed bill should it become a law and that the Fort Leavenworth Branch was under the same assumption when it indorsed the bill. If this be the case, it is probable that the West Point and the Fort Leavenworth Branches would agree to substitute the General Staff bill. It is believed that the General Staff plan would not meet with much opposition."

PROVISIONAL CAVALRY DRILL REGULATIONS.

The Editor has received from the Chief of Staff of the Army copies of certain reports made on the Provisional Drill Regulations as exemplified by Captain Frank Parker, Eleventh Cavalry, with a provisional squadron at Fort Huachuca, Arizona, and which he states: "I think will be of interest to the cavalry service at large."

These reports are given below, omitting headings, signatures, etc., as well as such parts as do not strictly relate to the subject matter of the drill:

From General H. L. Scott, U. S. Army:

"The experimental squadron was composed of men of the Fifth Cavalry, with Lieutenants D. R. Rodney, A. W. Hanson, F. C. V. Crowley, and W. H. W. Youngs, as platoon commanders, all commanded by Captain Frank Parker, Eleventh Cavalry.

"The squads, platoons and squadrons were exercised in all the movements laid down in the experimental regulations, at all gaits, with excellent results. It was evident at once that a great deal of work had been accomplished by Captain Parker and his assistants in the very short time since his arrival. The riding with double rein and posting at the trot for some time past, compulsory in the Third Cavalry, gave a control of the horse, steadiness, and uniform solid appearance to the command not obtainable in any other way. The system of regulations was simple and easily learned. The part relating to the double rank gave a formation of great compactness and of the utmost smoothness and flexibility in every direction, the squadron in double rank taking up but one-half the space required for the same number of men in single rank.

"The movement to the rear, when advancing in line, each individual turning on his own ground, was rapidly, easily and smoothly accomplished, much more so than if wheeled about by fours.

"The extended order and dismounting to fight on foot was smooth and rapid.

"The system of signals by which the leading was done appeared complicated to a stranger at a distance, but when studied on paper were found to be simple, and must be so, for the leading was done easily and swiftly, and the signals were promptly obeyed without a mistake; in fact, the whole system lent itself to a direct, silent, steady, and continuous progression, and that rapidity, without lost motion, so essential to the cavalry arm."

From Lieutenant Colonel D. L. Tate, Fifth Cavalry:

"I have been a frequent spectator at the daily drills under you at this post during your experimental work for the Cavalry Board, and I wish to say that the prejudice which I had against the proposed changes in our system has been dissipated by observations of your work.

"I have read the statements made by yourself, the officers, and the non-commissioned officers of the Fifth Cavalry, who were under your instructions and these statements embody as clearly as I could have done, my views of the advantages of the proposed system.

"I have not seen that part of the system which corresponds to our 'School of the Trooper,' nor have I seen how the system would apply to larger commands than the one under a captain.

"It is my opinion that the system would not work with the small number of privates available in our present troop."

From the Officers of the Squadron:

"The organization of the Provisional Squadron is excellent in that:—

(a) From captain to corporal each officer and non-commissioned officer exercises a proper command.

(b) The Articulation by Platoon, and the Double Rank give a compact mobile squadron of 133 sabers, easily controlled as a unit by the Captain under all circumstances, and readily separated, at a moments' warning, into four highly mobile platoons of considerable strength.

(c) The duty of keeping the platoon up with the leader, now falls upon the non-commissioned officers, so that leaders and captains are free to think of where they are going and what they will do when they get there.

"The provisional Drill Regulations are exceedingly simple, few in number, and satisfy all demands.


"There is nothing that can be done with the single rank organization that can not be done with the double rank organization.

"The system of leading by signal is highly satisfactory.

"After every possible test, under varying conditions, has been given the provisional squadron under the Provisional Drill Regulations, both organization and drill regulations are satisfactory in all respects, and received our unqualified endorsement."

From the Non-Commissioned Officers of the Squadron:

- "1. Signals.—Simple and easy to learn.
- "2. Double Rank.—More compact and easier to handle than single rank, owing to the small front.
- "3. Drill.—Keeps all men on the alert; watching the leader for signals holding the attention.
- "4. Movements.—Simple and easy to learn.
- "5. Responsibility.—Each officer and non-commissioned officer has a unit for which he is responsible at all times.
- "6. Extended Order.—When the position to be occupied has been made known, the squadron or units thereof march to the new position by the most direct route and at the gait indicated by the signal of the leader.
- "7. Jumping.—Hurdles, ditches, passing obstacles, cross country riding as taught, has taught the men to understand and ride their horses in a manner new even to the oldest soldier, and has given them confidence in riding at the fastest gaits over the roughest of unknown country.
- "8. In addition to the fact that all confusion has been eliminated, the absence of the multitudinous commands by



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trumpet and word of mouth, gives a resting element to the drill that is appreciated by both the participant and the observer.

"9. All are unanimous in thinking that the provisional drill as proposed for the reorganization of cavalry is far superior to the present drill regulations.

There was also a report from Sergeant Major Middagh, Fifth Cavalry, confirming the opinions set forth by the non-commissioned officers of the provisional troop, which is well written but too long for publication.

It is unfortunate that nothing can be gleaned from these several reports as to nature of the drill itself and therefore we are unable to discuss the same. It is hoped that a report may be received from Captain Parker giving the Provisional Drill in full for publication in the forthcoming number of the CAVALRY JOURNAL.

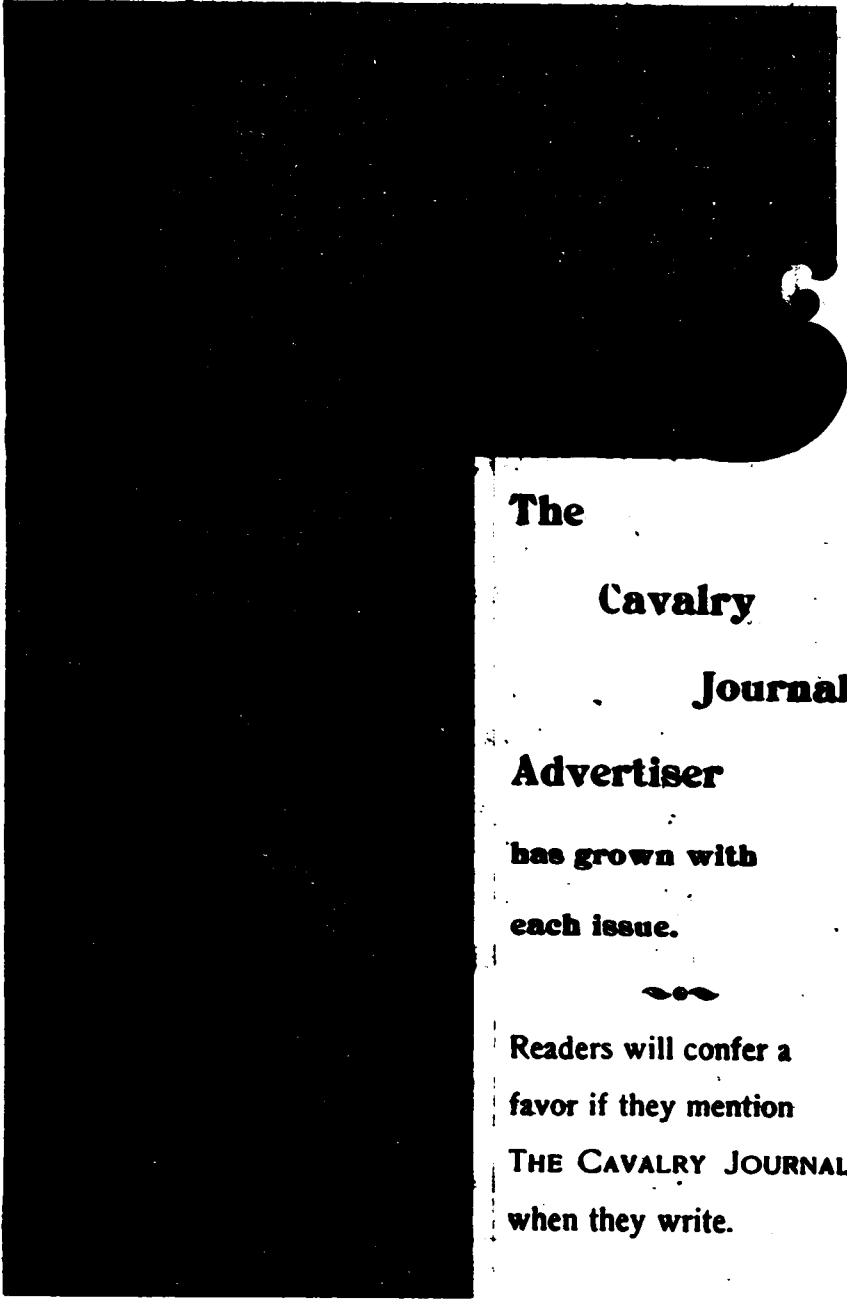
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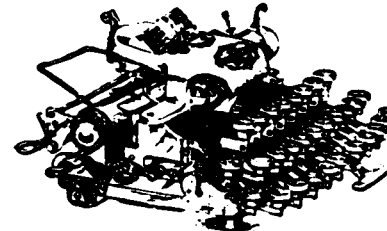
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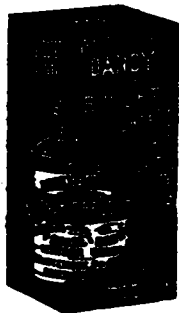
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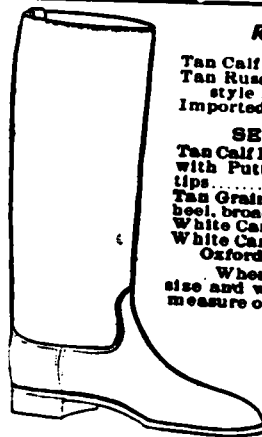
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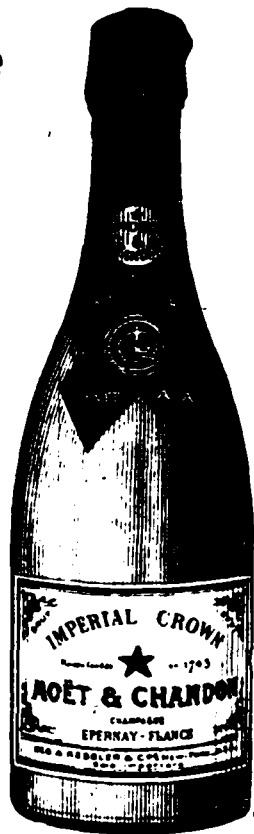
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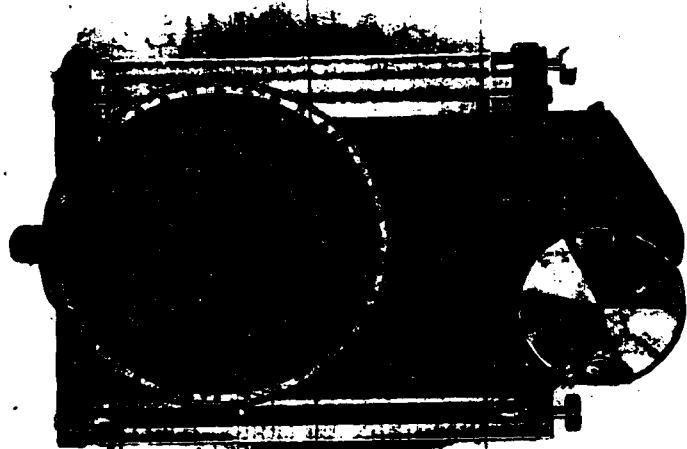
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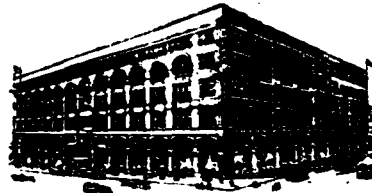
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Entered as second-class matter, January 21, 1911, at the Post Office at Fort Leavenworth, Kansas, under the Act of March 3, 1879.

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ETCHEDON PRINTING COMPANY
LEAVENWORTH, KANSAS.

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JOURNAL

OF THE

United States Cavalry Association

Vol. XXIV.

SEPTEMBER, 1913.

No. 98

NOTES ON THE WORKS OF GENERAL VON BERNHARDI.

BY LIEUTENANT COLONEL J. A. GASTON, TENTH U. S. CAVALRY.

("Cavalry in War and Peace" and "Cavalry in Future Wars.")

THESE works are both excellent. It is impossible to do justice to them in a few notes. They are all interesting and instructive and they should both be read by all military students, and especially by all cavalry officers.

In the following notes, I have simply made extracts from some of the most striking of General Bernhardt's remarks, and where deemed necessary have added my own comments.

They will only be useful to those who have not read the originals.

CAVALRY IN WAR AND PEACE.

P. 2.—"Newly raised levies * * * cannot possess the same steadiness as standing permanent troops." * * * "By reason of its relative numerical weakness, cavalry can no longer retain its former importance in the battle, and the manner of its intervention in the fight must often be of a very different nature from what it has been in the past."

"On the other hand, the duty of cavalry in the sphere of reconnaissance has increased in importance."

P. 3.—"Air cruisers will not be designed for all the possibilities of War."

P. 4.—Cavalry "Activity may indeed be supplemented by airships, but (it) will never be replaced by them."

Speaking of the duties of *Divisional Cavalry*, he refers (p. 17) to the possible use of Infantry in carts and cyclists to assist it.

P. 32.—He deems the use of single cyclists of motor cars as inadvisable, to furnish communication between reconnoitering squadrons and the main body of independent cavalry.

P. 37.—Animadverts against reconnoitering squadrons marching too rapidly or making too long marches—as patrols must march faster and farther thereby ruining horses unnecessarily.

P. 42.—Gives the instructions necessary for patrols.

P. 68.—The independent cavalry during a battle "should rather strive with all energy to echelon itself in advance of the wing of its own army and to maintain itself on the flank."

P. 72.—In addition to officers carrying good field glasses he says "The scissors telescope, which no higher cavalry leader should be without, should also be used for reconnaissance on the battlefield."

* * * * *

"Patrol service during the battle itself is a matter for the infantry, and can be carried out by no other troops."

Pp. 80-81.—With large forces owing to the long range of modern guns "In a battle of encounter, deployment should take place, at the latest when still five miles from the enemy."

P. 92.—He says: "During the night, when it is not possible to occupy advanced areas, the divisional cavalry should try to assist the screen by being so disposed that detached posts will lie on the main road in advance of the infantry outposts."

Comment.—I do not agree with this statement—unless in an emergency divisional cavalry should always bivouac in rear of the infantry outposts so as to save the horses. This is said to have been one of the mistakes made in the early days of our Civil War.

Remarks on Raids:

Pp. 92-101.—Important, but American cavalry officers will obtain all necessary information at first hand by studying the campaigns of the Civil War, 1861-65.

P. 103.—Speaking of large masses in action he says: "On our maneuver grounds, the charge on horseback is always the order of the day, even against artillery or machine guns. The umpires continually allow such attacks to succeed." "In real war," P. 104, it is different, * * * * * again and again (in 1870-71) was it necessary to detail infantry to the cavalry divisions."

Comment.—The composition and action of the Union cavalry in 1863 at Brandy Station, Aldie, etc., show the proper organization and method of attack for a large cavalry command.

P. 121.—Speaking of the charge, he says: "Frederick the Great, in order to obtain the greatest possible cohesion, finally abolished all intervals between the tactical units and required the knee to knee riding." He also says: "Frederick would never allow the enemy's cavalry to be attacked without a second line following the first."

Comment.—For a charge against formed cavalry this is equally essential in our service.

P. 127.—When charging cavalry the Germans use the double rank formation, but to charge infantry General Von Bernhardi says: "It will usually be of no advantage to form the first line in two ranks." "It will be better, generally, that the leading line or lines should consist of one rank at quite loose intervals."

Comment.—The above is important on account of recent discussions in our service.

Pp. 134-141.—He shows the use of mobile and immobile horses. (The latter have insufficient men to hold them).

Pp. 173-174-175.—He disapproves of the bayonet for cavalry, and seems positive that cavalry should carry the rifle, lance and saber.

Comment.—The question of armament is of course important, personally I believe that our armament of rifle, pistol and saber, is the best. A bayonet which could be used as an intrenching tool would also be an advantage. Except in the

charge, the lance is useless. In future wars, it is more than probable that the charging line will be under fire and this fire would destroy the formation adopted. In such a case, it would seem that the lancer would soon fall a prey to our cavalry.

Pp. 192-193.—He speaks of the greater independence of cavalry and therefore of the necessity of a Leader.

Comment.—Applied to our service it shows how necessary a Chief of Cavalry with proper rank is to the U. S. Cavalry.

P. 207.—Attacking infantry or artillery several lines are used. "A mean distance of about 250 paces (between the lines) would generally meet the case."

P. 213.—In case the enemy is beaten, emphasis is laid upon the necessity of a parrallel pursuit (e. g. Sheridan, 1865).

P. 220.—* * * * * Emphasis is placed upon the necessity of depth formation for cavalry attacks. Echelon formations are not sufficient. Frederick always used two lines.

P. 227.—If echelons are used, troops "Must be echeloned forwards."

Training of Cavalry in Peace.

P. 249.—Necessity of good horsemen.

P. 258.—Remounts must be well trained. "Imperfectly balanced horses should on no account take their place in ranks." German horses are received in July. General Von Bernhardt says: "The (P. 260) actual breaking in of the horses should be completed by the end of February." He speaks of the necessity (P. 262) of cross country rides and says: "In these exercises more importance should be attached to scrambling than to jumping. Jumping, however, must also be diligently practiced, especially over wet and dry ditches."

P. 265.—"Recruits should be given the curb bit after Christmas."

P. 285.—"The cavalry officer of today requires a better general military education than any other officer."

P. 307.—At maneuvers, large numbers of umpires are recommended on account of the training of the officers. Also that flags are useful to represent companies, squadrons, etc.

P. 318.—"A mistaken idea prevails that horses in hard condition must be thin." Fat should of course be replaced by muscle.

P. 319.—"At drill, ceremonial only excepted, and for all practice in the use of weapons, all four reins should be held in one hand. It would also be well to lay down, once for all, that in all drills the men should sit down in the saddle at a trot, and that rising in the saddle at a trot should only be permitted on the march or during long evolutions in column, and then only when specially ordered. It is impossible to carry out evolutions in close formation when men rise in the saddle, as this leads to a looseness of formation dangerous in the presence of the enemy."

Comment.—Coming from a German the above merits consideration.

P. 322.—"Strict attention should be paid to the correct position of the horses which should have their noses down and backs arched." German Cavalry Inspectors notice these things.

P. 322.—"The reins should be quite loose, and turns or wheels affected by the balance of the rider independently of them."

Comment.—The above is correct in principle. Neither the men nor the horses in our cavalry have been sufficiently trained to do this.

P. 328.—"When attacking Infantry, the enemy's firing line if represented by real troops should be passed at a foot pace and the charge resumed against the hostile forces farther to the rear."

P. 334.—"Only on rare occasion should exercises be conducted by words of command and trumpet calls, but orders should be transmitted as in time of war."

Organization.

P. 351.—Cavalry is "Practically always obliged to act independently, field artillery, never."

P. 353.—Shows necessity of strong cavalry brigades. Recommends three regiments to a brigade. "A tripartite formation possesses undoubted advantages, etc."

P. 355.—For independent action, cavalry must be given the necessary transport organization.

P. 356.—"I have repeatedly stated that I consider our cavalry to be of itself too weak."

P. 357.—Recommends cyclists. A cyclist battalion to every army corps.

P. 358.—Recommends an adequate reserve of horses, corresponding to our own remount depots during the Civil War, except that here the horses must be trained.

• P. 365.—The Inspector General of Cavalry (in our service Chief of Cavalry) must have an adequate staff. Recommends one chief of Staff, one other General Officer, two Aides-de-Camp, a Registrar, and the necessary clerks.

CAVALRY IN FUTURE WARS.

P. 3.—"Introduction of compulsory service, and the consequent reduction in length of time spent by the soldier with the colors, have changed the character of almost all European Armies."

P. 5.—"The cavalry alone remains a specialized service," * * * * "It can scarcely count on having the wastage of war made good by equally trained men and horses."

P. 6.—"In spite of this * * * * the proportion of cavalry * * * * has steadily receded."

P. 16.—"On the other hand the strategical importance of the arm, as well as the scope of its duties, have increased very decidedly."

Pp. 19-20.—Does not recommend active use of cavalry during mobilization and concentration of the enemy.

P. 25.—"When the strategical concentration commences, after railroad movement is completed, reconnaissance becomes possible and important."

P. 31.—"Fundamentally the duty of the cavalry must be to seek to bring about collision with that of the enemy, so that from the very beginning it secures the ground between the two armies and that the actual and moral superiority between the two armies is obtained * * * * for our own cavalry."

P. 32.—"We must fight to reconnoiter and fight to screen."

P. 37.—"In the strategical handling of the cavalry, by far the greatest possibilities lie."

"For reconnaissance and screening, for operations against the enemy's communications, for the pursuit of a beaten enemy, and all similiar operations, * * * * the cavalry is and remains the principal arm."

P. 42.—"We must therefore lay down as a principle that as much cavalry as possible is to be organized for strategical independence and as little as s expedient retained for infantry divisions."

P. 47.—With reference to organization, it "Must be made so elastic that we can alter the strength of our units to meet the varying circumstances which may confront us."

P. 60.—In addition to the use of the Arme Blanche, "The cavalry must in fact be able to attack on foot exactly like infantry * * * *; but if it is to be handled in this spirit, then it will require to be very strongly provided with artillery."

P. 65.—"The place of the responsible leader until the moment of the charge is therefore well to the front, in a position from which he can best overlook the situation as a whole. Even the leaders of independent units, if possible down to the regimental commanders should remain close to him * * * * The greatest fault of all is to stick too close to your troops."

"Never should the Chief Commander take part personally until he puts in his last reserve." This does not apply of course when the necessity arises of setting a personal example.

P. 66.—"If the commander falls, then his staff officer or adjutant assumes the responsibility until such time as the next senior can be notified."

P. 68.—"The * * * * word of command should be limited to those units which it can actually control—namely the squadron."

Comment.—In our service, should the troops be increased to say 125 or 150 men, this limit would be the troop.

P. 69.—"The use of bugle calls must be restricted to the utmost, and only be permitted in circumstances where no possibility of misunderstanding can arise."

Comment.—This is excellent advice to our service where the trumpet is sometimes blown when it causes confusion. Squad-

ron and Regimental Commanders must have a suitable staff for the transmission of orders.

P. 72.—“Reinforcements from the rear should always join their own regiments or brigades.”

P. 84.—At the proper time, “The last man and the last breath of his horse must be risked, and he who is not willing to stake his soul is no true cavalry soldier.”

P. 85.—After recommending that on the battlefield, the cavalry should seek a position on the flank of the army well forward, he discusses how it should be formed. He recommends that each division retain full space for deployment and room for maneuver.

P. 88.—“When after long marches, hours of fighting, and heavy losses, the exhausted victor bivouacs on the hard won field and night falls, then the real work of the cavalry begins, then without drawing rein, the horseman must press forward to intercept the enemy's retreat, attack him where he least expects it, and harry him to utter exhaustion.”

P. 88.—In order to do this attention is invited to the necessity of giving opportunities to both men and horses to feed, water and rest when opportunity allows.

P. 95.—When dismounted action is decided upon an adequate mounted reserve must be left with the led horses. “Immobile detachments are practically at the mercy of every mounted patrol.”

P. 96.—“In general, the reserve can be reduced in proportion to the weakness of the enemy's cavalry, and to the depth of the zone of security his patrols have been able to secure for him.”

P. 121.—“A uniform rate of advance, . . . is an essential condition of complete security” . . . —“Hence it is advisable to work (patrols) in sections—that is to say, when they have reached certain points to withdraw them to the main body, and send out reliefs for the next section.”

P. 123.—The horses (in the days of Frederick and Napoleon) were much less well bred, (than today) and the commoner cold-blooded strain can stand bivouacs, cold and wet, much better than our present high bred material, although the latter stand heat and exertion very much better.”

P. 123.—“When circumstances allow the bulk of the horses to take shelter behind the infantry outposts, the most must be made of the opportunity and only the more distant patrolling service be left to the cavalry.” Attention is invited to the fact that by taking good care of the horses the cavalry when required “will be capable of exertions far beyond what could be expected of troops less thoughtfully managed.”

P. 125.—“This tendency towards cantonments must not be allowed to become stereotyped. Occasions will constantly arise when cavalry must remain in immediate touch with the enemy.”

Comment.—The above is all true but no mention is made of the necessity of hardening the horses for field service by removing the blankets and allowing the hair to grow in cold weather prior to a campaign.

It would seem to be a good rule to take the best care of your horses possible under the circumstances—shelter them where possible but do not coddle them.

P. 130.—“Short rations reduce the horses very rapidly and only too thoroughly.”

P. 132.—The distinction between reconnoitering and security patrols is plainly shown. In fact Chapter VIII on the subject of patrols, etc., is one of the most important in the book and also one of the best.

P. 142.—“As a general type three lines of patrols result, viz: strategical patrols far in advance, tactical patrols, and security patrols, which latter, when the main body is halted become the standing outposts.”

P. 146.—Stress is also laid upon the use of cyclists.

P. 151.—He says: “That the difficulty of securing a supply of reinforcements adequate for the performance of our duties is greater with the cavalry than with any other arm.”

P. 153.—He speaks of the “Absolute need for the numerical augmentation of this branch of the service” and (P. 154) also of the necessity of a home squadron for the purpose of supplying remounts.

Comment.—No provision is made in the United States as yet for filling up old regiments in time of war. This method

both with reference to men and horses in the cavalry is as essential as was shown during our Civil War.

General Von Bernhardt brings out very clearly the necessity for a proper organization in time of peace and maneuvers for the three arms together.

P. 170.—Necessity for a proper supply train is also dwelt upon.

P. 173.—But "It is not the number of wagons which concerns us, but their individual lightness and mobility, so that on all roads they can follow their units at a trot, and only in the case of divisional cavalry can the other point of view be admitted."

P. 173.—An emergency horse ration is also necessary. It should (P. 174) keep horses in condition for three or four days.

P. 175.—Collapsible boats are also recommended for independent cavalry. Also a wagon with bridging material.

P. 177.—He recommends a reduction of caliber of the carbine and a corresponding increase of ammunition. He adds "The desire to retain the same cartridge as the infantry to facilitate mutual assistance in ammunition supply seems to me of quite secondary importance."

Comment.—I cannot except this statement. In my opinion the results would not justify it.

P. 178.—He recommends fifteen to twenty-five cyclists to a regiment of cavalry, also the addition of machine guns.

P. 179.—He also recommends a battery of four pieces of field artillery be assigned to each brigade of cavalry.

Pp. 184-185-186.—He shows the necessity for well trained men and horses—and gives some of the details of training them both. In cavalry inspections, he recommends (P. 191) individual inspection of man and horse, and inspection of closed masses be restricted as much as possible.

P. 194.—In case of war, he recommends some of the old well trained horses be left with the remount squadrons.

Pp. 203-4.—Some interesting experiments with feed for horses are given.

P. 208.—On German training, he says he has seen "Whole regiments cover 8,800 yards (five miles) at the regulation gallop,

and the horses at the end of it had still both strength and wind to increase the pace."

P. 211.—In order to harden the horses to the weight they must carry in war, he recommends gradually increasing the pack during the drill season, and "Horses should be prepared gradually for the full weight (P. 212) carried in the maneuvers."

P. 221.—He speaks also of the necessity when cavalry charges against cavalry of keeping well closed in. "Against infantry, the files must be loosened and every horse go in his normal stride as in hunting."

"Utmost speed consistent with closely locked files against cavalry; a natural extended gallop against infantry or artillery. These are the two cardinal points to be observed in attacking."

P. 230.—He speaks of the advantages of a Regimental Bugle Call.

Comment.—Bugle calls on the battlefield are of course seldom used. If our troops were trained to it, such a call would be of benefit to our service.

P. 234.—Artillery should be attacked from the flank if possible. Also "only closed lines on a broad front can be relied on for success." "Such frontal attacks require generally reserves on both flanks."

P. 247.—He speaks of the necessity for more training for dismounted cavalry action in the German Army.

P. 268.—Speaking of cavalry training, he says: "The first point which strikes one, and which lies at the bottom of all cavalry undertakings, but in which no real education ever takes place, is the conduct of patrols, and particularly of those employed for reconnoitering purposes."

P. 274.—He also enters a protest against the absurd misuse of maps in peace. He recognizes their use but claims they will not be available in war.

Comment.—The above is of course correct. In our service every cavalry non-commissioned officer should be able to make a rough sketch to submit with a report. Whenever practicable of course maps should be furnished.

ORGANIZATION AND EMPLOYMENT OF CAVALRY BRIGADES.*

BY CAPTAIN PAUL T. HAYNE, JR., TWELFTH CAVALRY.

AT the beginning of any campaign the commanding general will have a limited amount of information as to the strength and location of the enemy's forces, but will be very anxious to get more. It is generally recognized that his main reliance for getting this information will be the independent cavalry, or cavalry brigades and divisions operating under the direct orders of the army commander.

Spies will be employed, but the exaggerated and inaccurate reports received by General McClellan during the Peninsular Campaign from the well organized Pinkerton detective agency are enough to convince anyone that the uncorroborated reports of spies are of very little value.

Aeroplanes and balloons will also be used to get information and undoubtedly will at times be of great value, but their possibilities are so uncertain, and they are so dependent upon the condition of the weather, that no one would think of depending on them alone.

If the enemy had no cavalry, this information, so urgently needed at the beginning of a campaign, might possibly be obtained by unsupported officers' patrols; but the enemy will almost surely have cavalry between the two armies, and to expect patrols to get through this cavalry, obtain information, and then evade the enemy's cavalry again in returning is expecting too much. The little information that did get back would probably arrive too late to be of much value.

The only way in which information can be obtained with certainty, and reach the army commander in time to be of

value, is by sending out a body of cavalry sufficiently strong to defeat and drive back, or break through, the enemy's screening cavalry. As we never know exactly how great a force will be required to defeat the enemy's cavalry and get information as to his main forces in rear, the independent cavalry must be made strong as practicable, and it is given horse artillery to increase its fighting power.

This independent cavalry, with the getting of information as its mission, will by attacking the enemy's cavalry and driving it back furnish a considerable amount of protection to its own army; but it is generally accepted at the present time that other protective cavalry is also needed, though methods of furnishing it differ.

In the latter part of the War of the Rebellion, when the army commanders had been for some time learning in the most effective of all schools, actual experience in war, all the cavalry was united into divisions and corps operating under the direct orders of the army commander, detachments for protection being made when the bulk of the cavalry was so employed that such detachments were considered necessary. General Sherman, however, who made a study of organization in addition to having exceptional opportunities for observation throughout the war, recommends the assignment of a brigade of cavalry to each army corps of approximately 30,000 men, with a cavalry corps of three divisions for the army. (Memoirs, Vol. II, p. 385).

The assignment of cavalry to infantry divisions or corps, in addition to the cavalry acting under the direct orders of the army commander, is an accepted principle in the organization of practically all modern armies, and this "divisional cavalry" is expected to do most the work of protection or security, leaving the cavalry divisions free for reconnaissance or other duty which may cause them to be at considerable distances from the army.

In the organization of the British Expeditionary Force there are provided, in addition to the divisional cavalry (which is mounted infantry), two distinct bodies of cavalry acting directly under the orders of the army commander. The cavalry division, or independent cavalry, is charged with strate-

*Thesis Staff Class, Army Service Schools, 1912-13.

gical reconnaissance; and the "mounted brigades," composed of cavalry and mounted infantry with horse artillery, called "protective cavalry," are charged in general with the duties of security or protection. It is stated, however, in the British Field Service Regulations (par. 65) that circumstances may require that these two bodies be united. This division into three echelons seems wrong in principle. One body or echelon charged with the getting of information and another with protection is as much sub-division as the cavalry can stand without great danger of so much dispersion that neither mission can be accomplished if the enemy is aggressive. It is also difficult to see the advantage in deliberately organizing mounted infantry instead of cavalry. The cost of upkeep is just as great, so why not give the additional instructions and armament needed to make cavalry instead.

As the independent cavalry is almost sure to have to defeat the enemy's cavalry as a preliminary to accomplishing its mission of getting information, the greater part of its forces must be kept sufficiently concentrated to be used as one body in the expected contest. Hence, it is an accepted principle in reconnaissance by independent cavalry to have a central mass, though not necessarily on a single road, sending out from this mass contact squadrons or troops, each assigned a certain reconnaissance area or mission, and these in turn detach just enough patrols to reconnoiter the area or accomplish the mission assigned. In this way the number of detachments is kept at a minimum, and every detachment has a supporting body to back it up.

Even if the enemy is deficient in cavalry it is well to have the reconnoitering cavalry strong, for it can get information better, and may be able to seize some important position and hold it, even against superior numbers, until the infantry of its own army can come up.

This is well illustrated by the work of General Buford's cavalry division just before the battle of Gettysburg. Stuart was on a raid around the Federal army, leaving Lee practically without cavalry. Buford, with two brigades of his division and his artillery, moved early on June 30th from his camp near Fairfield, via Emmittsburg, to Gettysburg. He arrived at

Gettysburg just as Pettigrew's infantry brigade was approaching the town, and he had sufficient force to drive it back before it got a foothold. He sent in several valuable reports as to the position and movements of the enemy on June 30th and July 1st, and held his position at Gettysburg for more than two hours on the morning of July 1st against an attack by the infantry and artillery of Heth's Confederate division, until relieved by General Reynolds with Wadsworth's division of the First Corps. (R. R. 43, pp. 923-927.)

General Meade was still undecided on July 1st as to what his plans would be, and had already issued a tentative order for a withdrawal to the line of Pipe Creek in case the enemy took the offensive and a withdrawal seemed necessary. (R. R. 45, pp. 458-460). As a result of the work Buford's cavalry division the battle was fought at Gettysburg and the victory gained there is generally considered one of the most decisive of the war.

Another valuable service the reconnoitering cavalry can render, in addition to getting information, is in delaying the enemy's advance. Just before the battle of Murfreesboro, or Stone's River, when Rosecrans was advancing from Nashville against Bragg at Murfreesboro, General Wheeler's cavalry not only kept Bragg fully informed as to the movement, but also delayed Rosecrans to such an extent that it took him four days, from December 26th to December 29th, 1862, to move less than thirty miles, using several roads. (R. R. 29, pp. 184 and 663.)

While in general the mission of independent cavalry is reconnaissance, protection being only incidental, it may happen that its mission is to screen a movement of the army, rather than to get information. There are two general methods of accomplishing this, one or the other being applicable in most cases.

If some natural obstacle, such as a river or mountain range, is so situated that guarding the few practicable crossings will prevent the enemy's cavalry from getting information of the movement the so-called defensive screen is employed. The crossings or defiles are held and every precaution taken to prevent their being forced; strong bodies are held at favorable points, ready to move promptly to any threatened crossing.

When there is no natural obstacle to assist in stopping the enemy, recourse must generally be had to the offensive screen, the cavalry being held in a central mass ready to strike and defeat the enemy's cavalry as soon as its approach is reported by the reconnoitering squadrons or troops sent out to discover its advance. Having defeated the enemy's cavalry, touch with it must be maintained and a sufficient force kept concentrated to prevent its taking the offensive successfully, while the roads are guarded to prevent small patrols from getting through.

Whether the plan for screening is offensive or defensive a fight with the enemy's cavalry, and possibly with his infantry, will result if he is at all aggressive; the mission of screening includes fighting just as the mission of reconnaissance does.

That cavalry, well handled can screen, even against superior numbers, is proven by the action of Stuart's cavalry at the beginning of Lee's movement toward Gettysburg. Early in June, 1863, when General Lee was moving his army from Fredericksburg to Culpeper and from there to the Shenandoah Valley, preparatory to invading Maryland and Pennsylvania, he was naturally anxious to have the movement screened. A. P. Hill's corps, left at Fredericksburg, delayed the getting of positive information there as to the movement. (R. R. 45, p. 859) and Stuart's cavalry at Brandy Station, although attacked by Pleasonton with his cavalry corps and a brigade of infantry on June 9th screened the movement through Culpeper. (R. R. 43, p. 903). Ewell's corps arrived at Culpeper June 7th and started for the Valley June 10th (R. R. 44, p. 439). But Pleasonton reported on June 11th that Ewell was at Fredericksburg (R. R. 45, p. 62), and on June 12th he reported that he believed that the Confederates would make no move but remain on the defensive. (R. R. 45, p. 70).

While screening and reconnaissance are generally considered as distinct missions, requiring different methods for their accomplishment, it is seldom possible to draw a sharp line between them. In any particular case one or the other is the principal or most important mission of the cavalry. In order to screen, however, the cavalry must reconnoiter and is expected to report the information gained; while in carrying out aggressively a mission of reconnaissance a considerable amount of

screening is incidentally accomplished by keeping the enemy's cavalry occupied and defeating it and driving it back.

Whether the principal mission of the independent cavalry is reconnaissance or screening, there will certainly be a number of cavalry combats, and the cavalry which can establish its superiority over the opposing cavalry will have greatly facilitated all future reconnaissance or screening.

However, it will seldom or never be advisable to make the defeat of the enemy's cavalry the principal mission of the independent cavalry, for there are usually more important duties for the cavalry. Nor is it to be expected that the defeat of the enemy's cavalry will eliminate it entirely and give such a clear field to the independent cavalry as the German cavalry had in 1870 and 1871.

Partly as a result of the ill feeling between Sheridan and Meade, Sheridan was, in May 1864, given as his mission the defeat of Stuart's cavalry under the following orders:

HEADQUARTERS ARMY OF THE POTOMAC,
May 8th, 1864—1:00 P. M.

General Sheridan,

Commanding Cavalry Corps:

The Major General Commanding directs you to immediately concentrate your available mounted force, and with your ammunition trains and such supply trains as are filled (exclusive of ambulances) proceed against the enemy's cavalry, and when your supplies are exhausted, proceed via Newmarket and Green Bay to Haxall's landing on the James River, there communicating with General Butler, procuring supplies and return to this army. Your dismounted men will be left with the train here.

A. A. HUMPHREYS,
Major General, Chief of Staff.

(R. R. 68, p. 552.)

The "*Richmond Raid*" was the result of this order. The Confederate cavalry was defeated in four engagements and its commander, Stuart, killed, but the Confederate cavalry was by no means eliminated and continued to play an important

part until the end of the war, so it hardly established a precedent for such orders.

Sometimes reconnaissance as a principal mission may be combined with operations against the enemies lines of communications in rear of his army. The order for what is called Stuart's "Chickahominy Raid" illustrates this. The gaining of information was made one of the chief missions of the cavalry, and as General Lee had just taken command in the field and was contemplating bringing Jackson from the Shenandoah Valley to take the offensive, as he did in the "Seven Days Battles," it is evident that the getting of information was very important. But interference with the enemy's system of supply was also assigned as a mission. The order was:

HEADQUARTERS DOBB'S FARM,
June 11, 1862.

General J. E. B. Stuart,
Commanding Cavalry:

GENERAL:—You are desired to make a scout movement to the rear of the enemy now posted on the Chickahominy, with a view of gaining intelligence of his operations, communications, etc., and of driving in his foraging parties and securing such grain, cattle, etc., for ourselves as you can make arrangements to have driven in. Another object is to destroy his wagon trains, said to be daily passing from the Piping Tree Road to his camp on the Chickahominy. The utmost vigilance on your part will be necessary to prevent any surprise to yourself, and the greatest caution must be practiced in keeping well in your front and flanks, reliable scouts to give you information. You will return as soon as the object of your expedition is accomplished; and you must bear constantly in mind, while endeavoring to execute the general purpose of your mission, not to hazard unnecessarily your command, or to attempt what your judgment may not approve, but be content to accomplish all the good you can, without feeling it necessary to obtain all that might be desired. I recommend that you take only such men and horses as can stand the expedition, and that you use every means in your power to save and cherish those you do take. You must leave sufficient cavalry here for the service

of this army, and remember that one of the chief objects of your expedition is to gain intelligence for the guidance of future movements.

Information received last evening, the points of which I sent you, leads me to infer that there is a stronger force on the enemy's right than was previously reported. A large body of infantry, as well as cavalry, was reported near the Central Railroad.

Should you find upon investigation, that the enemy is moving to his right, or is so strongly posted as to make your expedition inopportune, you will, after gaining all the information you can, resume your former position.

I am, with great respect, your obedient servant,

R. E. LEE, *General*.

(R. R. 14, p. 590).

That both missions were accomplished, is indicated by the following congratulatory order:

HEADQUARTERS DEPARTMENT OF NORTHERN VIRGINIA,
June 23d, 1862.

General Orders, No. 74:

The commanding general announces with great satisfaction to the army, the brilliant exploit of Brigadier General J. E. B. Stuart, with part of the troops under his command. This gallant officer, with portions of the 1st, 4th and 9th Virginia cavalry, a part of Jeff Davis Legion, with whom were Boykin Rangers, and a section of Stuart's Horse Artillery, on the 13th, 14th and 15th of June, made a reconnaissance between the Pamunkey and Chickahominy Rivers, and succeeded in passing around the rear of the whole Union Army, routing the enemy in a series of skirmishes, taking a number of prisoners and destroying and capturing stores to a large amount. Having most successfully accomplished its object, the expedition recrossed the Chickahominy almost in the presence of the enemy, with the same coolness and address that marked every step of its progress, and with the loss of but one man, the lamented Captain Latane of the 9th Virginia Cavalry, who fell bravely leading a successful charge against a superior force of the enemy. In

announcing the signal success to the army, the general commanding takes pleasure in expressing his admiration of the courage and skill so conspicuously exhibited by the general and the officers and men under his command.

* * * * *

By Command of General Lee,
R. H. CHILTON, A. A. G.

(R. R. 12, p. 1042.)

As to the advisability of sending cavalry in rear of the enemy's arm solely to operate against his lines of communication, opinion differ. The Germans do not favor such "raids" as is indicated by the following extracts from the German Regulations:

"Enterprises of long duration by large bodies of cavalry against the enemy's lines of communication separate them from their principal duties. Such raids are to be undertaken only when cavalry is redundant. Sufficient ammunition and supplies must be arranged for." (Par. 527).

"Attempts on the more distant hostile communications may produce valuable results; but they must not distract the cavalry from its true battle objectives. In the event of an engagement, coöperation with a view to victory must be the watchword of every formation, whether great or small." (Par. 395).

There is no doubt that this view is sustained by a number of raids during the War of the Rebellion, the cavalry being separated from its principle duties while engaged on several raids. It is generally conceded that Stuart's cavalry would have been of much more value to Lee in the Gettysburg campaign if it had stayed with the army instead of going on a raid. Sheridan's "*Trevillian Raid*" certainly accomplished nothing, and Wilson's raid the same month, June, 1864, accomplished very little, was accompanied by heavy losses and Wilson himself admits that it "*ended in disaster*." (Under the Old Flag, Vol. 1, p. 481).

Bernhardi disagrees with the German Regulations, saying:

"The importance of such raids in modern war should not therefore, in my opinion, be underestimated. They are capable rather of exercising enormous influence on the course of events."

And again, after explaining how dependent a modern army is on its supply, especially of ammunition, he says:

"I hold, therefore, that such circumstances render a disturbance of the rear communications of an army an important matter. It will often do the opponent more damage and contribute more to a favorable decision of arms than the intervention of a few cavalry divisions in the decisive battle itself." (Cavalry in Future Wars, pp. 92-97).

It is to be noticed, however, that he mentions only the absence of the cavalry from the actual field of battle, giving Stuart in the Gettysburg campaign as an example of making a raid and still being present in the battle. Where cavalry is most needed, however, is in getting information before and in the first part of the battle, and Stuart was missing at just that time, his absence being generally considered an important factor in Lee's defeat. Stuart's arrival at Gettysburg the afternoon of July 2d, (R. R. 44, p. 697), when the battle had been going on for the greater part of two days, can hardly be said to atone for this absence.

But that the results obtained may sometimes justify the absence of the cavalry from the vicinity of the army and the risks involved, is illustrated by several successful raids in the War of the Rebellion, from which practically all our information in regard to such expeditions comes.

In December, 1862, the destruction by Forrest of the railroad north of Jackson, Tenn., and by Van Dorn of the depot of supplies at Holly Springs, Miss., put a complete stop to Grant's advance on Vicksburg, causing him to fall back to the Memphis and Charleston Railroad, to get supplies from Memphis. (R. R. 24, pp. 477, 481, 503, 592).

After the battle of Murfreesboro or Stone's River, December 30-31, 1862, the long delay that Rosecrans made before advancing was principally due to the raids made by Morgan's, Forrest's and Wheeler's cavalry against his communications. Rosecrans would not move until he could organize a mounted force strong enough to prevent these raids. (R. R. pp. 29, 34, 35).

In July, 1862, Forrest captured Murfreesboro, Tenn., with quantities of stores and destroyed the railroad in its vicinity

(R. R. 22, pp. 792-811), and a month later Morgan did the same thing at Gallatin, Tenn. (R. R. 22, pp. 348-357). The result of these two raids is shown by the report of the Commission ordered by S. O. 356, Headquarters of the Army, November 20th, 1862, "to investigate and report upon the operations of the army under the command of Major General D. C. Buell, U. S. V., in Kentucky and Tennessee," from which I will quote:

"We find that the rebels under Bragg concentrated at Chattanooga about the 22d of July, 1862, for the purpose of invading Kentucky. Prior to that, on the 11th day of June, General Buell with his Army of the Ohio, was ordered by General Halleck to march against Chattanooga, and take it, with the ulterior object of dislodging Kirby Smith and his rebel force from East Tennessee. We are of the opinion that General Buell had a force sufficient to accomplish the object if he could have marched promptly to Chattanooga. The plan of operation, however, prescribed by General Halleck, compelled General Buell to repair the Memphis and Charleston Railroad from Corinth to Decatur and put it in running order, as a line of supply during the advance. While that road proved of comparatively little service, the work forced such delays that a prompt march upon Chattanooga was impossible. The delays thus occasioned gave Bragg time to send numerous cavalry forces to operate against Buell's lines of supply. So successful were the incursions of the cavalry that no opportunity was found after the Memphis and Charleston Railroad was completed to Decatur, to concentrate enough of the Army of the Ohio to capture Chattanooga and execute the ulterior purpose of the expedition." (R. R. 22, p. 9).

With the telegraph and telephone facilities of the present day, it will be difficult to prevent the whereabouts of a raiding force from being known, and correspondingly easy to order troops out promptly to cut it off. As a consequence a raiding force runs a big risk of being cut off and destroyed, or else very much demoralized by the forced marches it would make to avoid destruction. And it is very seldom that cavalry is not very much needed with the army to get information. This must be carefully considered and unless the probable damage to the enemy fully justifies both the risk taken and the absence

at least temporarily of the cavalry where it is always needed, getting information, raids against the enemy's lines of communication should not be ordered.

In operating in rear of the enemy, against his communications, the main dependence must be on secrecy and moving quickly, hence the force must be very mobile. But it must be also strong enough to overcome the guards it will certainly find protecting the enemy's communications and supplies. The strength of raiding forces in the War of the Rebellion varied from less than 1,000 to more than 10,000 which would indicate that the proper strength of a raiding force is variable, each case to be decided separately, according to the situation.

Our Cavalry Drill Regulations (Par. 856) give the release of prisoners as an object for cavalry raids. But the complete failure of the two great raids made for that purpose in the War of the Rebellion, Kilpatrick's raid to Richmond, February and March, 1864 (R. R. 60, p. 183), and Stoneman's raid to Macon, Ga., July and August, 1864, in which Stoneman and part of his command were themselves made prisoners (R. R. 76, pp. 264-5 and R. R. p. 914) hardly encourages such expeditions.

At the time of Napoleon the cavalry, as he used it, was expected to and did take a decisive part in most great battles. It was usually held in reserve until the crucial moment, and then charges by masses of cavalry often decided the day. The improvement in firearms has changed the method of employment and has to a certain extent lessened the importance of cavalry during a general engagement, but it can, undoubtedly, still play an important part.

Instead of being held in rear as a reserve, it should usually be on a flank, and in front. From this position it is able to meet promptly any turning or enveloping movement by the enemy, stopping or delaying such a movement until proper disposition can be made to meet it. It covers the outer flank of an enveloping or turning movement of its own army, repels any hostile cavalry, and operates against the hostile flank and rear.

Unless the enemy has no cavalry there will probably be a meeting of cavalry on the flanks of a great battle, and the cavalry which defeats decisively the opposing cavalry will then

have a great chance for reconnaissance and operations against the enemy's flanks and rear. Hence, cavalry on a flank must take the offensive vigorously against any opposing cavalry, defeat and drive it in as promptly as possible, and then endeavor to damage the enemy and shake his morale in every possible way, especially by operating against his flank and rear.

Bernhardi says: "If cavalry can succeed, especially in battles of several days' duration, in interrupting the hostile supplies from the rear, in surprising the enemy's reserves with fire, causing him heavy losses and compelling him to deploy against it, or if any advancing portions of the enemy's army can be brought to a halt and prevented from reaching the battlefield at the right time, greater results will probably be obtained than by a doubtful charge. This is quite apart from the great moral impression which such action must produce on leaders and troops when the alarm suddenly re-echoes from the rear and the shrapnel of the cavalry carries confusion and consternation amongst the reserves and supports of the fighting line. The enemy's artillery, firing from covered positions, and otherwise so difficult to reach, may then fall a prey to a bold cavalry, and will offer opportunities for a success of far reaching importance. Such action must of course be conducted with a due cooperation between mounted and dismounted action." (*Cavalry in War and Peace*, p. 202).

Firearms were quite effective during the War of the Rebellion and the mounted charge against unbroken infantry was impossible then as now, but cavalry did effective work on the flanks during general engagements, both by mounted and dismounted action. The battles of Winchester and Nashville are excellent examples of such use of cavalry, both mounted and dismounted.

At the battle of Winchester, September 19th, 1864, the cavalry divisions of Merritt and Averell, under Torbert, operated on the right flank of Sheridan's army and their work is described as follows by Sheridan:

"To confront Torbert, Patton's brigade of infantry and some of Fitzhugh Lee's cavalry had been left back by Breckenridge, but with Averell on the west side of the Valley pike and Merritt on the east, Torbert began to drive this opposing

force towards Winchester the moment he struck it near Stephenson's depot, keeping it on the go till it reached the position held by Breckenridge, where it endeavored to make a stand.

"The ground which Breckenridge was holding was open, and offered an opportunity such as seldom had been presented during the war for a mounted attack, and Torbert was not slow to take advantage of it. The instant Merritt's division could be formed for the charge it went at Breckenridge's infantry and Fitzhugh Lee's cavalry with such momentum as to break the confederate left, just as Averell was passing around it. Merritt's brigades, led by Custer, Lowell and Devin, met from the start with pronounced success, and with saber and pistol in hand literally rode down a battery of five guns and took about 1,200 prisoners."

* * * * *

"Early tried hard to stem the tide, but soon Torbert's cavalry began passing around his left flank, and as Crook, Emory and Wright attacked in front, panic took possession of the enemy, his troops, now fugitives and stragglers, seeking escape into and through Winchester." (*Memoirs*, Vol. II, p. 26).

At the battle of Nashville, December 14-15, 1864, Wilson's cavalry corps was on the right flank of General Thomas' enveloping attack and finally got in rear of the enemy's left. The finale of this is thus described by Colonel Henry Stone of General Thomas' staff, an eye witness:

"Hatch's division of cavalry, dismounted had also pushed its way through the woods, and had gained the tops of two hills, that commanded the rear of the enemy's works. Here, with incredible labor, they had dragged, by hand, two pieces of artillery, and just as McMillen began his charge, these opened on the hill where Bate was, up the opposite slope of which the infantry were scrambling. At the same same time Coon's brigade of Hatch's (cavalry) division with resounding cheers charged upon the enemy and poured such volleys of musketry from their repeating rifles as I have never heard equalled. Thus beset on both sides, Bate's people broke out of the works, and ran down the hill toward their right and rear as fast as their

legs would carry them." (B. and L. of the Civil War; Vol. IV, p. 463).

Cavalry on the flank during a general engagement is also in the most suitable position to take up the pursuit on a road parallel to the enemy's line of retreat, or to cover the retreat of its own army. This is an additional reason why its use as a reserve in rear of the line should be very exceptional.

The mobility of cavalry and horse artillery make itself evident that they are the arms to make an effective pursuit after a victory, and all armies of the present day contemplate this use of their cavalry divisions. Unless the defeated army is completely demoralized, little will be accomplished by a pursuit by the cavalry directly in rear of the retreating army, for such a pursuit can be stopped by a comparatively small rear guard. But by keeping in touch with the retreating enemy, both in rear and on the flanks, so his line of retreat is known, and at the same time moving with the bulk of the cavalry on a parallel road to block his retreat at some defile or other favorable place, great results may be obtained, especially if some of the infantry is able to keep up a pursuit directly in rear.

While this use of the cavalry is so logical, it is principally by figuring on the results that would have been obtained if the cavalry had been used in this manner that we arrive at the conclusion that it would be a very effective use of cavalry. There were no such effective pursuits during the War of the Rebellion unless the pursuit after the fall of Richmond and Petersburg is counted and its end was a foregone conclusion any way. And there were no such pursuits in the Franco-German War.

As to covering a retreat the German Regulations give the following:

"Should the issue of the battle prove unfavorable, the cavalry must strain every nerve to facilitate the retreat of the other arms. It is just in such cases that they must assume a relentless offensive. Repeated attacks on the flanks of the pursuing troops will produce the best results.

"Even temporary relief for the retreating infantry and a short gain in time, may avert utter defeat. The cavalry which effects this, will, though it gains no victory, retain the honors of the day." (Par. 518.)

Bernhardi says that here all the essentials are set forth in compressed form and adds:

"Continual effort must be made to confront the enemy, and to attack him whenever possible with the cold steel. Defensive fire tactics, however, will of course be employed whenever circumstances demand such action."

The Union pursuit after Shiloh was stopped by Forrest's cavalry taking the offensive, making a mounted charge just as Bernhardi suggests. General Sherman, who commanded the pursuing column, composed of cavalry, infantry, and field artillery, describes this charge and its effect in his report as follows:

"The enemy's cavalry came down boldly at a charge, led by General Forrest, in person, breaking through our line of skirmishers; when the regiment of infantry, without cause, broke, threw away their muskets and fled. The ground was admirably adapted for a defense of infantry against cavalry, being miry and covered with fallen timber.

"As the regiment of infantry broke, Dickey's cavalry began to discharge their carbines, and fell into disorder. I instantly sent orders to the rear brigade to form line of battle, which was promptly executed. The broken infantry and cavalry rallied on this line, and as the enemy's came to it, our cavalry in turn charged and drove them from the field. * * *

"The check sustained by us at the fallen timber delayed our advance, so that night came upon us before the wounded were provided for and the dead buried, and our troops being fagged out by three days hard fighting, exposure and privation, I ordered them back to their camps, where they are now." (R. R. 10, p. 639).

This ended the only attempt to pursue after Shiloh. A single charge over unfavorable ground, stopped all pursuit and solved the problem of covering the retreat, although the charging cavalry was eventually stopped and driven from the field.

General Forrest proved conclusively that a bold charge at the right moment may put a complete stop to the enemy's pursuit after a defeat; but often dismounted fire action can more effectively cover a retreat. To make use of the nearest suitable

position, cause as much delay as practicable by fire from rifles and horse artillery, then mount and fall back rapidly to another position would in many cases cause the pursuers enough delay to let the infantry get well on the road. General Wilson, who commanded the pursuing Union cavalry after the battle of Nashville, gives the following description of such action by the Confederate cavalry covering Hood's retreat:

"Hatch's column had not gone more than two miles when its advance, under Colonel Spalding, encountered Chalmers' cavalry strongly posted across the road behind a fence rail barricade. The gallant Confederates were driven in turn from every fresh position taken up by them, and the running fight was kept up till near midnight. Chalmers had, however, done the work cut out for him gallantly and well. He was overborne and driven back, it is true, but the delay which he forced upon the Federal cavalry by the stand he had made was sufficient to enable the Confederate infantry to sweep by the danger point that night, to improvise a rear guard, and to make good their retreat the next day." (B. and L. of the Civil War, Vol. IV, p. 469).

The commander of the cavalry must be prepared to use both mounted and dismounted action, and his success in covering the retreat will be to a great extent, depend on his good judgment in deciding which to use at a given moment, and in combining mounted and dismounted action to the best advantage. He must be prepared to sacrifice his command if necessary to prevent the destruction of the retreating army.

In determining the organization of the independent cavalry which is expected to perform the various duties mentioned, acting under the direct orders of the army commander, the first point to consider is the strength of the body of cavalry that will in most cases operate as a distinct command, complete in itself, with all the necessary auxiliary troops. In the organization of the infantry of our army the division, of three brigades, is considered such a unit and is furnished with all the auxiliary troops and trains that it would ordinarily need, either to act as part of a field army or detached, without calling on higher authority for anything.

European armies follow more or less closely the German organization, in which the cavalry division is the unit organized for independent operations. The German cavalry division is organized as follows:

The eskadron has 180 officers and men. The regiment has 4 eskadrons and an additional depot eskadron which does not accompany it in the field, total strength with the regiment in field about 800 with 19 wagons and 2 pack horses carrying supplies and telegraph and bridge material. The brigade has 2 regiments, total strength about 1,600. The division has 3 brigades of cavalry about 4,800; 2 batteries of horse artillery, 12 guns; 1 machine-gun battery, 6 guns; a detachment of engineers and a light ammunition column.

Supply columns of 4-horse wagons may be attached to the cavalry under orders from army headquarters, but in most cases it is expected to depend upon the resources of the country, forming supply columns of requisitioned wagons.

Bernhardi recommends increasing the German cavalry division from 6 to 9 regiments by adding a regiment to each brigade, with 3 instead of 2 batteries. This would give the division 7,200 cavalrymen, with the same auxiliary troops, increased by 1 battery. He says this three unit formation facilitates tactical dispositions and the detachment of reserves. He also recommends that cavalry divisions be provided with the necessary supply and transport service, consisting of motor and wagon columns. (Cavalry in War and Peace, p. 355).

Several of these divisions may be united under one commander, or detachments made from the divisions, but the division is the basic unit of organization of the Army Cavalry.

The cavalry division of the British Expeditionary Force is organized as follows: The regiment has 3 squadrons and a machine gun section, 532 officers and men, with 27 vehicles. The brigade has 3 regiments, 1,613 officers and men. The division has 4 cavalry brigades, 6,452 officers and men; 2 horse artillery brigades, 24 guns; 4 field troops of engineers; 1 wireless telegraph company; 1 transport and supply column, 75 wagons and 11 carts; and 4 ambulances.

The strength of the Union cavalry divisions during the War of the Rebellion varied greatly, and the strength actually

present for duty equipped was seldom more than half and often less than one-third of the total strength. The average strength of the cavalry divisions at the battle of Gettysburg was about 4,000, each division having either two or three brigades with two to four batteries of horse artillery, three of these divisions being united to form the cavalry corps. (R. R. 43, p. 154). The strength and organization was about the same when Sheridan took command of the Cavalry Corps, April, 1864. (R. R. 60, p. 1036).

In the Confederate army the strength of the cavalry divisions varied even more than in the Union army. Each cavalryman furnished his own mount, and when his horse became disabled the trooper was given pass to go home and get another. The result was that an enormous proportion of the command was continually absent. (Campaign of Stuart's Cavalry, McClellan, p. 257). In the Gettysburg campaign Stuart had a cavalry division composed of six brigades with six batteries of horse artillery; its strength was not reported. (R. R. 44, p. 290). Soon after Gettysburg the cavalry was organized into a corps of two divisions, each division having three brigades. On March 20, 1864, the strength of Hampton's division was 3,370, Lee's division 1,431. (R. R. 60, p. 1234). Just one month later the strength of Hampton's division was 3,235, Lee's division 5,309. (R. R. 60, p. 1298.)

If General Stuart found it more difficult to handle six brigades than two divisions, as is indicated by his adopting the corps organization after Gettysburg, it is reasonable to suppose that future cavalry generals will also do well to have a small number of units to handle.

Sherman says in his Memoirs: "In war, three regiments would compose a good brigade, three brigades a division, and three divisions a strong cavalry corps such as was formed and fought by Generals Sheridan and Wilson during the war." (p. 384).

Practically all authorities agree on the general proposition that three regiments to a brigade and three brigades to a division is the best organization, and only very good reasons would justify adopting any other organization. Such an organization gives each commander a convenient number of

units to handle, and enables him to detach one unit without being left, in effect, without a command.

A brigade of three regiments as prescribed in our Field Service Regulations would have a total strength of 3,600 officers and men, if every man and horse were present, and it is to be expected that they will habitually have less than their maximum strength even with a well planned system for supplying remounts and recruits.

Hence to make the brigade of three regiments a complete unit with auxiliary troops and an administrative staff, would give us a unit smaller than the cavalry division which was the unit in the War of the Rebellion and smaller than the cavalry division of foreign armies. And to put more than three regiments in the brigade would give the brigade commander too many units to control, without any appreciable advantages over combining instead two or three of these brigades into a division and giving the division the auxiliary troops.

The efficiency of the cavalry in the War of the Rebellion was greatly increased by concentration; in fact its dispersion in small commands is blamed for the small results obtained by the Union cavalry in the first part of the war, hence to make the division the complete unit would facilitate the use that got the best results.

The organization of the division should be such that it could detach a brigade whenever necessary, giving it such auxiliary troops as its mission might require, usually horse artillery only, but on occasions as complete an organization, on a smaller scale, as the division itself has. The amount of horse artillery attached to a brigade for detached service would vary from a battery to a battalion, depending on circumstances.

As to auxiliary troops, assigned to the division, Par. 7, Field Service Regulations, prescribes the following:

- 1 regiment of horse artillery;
- 1 pioneer battalion of engineers (mounted).
- 1 field battalion of signal troops.
- 2 ambulance companies.
- 2 field hospitals.
- 1 ammunition train.

1 supply train (including Sanitary reserve).

2 or more pack trains.

A light bridge train is attached when necessary.

A light bridge train should be permanently assigned to the cavalry division instead of being attached when necessary, as prescribed in the Field Service Regulations. The Germans, as has been mentioned, have two wagons of bridge material with each regiment; Bernhardt, however, recommends a bridge train for the division instead. (Cavalry in Future Wars, p. 175). The commander of the cavalry division should not have to call on higher authority every time he thinks he may have to bridge a stream, for the bridging of streams will often be necessary and the necessity cannot always be foreseen.

One field company of signal troops instead of a battalion should be sufficient for a cavalry division. The second company with an infantry division is expected to keep up communication with field army headquarters, but this will not be necessary with a cavalry division for the communication with army headquarters will necessarily be by wireless only and a wireless outfit will be available at field army headquarters without any detachment from the division.

With these exceptions the assignment of auxiliary troops and trains seems well adapted to probable needs. While it would be desirable to reduce the number of wagons with the cavalry division in order to increase its mobility it is essential that a cavalry division have both a supply train and an ammunition train. When necessary these can be left back with the trains of the nearest infantry divisions. The cavalry will do a great deal of its fighting dismounted, using rifle and artillery fire, and the ammunition expended must be replaced promptly or mobility is lost to a much greater extent than by having the necessary wagons.

The same principle applies to rations and forage. While the main dependence will be on supplies collected in the country, mobility would in many cases be sacrificed if the sole dependence were on this. It has been mentioned that Bernhardt recommends giving the cavalry divisions supply columns, and Von Schellendorf says: "It is, therefore, absolutely essential

that the German cavalry divisions should be allotted supply columns of their own in the organization for war, as is done in Austria and Italy." (Duties of the General Staff, p. 284).

In April, 1864, when every effort was being made to reduce transportation to a minimum General Ingalls, Chief Quartermaster of the Army of the Potomac in a memorandum submitted to General Meade allowed 600 wagons for the supply of the cavalry corps, estimated at 15,000 men. (R. R. 60, p. 853). This is about the same as the allowance now prescribed although the expenditure of ammunition has greatly increased, requiring more ammunition wagons.

While the decision should be the basis of organization of the independent cavalry in war, and as a consequence in peace; the actual concentration in peace of a cavalry division for maneuver and instruction would hardly be necessary. Better results would be obtained by concentrating brigades with the necessary auxiliary troops and letting them operate against each other as part of a real or imaginary army. In this way each regiment would get more instruction in the duties of reconnaissance.

WHY THE PISTOL?

BY CAPTAIN J. M. MUNRO, THIRD CAVALRY.

HAD it not been for Captain Hawkins' article "*The Question of the Pistol*," which appeared in the July issue of the CAVALRY JOURNAL the somewhat badly arranged and incoherent thoughts which follow would no doubt never have been put on paper, though they have been simmering in my mind for some time. Captain Hawkins' article, however, gives me hope that something may yet be accomplished for the despised pistol.

Captain Hawkins has most ably answered the stock arguments against the retention of the pistol with one exception, and that he barely touches on in the third paragraph from the end of his article, where he says he is not prepared to admit that it is more difficult to acquire proficiency with the pistol than with the saber or the lance. Before I get through with this effort I hope to show Captain Hawkins and other readers of the CAVALRY JOURNAL that of all the weapons we carry, the pistol is the most easily handled and proficiency with it more easily acquired and more easily retained than with any of the others. The point made by many of those opposed to the retention of the pistol is that, though we have been using the arm for years, we have made little or no progress with it and that proficiency with it for the mounted soldier is out of the question except in a few individual cases.

There is what I believe to be a dangerous tendency today throughout the service to belittle target practice and to frown on competitions and any enthusiasm on the subject of marksmanship. This I believe is to some extent due to our tendency to adopt the methods of foreign armies—cavalry reorganization, for example—and to forget some important considerations regarding our own army. Too many young officers today are saying "Target practice is simply a bore to me; I can't get up

any enthusiasm about it and I think the thing is being run into the ground." You will meet officers, and many of them, who say that the result does not warrant the expense; others who contend that modern conditions render target practice no longer necessary, and so on clear up to the fellow who can prove to you mathematically that an organization of 100 poor shots are far more effective than an organization of 100 expert rifle men. Of course he calls the poor shots "*average shots*," but when you get right down to what he means by "*average shots*" you find that "*poor shots*" is the proper designation. Finally there is the man who points to the great foreign armies whom we study and try to imitate and tells you that they not only devote very little time to target practice, but do not believe in it. Among our older officers who will argue with you against so much attention to target practice you will find, if you continue the conversation, that they will finally wind up with some such remark as this: "Well, you know, in all the years that I shot with my troop I was never able to qualify better than marksman and it took me five seasons to do that." Naturally these officers do not enthuse over target practice. The reason that so many officers and men fail to make progress in marksmanship is that they leave their training till they arrive on the target range. No one yet ever learned to shoot on the target range. Now this is not intended as a homily on target practice in general but it is deemed necessary to properly appreciate what follows.

The opponents of target practice as it now exists in our service have directed their main attack at the pistol and their principal contention is that it is not used by foreign armies. Foreign armies do not believe in pistols neither do they believe in spending time or ammunition on rifle practice. Why not? For the very same reason that you and I do not believe in the use of private cars. We can't afford it. Suppose Germany or Japan should attempt to give their soldiers the same course in target practice for one season that we give to ours, what would it mean? Bankruptcy! It doesn't cost anything to practice with the lance, sabre, or bayonet, consequently they are strong for those arms. Doubtless they would be highly delighted could they persuade us of the extravagance and inutility of

individual skill with firearms, and they seem to have succeeded in some cases. Now we have a pitifully small military force; some of us are so cowardly as to think it too small for safety, but we must have some points of supremacy, man for man, for we are constantly assured that we can lick the whey out of the wide world should the said wide world have the temerity to tackle us. What are these superior qualifications in our favor? We are not swordsmen, there can be no dispute as to that. But we have the supremacy in rifle practice and there is no dispute as to that, either. We have also supremacy with the revolver. Poor as we deem our performance with the pistol mounted, if compared with the pistol shooting of soldiers who have no practice, who have not even pistols, it would doubtless seem little short of marvellous. Since we have then the supremacy with two arms out of three, let us maintain this supremacy and at the same time strive for supremacy with the saber. To those who contend that pistols should be issued only to men who become expert in their use I say, apply the same system to the saber and there would not be a dozen sabers issued to the entire cavalry service.

Is our mounted practice with the pistol such a poor performance after all? I think not. The possible for the mounted course is 80 points. Approximately half of any troop where the men are not all in their first season make better than 25 points. While this is not an excellent performance by any means, it would mean fairly effective work when applied to an enemy having no pistols. But the encouraging thing about it is that this can all be vastly improved if proper methods are used and more demanded of the mounted service in the line of pistol shooting. The trouble now is that not one officer in ten cares what his troop makes at mounted practice and he is encouraged in this by those who claim that the pistol should be discarded and that results mounted cannot be obtained anyhow.

◆ Pistols are issued to our cavalry for use mounted, or so I have always conceived it, and yet, the prescribed course is arranged as if it were the intention for the cavalryman, whenever he had occasion to use his pistol to dismount to fight on foot. Of the 180 rounds allowed for target practice 105 are prescribed for the dismounted course and only 75 for the mounted course.

If the amounts prescribed in each case were reversed it would be more logical. Again, the cavalryman in order to qualify as a Pistol Expert must make 368 points, more than 300 of which he must make dismounted. There is absolutely no analogy between skill with the pistol mounted and skill with the same weapon dismounted, except, of course, in the case of the few individuals who "shoot from the hip," as it is called. Such men, however, are not target shots. Generally speaking, the principles underlying mounted and dismounted pistol practice are totally different and when I stated that I hoped to show that skill with the pistol was easier to acquire and retain than skill with any other arm we carry, I referred to the use of the weapon mounted. Proficiency with the pistol as a target weapon requires long and careful training and is quickly lost. It is governed by many of the same principles as rifle shooting. Skill with the saber is an even more strenuous matter and requires constant practice against skillful opponents, otherwise the art is lost. Skill with the pistol mounted requires no severe course of training and once acquired is not easily lost and is quickly recovered, as it depends on a single simple principle.

In the following discussion, which I hope to make clear, I wish it understood that I am announcing no new principle or that I have discovered something new. This principle was thoroughly understood by all enlisted men and used in the days when mounted pistol practice was a part of every Department competition. This is another argument for the maintainance of competitions. The art of mounted pistol shooting has simply been temporarily forgotten.

The reason that anyone of us cannot pick up a pistol and make practically a possible number of hits from a galloping horse is that a sense is lying dormant in us waiting development and training. I shall call this the sense of "accurate direction."

When I was a small boy the 22 cal. rifle was not the cheap and easily available toy that it is today and it was just as much within my reach as the private car previously mentioned now is. Necessity, however, knows no law, and, with many of my boy companions, I fell back on the most easily available and effective weapon, the catapult, or sling shot. Doubtless many of you who were not reared in a large city with

an active police force have enjoyed many hours with this simple device. Doubtless you likewise acquired a skill with it that made the inhabitants of your immediate neighborhood rise up and call you cursed. They did in my case. After many experiments and much thought I eventually developed a catapult, that, by the use of indirect fire would throw a .00 buckshot about 400 yards. At ranges from twenty-five to forty yards anything the size of a meadowlark stood very little show for its life. At 50 to 100 yards dogs, calves and similar targets were taking long chances. You have all, or at least many of you have done the same thing. Now how did you do it? Did your elders ever ask you that question and were you able to answer it? You very probably were not able to give any very satisfactory reply. I could never tell them how I acquired my skill. I know now. It was simply the development of the latent sense of "accurate direction." Not one man in 500 has this sense developed. If you don't believe it, just step to the window and point your forefinger suddenly at some object like a fence picket, or a small sapling thirty or forty yards away; keep your finger perfectly still and go through the process of aiming; you will have to be careful about this or you will instinctively move your finger into the line of sight. Now see if you are pointing accurately at the object. The chances are ten to one that you are not. If your daily beef steak depended on your ability to hurl a stone hatchet into the skull of a charging aurochs, or drive an arrow into the vitals of a buffalo from the back of a galloping horse you would be able to point instinctively and accurately at any object within the range of the weapon you are accustomed to. This is the developed sense of "accurate direction" and it is the sense upon which a base ball pitcher makes his reputation; upon which the ancient archer with his cloth yard shaft depended, and which the skillful mounted pistol shot must develop.

Is the development of this sense of "accurate direction" with the pistol difficult? Not at all. There is no necessity for any expenditure of ammunition at first, nor need the expenditure of ammunition be any greater than it is at present. A suitable object for a target, an empty pistol, and then simply repeated practice in dropping the weapon on the target without reference

to the sights and correcting your error as described in the case of pointing with the forefinger. If no pistol is available simply pointing with the finger will help. When riding along on the march I constantly raise my pistol and drop it on small tree trunks, fence posts, rocks and other objects along the line of march and encourage my men to do the same. Men should be cautioned to carefully correct the direction of the pistol in each case by reference to the sights, otherwise the exercise is time wasted. I believe that pistols should be carried to drill and a few minutes devoted to practice of this kind. It would accustom the horses to the sight of the weapon and the act of pointing and render unnecessary much of the annual breaking of the animals to the sight and the sound of the pistol before beginning mounted target practice. The custom now is to put pistols away at the end of the target season and never regard them seriously as weapons until the opening of the next target season. Results cannot be expected in this way. I presume if there was an annual saber practice season we would treat our saber in the same way. But we do not. It is true that we do very much the same with our rifles, but the rifle is an entirely different weapon and when we do practice with it we devote much more time and ammunition to the work. Even so I believe it is a mistake to assign rifle practice to any two or three months of the year.

With reference to our present course in mounted pistol practice. This course provides only for firing to the flank. While it contemplates firing to the right front, left front, etc., the targets are arranged parallel to the track and the effect is that of firing only to a flank. In campaign, our cavalryman will very probably be obliged to deliver his fire to the front more frequently than to the flank. There is no reason why this cannot be carried out in practice by squads, platoons and troops. An infinite number of practical field exercises could be prepared for the pistol just as readily as those we now carry out with the rifle. This season after the close of the pistol practice, I carried out a practical field exercise with the pistol which involved charging at full speed and firing on targets directly to the front. The details of this exercise are inclosed.

While I have always been a fair pistol shot dismounted, it was only two seasons ago that I learned how to shoot the present mounted course. This came to me purely by accident. I had finished my dismounted course with the unusually low score of 306 due purely to carelessness. In order to make Pistol Expert 62 points, out of the possible 80, were necessary and I believed this to be out of the question for me. In my instruction course mounted I made scarcely anything, nor was I able to find the nature of my error for I had the manipulation of the pistol thoroughly down, and I could hold where I wanted to. On my first run through on record I saw the shot strike of two of my misses both apparently to the left. Thinking this over while waiting for my run to the left I decided that my poor shooting was due to my failure to allow for the speed of the horse which at the short distance of ten yards I had always assumed to be practically negligible. I decided to give this a test and on my run to the left I held off the target on the side from which I was approaching and made a possible. I continued this practice for the rest of my record and checked my shots after each run if I failed to see them as they were made. I wound up with a score of 69. On returning to camp, I explained to several officers who had their mounted course still to fire, what I believed I had learned and they at once tested it. One of these officers made 73 in his mounted course. I explained this principle to my troop during this season's practice and got good results in every case where the man was up on manipulation.

To secure results then, with the pistol mounted I am convinced depends on the following:

1. Manipulation. This is simply what is ordinarily termed "form," perfect ease in handling the arm.

Form is at least one third of the art of skillful use of any firearm.

2. Trained sense of direction. This has already been explained.

3. Confidence. This will naturally result from the acquisition of the other two qualifications.

4. Above all things prohibit the use of sights in firing. Use them only for correcting inaccuracies in pointing while training the sense of "accurate direction."

To recapitulate just a little. It is clear that we possess supremacy in two of the three arms which we now carry. It is equally clear that for economic reasons no nation with which we are liable to be involved will ever seriously contest this supremacy. The very fact that they do not give the time, or support, to proficiency in these two arms is to my mind the most vital reason why we should strain every nerve to maintain this supremacy and not an argument in favor of adopting their method. These are the only two trumps which we hold in a mighty shaky hand; by all means let us hold on to them. As for the third arm, the saber, there is no reason on earth why we cannot perfect ourselves in its use if we seriously take it up as we should have done long since. The Mounted Service School would seem to be an appropriate center from which to disseminate knowledge of the use of the saber. Therefore, let us give up *nothing*, but perfect ourselves in what we now have.

Above all things let us have a powerful modern pistol at once and get to work with it. The new Colt's Automatic .45 promises to be an effective weapon. With trained mounted pistol shots this weapon begins to be deadly at more than a hundred yards. A body of men armed with this weapon could deliver three shots in the last hundred yards of their attack and still have four left in the magazine. Skillful mounted pistol shots would do deadly work in the twenty-five yard zone, if not on men, at least on horses.

It is possible that we are going to lose the pistol; the powers that be may decide that it is a useless piece of equipment. But let no one deceive themselves; the American cavalryman is not going into campaign without his pistol. If the government will not supply it he will furnish it himself.

PROBLEM IN PISTOL CHARGE WITH SERVICE CARTRIDGES.

Problem.

A troop of cavalry moving north on new target range, is fired on by dismounted squad in position at base of ridge near old ruin to the east. Troop dismounts to fight on foot except rear squad which is detached to gain enemy's left flank under

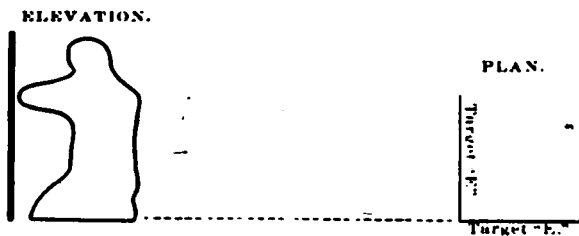
cover of the woods along dry creek bed separating old and new ranges.

Squad leader, after moving at a gallop some 500 yards, finds he has approached to within 150 yards of the enemy's position, is still undiscovered, and has cover for a charge as foragers to within 100 yards of the enemy's front. Enemy is in irregular open order with wide intervals taking cover behind bushes and trees. He decides to charge with the revolver.

Target.

A line of targets placed behind bushes with intervals of about ten paces, one target for each man firing. Each target made up of two targets "E," arranged as follows: One target "E" facing as if firing at the troop; a second target "E" placed at right angles and in rear of the preceding and flush with its right hand edge to simulate a dismounted man turning to his right while delivering fire at an enemy charging through his line; this to enable troopers to deliver to the right as they passed through the line any unfired cartridges remaining from the firing during the direct charge.

Plan of Target.



Procedure.

The two troop officers and six men who had made scores of 40 or better in their regular mounted practice, made up the squad. This squad of eight men was divided in two squads of four in order to avoid confusion and accidents at first and also to permit the troop commander, who was firing, to better supervise the test. The men were shown the targets and the following details were explained to them; to charge at full speed

directly at their target, leaning well forward and to the right; to direct their course so as to finally pass the target to its left; to continue at full speed beyond the targets into the woods; only the right flank man to fire on his flank target as he passed through the line; this last precaution was necessary for safety in practice and would not, of course, be observed in action; firing to begin at fifty yards from the enemy's line, five shots to be delivered if possible.

Four targets (see targets above) were set up and the two squads of four practiced for a run or two with the empty revolver. A run was then made with blanks and then the first four men were lined up for the charge with ball ammunition.

Results.

The first run brought out a number of important points which had not occurred to me, or at least had not been fully appreciated. The most important point was the speed with which the distance was covered when the horses were at a dead run. The result of this was that only one man succeeded in firing five shots. I was able to fire only two myself (using single action) but got a good hit at fifty yards. The next important thing which developed was that with horses at full speed the seat is much steadier and firing at a target to the front is a very much simpler proposition than firing to a flank as we do in regular practice, no allowance being necessary for the speed of the horse.

The result of the first run was as follows:

Target.	No. of shots fired.	No. of hits made.
No. 1	2	1
No. 2	3	1
No. 3	3	2
No. 4	4	0

A second run was then made with the same men running on the same targets with the following results:

Target.	No. of shots fired.	No. of hits made.
No. 1	4	1
No. 2	3	3
No. 3	4	2
No. 4	4	1

In order to permit every man to fire at the flank target of his objective, the next run was made by having each man run separately at his target with results as follows:

Target	No. of shots fired.	No. of hits made.
No. 1	3	0
No. 2	3	1
No. 3	3	3
No. 4	2	2

This completed the test for the first squad of four. The second four men were run through the course in precisely the same manner. Without detailing the individual runs, the result was as follows:

Target	No. of shots fired.	No. of hits made.
No. 1	10	2
No. 2	10	4
No. 3	10	3
No. 4	7	1*

The result of the above test far exceeded my expectations and suggested several variations of the exercise which will be carried out in other tests if opportunity offers. One of these exercises will include delivering all unfired shots to the rear after passing through the line of targets. I am convinced that, after sufficient practice with the new automatic pistol, much better results can be obtained. The new gun holds seven rounds; it is a much more powerful arm so that effective fire can be opened at 100 yards or farther; the speed with which the ground is covered will not be so much of a factor as the weapon can be fired much more rapidly and the pointing position, or position

*Pistol worked badly.

of "accurate direction," can be maintained from the moment of opening fire. The present pistol (Colt's .38) is not only ineffective as to shock, but defective as to mechanism. Not one of these pistols in ten is a six o'clock gun; the mechanism consists of so many delicate parts, especially small springs, that in a single season firing from six to a dozen pistols in a troop go out of action and have to be consigned to the store room. Fully 30 per cent. of them "shave lead" a defect which causes more horses to become incurably gun shy than any other one thing. These weapons are a disgrace to the service and I am not surprised that they have created a sentiment against the pistol.

SHIPMENT OF MEN AND HORSES BY RAIL.

BY CAPTAIN WILLIAM BENTON COWIN, QUARTERMASTER CORPS,
U. S. ARMY.

IN this present era of rapid transportation when distances are eliminated, and the thought of waking in the morning after having been carried hundred of miles in one night's time, little thought is given by the traveler to the wonderful method and system which makes all this so remarkably possible.

During this past year when our army has been more particularly mobile, through force of the unsettled conditions existing along the Mexican Border, many a staff quartermaster has been brought face to face with problems and details connected with the hurried transportation of a unit of our forces hitherto existing for him in a more or less vague form of theory solely. Acknowledging this from my own personal experiences, it seems to me to be not unlikely chance that some of my brother officers might care to profit from a few of my personal problems, the solving of them, and further, glad to be perhaps guided by a few notes of memoranda, and condensed jotting from my "Dope Book" taken from the Quartermaster Manual, text books, circulars, and so on, but not found by all to be available for immediate reference when the need for their use arises. With this possibility in view, I have sifted the following from the maze of orders and circular letters governing the transportation of a fully equipped unit of our army. These I have divided in the general order of need as will be shown under the following sub-heads:

TRANSPORTATION REQUESTS.

When an officer requires transportation requests for official use, a written request should be made, in case time permits, to the Chief of the Quartermaster Corps, Washington, D. C., for an adequate supply to meet his estimated need. In case the

need, however, is immediate a request should be made to the nearest Quartermaster for the present supply. In either case, the number of requests will be invoiced, using Form (QMC) No. 117, showing the number of requests transferred, their serial number, and when received from the invoicing officer; his invoice and receipt should be verified, the latter signed to show your receipt of the proper number and returned to him, and the former, bearing the invoicing officer's signature, given a proper serial number as provided for on the fold thereof (Cir. 18 and 19, QMGO—1911), and filed by you as a voucher to your property return. You have by this transaction opened your property account by the physical number of transportation requests you have received for.

ORDERS FOR THEIR ISSUE.

A person requiring a transportation request should present the issuing officer an order in duplicate, signed by competent authority. (If not presented in duplicate, it will be necessary for you to have a true copy made for your files). Before making out the request, study the order closely, note the number of persons for whom transportation is directed; between which points transportation is to be furnished; whether the cost is to be charged to the traveler, or to some Department other than the Quartermaster; the class of transportation, and whether or not the order contains the statement that "The travel directed is necessary in the military service." If the order is issued by a Post or Regimental Commander, and calls for transportation involving a permanent change of station, the authority directing the change and travel involved should be quoted in the order. After satisfying yourself that the order is competent in every detail, issue the request to the initial carrier in the name of the person designated in the order, if for more than one person, in the name of the person in charge of the number of persons in the order, as: and persons. State the class of transportation, whether 1st Class limited, or 2d Class, whether Special or Contract Rates apply, giving in each case the number and date of authority for Special or for Contract Rates. Care should be taken in filling out the stub of the request so that it corresponds in all essential details. Both

copies of the order directing travel should then be indorsed: Post 19 .. Transportation furnished on this order from .., to .., for (name of person, or persons in charge and number traveling), via (route in full) Class (1st, or 2d limited), with Berths in (Standard or Tourist Sleeper). File one copy of this order, returning the other with the transportation request to the traveler, instructing him, if necessary, where to present it in return for ticket or tickets.

A copy of the original transportation request is made on Form 17, which is attached to and mailed to the office designated to settle the accounts of the initial carrier on which the request was drawn. (See Cir. 1, QMGO—1912 for list of designated offices) on Form 100 (yellow). The request should be entered on Form 1-A, (QMC).

FORM 1-A, QUARTERMASTER CORPS.

Cir. 3, QMGO—1911, states: "Form 1-A, ("List of bills of lading and transportation requests issued") will be kept up *currently*. To this end proper entry will be made upon Form 1-A immediately upon the issuance of bills of lading, transportation or sleeping car requests, and before they are signed." The essential datum to be shown on this form is, briefly: Such as is called for under the headings on the form, and, in addition, entry will be made showing the disbursing office to which each memorandum copy (Form 17) of transportation and sleeping car requests have been sent. To quote further from the above mentioned Circular: "For its own protection, this office (the QMG) will be obliged to take measures to fix individually the responsibility for failure on the part of any one concerned to supply, according to existing instructions, the information required."

CLASS OF TRANSPORTATION.

When an order presented for the issue of transportation does not specify the class to be furnished, the issuing officer is required to determine the proper class authorized to be furnished as specified in Army Regulations and amendments thereto. Cir. 21, OCQMC., 1904. prescribes that a seat by day and a

berth by night be provided for each soldier, *when the cost* does not exceed the cost of the 1st Class limited fare; when sleeping car accommodations are *not* provided, the soldier is entitled to 1st Class fare, unless otherwise specified in the order. Under the above ruling a soldier, or a detachment of soldiers can, in most cases, be provided with sleeping car accommodations. The following governs: If a detachment, determine the cost by taking the cost of one upper and one lower berth for each three men, as follows: Three 2d Class fares, plus the cost of one upper and one lower berth; if the total cost of the above does not exceed three 1st Class limited tickets, then the 2d Class transportation, and two berths for each three men can be furnished. In a case of one man traveling: If 2d Class fare and tourist berth can be furnished at a cost not to exceed 1st Class fare, then the former may be furnished. In drawing sleeping car requests care should be exercised to specify the number of berths required, *not* sections, for three men; draw the request for two berths (allow one section). (See Decision, QMGO—March 15, 1910). In drawing a sleeping car request (which is the same form as is used for rail), for both officers and enlisted men, the number of berths required, and the number of officers and enlisted men, must be shown separately; namely: Twenty berths in tourist car, two officers and fifty-four enlisted men. In determining sleeping car accommodations for enlisted men, apply the following: 3 men to a section, or, two berths for each three men; if there is a fraction over, then one berth for each man over. Those to whom sleeping car requests are furnished, should be instructed to state in their receipt the number of lower berths (separately) actually furnished.

As tariff rates on upper and lower berths, which went into effect February 1, 1911, authorizes a charge for an upper berth of eighty per cent. of the tariff charged for a lower berth in either standard or tourist cars, transportation requests should show the number of berths, standard and tourist, lower and upper separately. Circular No. 1, OQMG—1911, states: "Officers are to be furnished with lower berths if practicable."

NON-COMMISSIONED OFFICERS.

A non-commissioned officer traveling from Omaha to New York is entitled to 1st Class transportation, with standard sleeping car accommodations for the entire journey. (See GO—27, WD—1910), because there is no 2d Class transportation with tourist car accommodations between these two points, but if, however, the journey were from Omaha or New York to San Francisco, it would be different, as in this case 2d Class rates and tourist sleepers could be obtained for a part of the journey, and in that case 2d class rates should be furnished for that part of the journey over which such rates applied.

1st. Under the provisions noted in the foregoing paragraph, and G. O. 27, WD., 1910, any non-commissioned officer traveling under competent orders, when the travel exceeds twelve hours, and it is *not* day travel, is entitled to sleeping car accommodations for the entire journey. If 2d Class transportation, with tourist sleeper, can be obtained, the transportation should be drawn for 2d Class and berth in the tourist.

2d. When 2d Class transportation, with tourist accommodations can be obtained for a *part* of the journey, and standard sleeper and 1st Class for the balance, the request should be drawn for 2d Class rail, and tourist sleeper for the part of the journey to which that rate applies and 1st Class for the balance.

3d. On some roads which operate tourist sleeping cars no 2d Class fare is in force. In this case draw transportation requests for 1st Class fare and tourist sleeper. (Decision QMGO—1912, Cir. Letter No. 5367). All transportation requests drawn for officers must be *routed*, and the route shown on the request must be indorsed on the travel order.

4th. When the established route of travel shall, in whole or in part, be over the line of any railroad on which troops and supplies of the United States are entitled to be transported free of charge, or over any fifty per cent. land-grant railroad, officers traveling as herein provided for shall, for the travel over such roads, be furnished with transportation requests, exclusive of sleeping and parlor car accommodations, by the Quartermaster Corps, or when the established route of travel is over any of the railroads above specified, there shall be deducted from the officers' mileage account, by the Quartermaster paying same.

three cents per mile for the distance for which transportation has been or should have been furnished. If an officer fails to secure transportation requests over subsidized roads, he cannot be reimbursed for what it would cost the Government had transportation requests been furnished.

Transportation should be furnished over the shortest usually traveled route, but if the officer requests that transportation be furnished over any other route or routes, it may be issued as requested, but the fact that it was so routed at the officers request and for his own convenience, must be indorsed on his travel order. Sleeping car requests are not furnished to officers except when they are traveling with troops.

Tourist car accommodations should be issued in connection with 1st Class transportation when practicable, and when no 2d Class rates are available for transportation the provisions of Par. 1143, A. R. 1910, are mandatory that the lowest class of sleeping car accommodations shall be furnished a non-commissioned officer, when available.

SEA TRAVEL, ENLISTED MEN.

When drawing a request for sea travel for an enlisted man, he should be furnished 2d Class transportation, excepting in cases where 2d Class transportation is not available, when he is entitled to 1st Class transportation. (See A. R. 1143—1910).

OFFICERS.

Actual expenses only will be paid officers for sea travel when traveling under competent orders with or without troops. The amount so paid will not include any expenses while ashore at port of embarkation, intermediate, or of debarkation.

COST TO BE CHARGED TO SOLDIER.

When an order directing that transportation be furnished by the Quartermaster Corps (soldier reporting from furlough, without means, etc.) and the cost thereof charged to the soldier specified in the order, the request is drawn in the usual manner. Notation is made on the back that "Cost is to be charged to the soldier," giving his name, rank, organization, and the date and number of the order under which such transportation has been

furnished. The organization commander is then notified by letter of the tariff cost (probable cost if tariff is not available). At the same time, the officer of the Quartermaster Corps designated in Cir. 1, QMGO., 1912, or in amendments thereto, to settle the account, is notified and requested to immediately inform the organization commander of the "net cash" cost of the journey made to be charged to the soldier, so that proper notation may be made on the muster rolls of the organization. In the column of "Remarks", Form 1-A, following the entry of this request, the fact that cost is to be charged to soldier, will be duly noted.

ATTENDANT WITH INVALIDED SOLDIER.

When an attendant accompanies an invalided soldier, he is entitled to the same sleeping car accommodations as the invalided soldier, which is in the standard car. In this case the Surgeon furnishes a certificate showing the necessity for the accommodations to be furnished. (See A. R. 1143, 1910).

CANCELLED REQUEST.

When an unused transportation request is returned to an issuing officer, he should plainly write "cancelled" across the face, and initial it. Form 1-A should then be corrected to show this request cancelled; the same action also to be taken on Form 43, QMC. The cancelled request should be forwarded with Form 43 at the end of the month. In case cancellation takes place after the Form 43 has been forwarded, the cancelled request should be forwarded to the Chief of the Quartermaster Corps, U. S. A., with the request that your Forms 1-A and No. 43 should be amended to show such cancellation.

ATTENDANTS WITH CARLOAD SHIPMENTS—PUBLIC ANIMALS.

In *carload* shipments, an attendant is in all cases furnished free transportation to destination of livestock with one carload of horses or mules. In the territory west of Chicago and the Mississippi River (including the states of Illinois and Wisconsin) but not including the states of California, Oregon or Washington (and not local stations of the Southern Pacific R. R., in

Arizona), free return transportation will be furnished an attendant who has accompanied a carload of horses or mules.

In shipments of less than carload lots, in the territory east of Chicago or St. Louis, and north of the Ohio and Potomac Rivers, an attendant is furnished free transportation to destination, and in all other territory, western and southern, free transportation is *not* furnished attendants to destination or returning.

In cases where an attendant or attendants accompany shipments of animals in carload or less than carload lots, no separate transportation request will be drawn by the shipping Quartermaster for their transportation, but the bill of lading which is issued with the shipment of live stock they accompany, will be indorsed: "Transportation required for attendants. (Give their names). Shipping officers will immediately arrange with the agents of common carriers to issue transportation for attendants on this authority. The fare of attendants, when not carried free, will be paid by disbursing Quartermasters in connection with the freight charges on the livestock when settlement is made on the bill of lading.

When it is necessary to furnish return transportation, after delivery by attendant of livestock at destination to which consigned, to enable attendant to return to their proper stations, and when no free transportation is authorized under railroad rules, transportation requests will be issued for the return journey. This will be 2d Class in all cases when available. If not available, 1st Class limited transportation will be furnished. When the return journey exceeds forty-eight hours, and 2d Class fares are available, tourist sleeping car accommodations are authorized in case of three or more men traveling together, on the basis of three men to a section. Less than three men, may be furnished a berth. In no case will berth in standard sleeper be furnished.

When free return transportation is authorized under the regulations of the common carriers concerned, no return transportation request will be issued by the Quartermaster Corps, but attendants will be instructed to present their stock contracts to agents at destination and secure transportation without cost to the Government, in accordance with

the rules stated in their contracts. In cases of shipment to points in Oregon and Washington, transportation at one-half limited first class fare is furnished the returning attendant, and transportation request issued for such travel under such conditions will be endorsed: "One-half 1st Class limited; Returning attendant, T. C. F. B., Tariff No. 4-H."

It is assumed in all cases that shipments of public animals on Government bill of lading shall be fully foraged by the Quartermaster from the point of origin to destination, but for other expenses, such as loading, unloading, watering, resting and for occasional emergency feeding charges that may have to be incurred en route attendants in charge of livestock will be furnished by the shipping Quartermaster in all cases, with a form of certificate, indicating number and date of bill of lading, issuing officer, shipping point, destination and routing, to be used by them in calling for services of the character referred to above, when in transit. These certificates to be signed in duplicate by the attendant in charge, one copy to be given to the agent of the common carrier that furnishes the service at the point where performed, the other to the consignee, to be forwarded by him to the office designated to settle the account. (See Cir. 1, QMGO—1912.)

HORSES OF OFFICERS CHANGING STATION.

Under the provisions of paragraph No. 1114, A. R. 1910, an officer is entitled to have horses purchased and shipped from point of purchase to his new station, provided that cost of shipment from point of purchase to his station, does not exceed the cost of shipment from his old to his new station on his last change of station; and, provided that the officer has not had his authorized private mounts shipped from his old to his new station, the total cost to the Government not to exceed \$100 for each animal including the cost of transportation for an attendant.

An officer desiring to ship his mounts under the provisions of the above, should prepare and forward to the shipping Quartermaster the following papers: Invoice, on Form 117, QMC, in duplicate; a certificate in duplicate, as follows: I certify that under the Act of Congress Approved March 23, 1910,

that I am entitled to have my private mounts shipped from (point of purchase), to my new station.....
My last change of station was made pursuant to Orders
No., dated 1911 from , to , orders
No. Sgd Rank.....

Under the provisions of Par. 1114, A. R. 1910, an officer under orders for duty over the sea, may have his authorized mounts transported on Government bill of lading to any place in the United States he may elect, and upon his return to the United States, transported to him at his new station there.

Owners of animals desiring to ship same under the provisions of A. R. 1114, 1910, must prepare invoices in duplicate on Form 117, and furnish the following certificate in duplicate; I certify that the horses, transferred by me to the Quartermaster Department at , pursuant to change of station, per Order No., are owned by me and are intended to be used by me at my new station in the public service.

ATTENDANTS ACCOMPANYING.

The name and address of the attendant to accompany the horses should be noted on the face of the invoices. The certificate will be attached to and made a part of the bill of lading issued by the Quartermaster. An enlisted man may be ordered to accompany as an attendant the authorized horse or horses of an officer changing station under competent orders, and ordered to return to his station upon completion of the duty. Commutation of rations when necessary, may be ordered paid to an enlisted man traveling on this duty.

The order directing the change of station of an officer will constitute the authority of the soldier's commanding officer to issue the order as stated above. (G. O. 21—W. D., 1911.)

STATE SANITARY REQUIREMENTS GOVERNING ADMISSION OF LIVESTOCK—HORSES AND MULES.

Alabama: Health certificate in duplicate, issued by an officially qualified veterinarian.

Arizona: Health certificate, preferably including Mallein test.

California: Health certificate, including Mallein test. One copy of certificate and test record attached to way-bill, and duplicate copy mailed to State Veterinarian on day of shipment.

Colorado: None.

Connecticut: None.

Delaware: None.

Florida: None.

Georgia: None.

Idaho: None.

Illinois: None.

Indiana: None.

Iowa: None.

Kansas: Inspection certificate issued by Federal or State authorities, when shipped or driven from below the southern quarantine line, showing them to be free from Texas fever ticks.

Kentucky: None.

Louisiana: Health certificate showing freedom from all contagious, infectious and communicable diseases.

Maine: Health certificate and Mallein test.

Maryland: None.

Massachusetts: None.

Michigan: None.

Minnesota: All branded horses, mules, or asses imported into Minnesota must be accompanied by a health certificate, certifying that animals have been examined and Mallein tested within thirty days prior to date of shipment and found free from glanders.

Mississippi: None.

Missouri: None specifically required, the statutes of the State forbid the importation of animals affected with glanders, farcy or nasal gleet.

Montana: Health certificate including Mallein test.

Nebraska: Health certificate.

Nevada: None.

New Hampshire: None.

New Jersey: None.

New Mexico: Health certificate.

New York: Health certificate.

North Carolina: Health certificate when for breeding purposes.

North Dakota: Health certificate, including Mallein test made within thirty days prior to entry into State. Certificates for stallions should, in addition, show the animals free from infectious, contagious or transmissible diseases or unsoundness.

Oklahoma: Health certificate stating particularly that stock is free from ticks.

Ohio: None.

Oregon: Health certificate, including Mallein test of stock used on railroad or other construction work. Horses that are part of settlers' effects, and animals for breeding purposes need no inspection but must be free from disease to comply with Oregon statutes.

Pennsylvania: No certificate, but must be free from contagious or infectious diseases.

South Carolina: Health certificate and Mallein test of any exposed animals.

South Dakota: Health certificate including Mallein test.

Tennessee: Must be free from equine scabies, glanders or other contagious, infectious or communicable diseases. No certificate.

Texas: Health certificate.

Utah: Health certificate, including Mallein test for stallions and jacks.

Vermont: None.

Virginia: None.

Washington: None. Physical inspection.

Wisconsin: Health certificate, including Mallein test.

Wyoming: Health certificate, and for stallions and jacks, include Mallein test.

DETENTION AND INSPECTION, QUARANTINE.

In lieu of an inspection certificate, as required by Rule No. 18, Live Stock Commission, stock may be detained at a suitable stockyards or other inclosure within the states, nearest the state line, on the railroad or on the highway over which they are being shipped, driven or hauled, and there examined at the

expense of the owner, or may be shipped, driven or hauled to their destination under quarantine at the discretion of the owner there to remain in quarantine until inspected, and tuberculine or mallein tested at the expense of the owner, and released by the State Veterinary Surgeon. Such an expense shall be a lien on the livestock.

Railroad or transportation companies are required to notify the State Veterinary Surgeon of any shipments of live stock entering the State, and not being accompanied by certificates of health as required by the State laws.

All health certificates are to be made in duplicate, one copy given to the Quartermaster to be attached to the bill of lading, and the other copy given to the attendant.

PRECAUTIONS NECESSARY.

Officers should inspect the stock cars, and have them thoroughly disinfected by a Veterinary Surgeon where possible. He should also see that the cars are free from nails, loose boards in floors and sides of walls; see that the stalls are solidly built, and that the car is well stocked with hay and the necessary amount of water. Hay should not be placed on the floor of stalls as it makes them too slippery. The attendant should be provided with a bucket, lantern, hatchet, and also with one or more blank official telegraph blanks (Form 87-QMC), together with his bill of lading, live stock contract and certificates of health.

NOTES ON WAGON TRANSPORTATION.

BY LIEUTENANT CARY I. CROCKETT, SECOND INFANTRY.

THE Field Service Regulations prescribe as a unit of army transportation the wagon company consisting of 27 wagons, 5 riding mules, 112 draft mules, and a total personnel of 36 men.

It is believed that in future warfare, though automobile trucks will doubtless be of great use in transporting men and supplies, the service of supply for troops operating in the field at a distance from depots will be dependent largely as heretofore upon wagon transportation and it is relative to the latter that the writer has ventured to present the following notes gleaned during two years of experience as a wagon-master serving with troops in the field in time of war.

ORGANIZING AND EQUIPPING THE WAGON COMPANY.

Assuming that war has been declared, troops have been assembled in mobilization camps for formation into brigades and divisions; and the supply and ammunition trains of the divisions are being organized; the situation confronting the officer responsible would probably be as follows:

There would be several thousand mules running loose in the depot quartermaster's corral; the wagons, harness, equipment, tools, etc., would be in boxes and crates in the quartermaster's store houses; and the wagon masters, teamsters, etc., yet to be secured.

The first thing to do would be to get together the necessary personnel for each wagon company, viz.:

- 1 wagon master;
- 2 assistant wagon masters;
- 1 horseshoer;
- 1 blacksmith;

1 saddler;
 1 cook;
 1 watchman;
 28 teamsters.

This would be difficult. The result would be, as found in actual experience, that the depot quartermaster would have enough civilians on his rolls to fill these places; that organization commanders would object strenuously to the detail of soldiers for these duties as this would decrease their number of effectives; and that in order to get men any one and every one who would apply for work would be engaged without regard to previous experience or training.

Apropos of this the writer has in mind a vivid and painful recollection of a certain rainy night in Japan when 500 mules en route to the Philippines were unloaded from a transport with a working force of such men, engaged as teamsters on the dock in Tacoma, and a still more painful recollection of a very warm day in Manila when each of these same emergency men attempted to catch, harness, and drive four half-broken Missouri mules.

There were among others, a lawyer from Australia, an Italian ex-naval officer, and an alleged member of the English nobility. It is no exaggeration to state that these hardly knew which end of the mule to put the collar on. There were wagon masters who could neither assemble a wagon nor put together a set of harness. When the means for supplying troops in the field are in such inefficient hands the probabilities are that the troops will suffer.

It would seem that the organization of a supply corps in which men could be enlisted and trained for this service would operate in the direction of economy as well as efficiency.

Having secured his men the officer in charge would draw for each company:

27 escort wagons, complete (including sheets and bows);
 27 extra tongues;
 27 extra reaches;
 2 extra wheels (one fore and one hind);
 12 extra lead bars;

4 extra doubletrees;
 6 pair extra hounds (front and hind);
 32 curry combs and brushes;
 2 extra wagon sheets;
 27 G. I. buckets;
 27 lash ropes;
 27 axes;
 27 picks;
 27 shovels;
 6 fifth chains;
 27 whipstocks and lashes;
 27 extra axle nuts;
 27 extra tongue bolts (used as wagon wrenches);
 27 candle lanterns;
 27 cans axle grease;
 60 open links;
 1 block and tackle (one double and one single block with 200 feet of rope);
 1 box harness oil;
 1 box veterinary supplies;
 1 portable forage (blacksmith's and horseshoer's outfits);
 1 saddler's kit (including a side of leather);
 1 box tools (hammer, hatchet, saw, etc., also assorted nails);
 Extra mule shoes and nails;
 5 Q. M. saddles, blankets and bridles;
 130 head halters and chains (13 extra);
 56 sets wheel harness (2 extra);
 56 sets lead harness (2 extra);
 50 extra hame straps;
 8 pair extra hames;
 8 extra collars;
 36 revolvers, belts, and holsters with 720 rounds ammunition;
 36 mess kits;
 1 field range complete;
 1 conical wall tent (2 in cold climate);
 112 draft mules (4 extra);
 5 riding mules;

The writer has depended upon memory in making the above list but he believes that a wagon company so equipped could easily undergo three-months hard service in the field in a theater of operations where articles of equipment could not be renewed; naturally under other circumstances it would not be necessary to burden the company with all of the extras mentioned.

The efficiency of the company is maintained however at the cost of constant care and vigilance on the part of those in charge. Thirty-six men for a company of twenty-seven wagons is a very liberal allowance. The writer has had to do with no assistant, one horseshoer, one cook, and thirty teamsters, for a wagon train of thirty wagons and this in the field in time of war. No tentage or field range was furnished in this case.

The wagons should be of uniform and standard make. The wagons used in the Philippines during the Insurrection were of three different kinds, consequently, extra parts for each kind had to be carried and those of another kind when available could not be substituted.

The extra tongues and reaches are very necessary; they are carried outside the wagon bed in iron straps which hook under them and over the edge of the bed.

The extra wheels are inconvenient to carry but should be taken if a long march or expedition is contemplated. The fore wheel can be lashed under the rear of the bed and the hind wheel carried in the wagon. The axes, picks and shovels are securely fastened in cleats outside the beds. The fifth chains are fastened from front to rear under the wagons or to the tongues if ropes are used in place of chains. The lanterns are placed in the buckets and both swung under the rear of the wagons. Other extra parts are attached under the foot-boards or outside the beds wherever most convenient. Those which cannot otherwise be conveniently carried are loaded in the field wagon of the company.

The object of the wagon company being to transport heavy compact loads, this should be interfered with as little as possible in attaching the extra parts and in loading the forage for the team and the bedding and clothing roll of the teamster.

The jockey box of each wagon should contain extra hame straps, and extra brake blocks, extra shoes (ready fitted) for

the team, a can of axle-grease, two open links, an extra axle nut, a tongue bolt (wagon wrench), a curry comb and brush, and personal articles of the teamster.

The lash rope for each wagon is indispensable. The whip is necessary as without it the lead team can "jack-knife" and break the tongue, the teamster being helpless. The block and tackle is invaluable as a time and labor saving device, especially when traversing a rough country where roads and bridges are bad. With this arrangement wagons or animals can be lifted out of ravines or ditches, up steep inclines, out of quick-sand, mud, etc., overturned wagons righted; and wagons run on and off flat cars, with ease and celerity.

To continue with the organization of the company. The mechanics and laborers of the Quartermaster's Department would probably set up and grease the wagons; while this is going on the horseshoers should be at work shoeing the mules. The teamsters should be assembled, each given four halters and chains, and taken to the corral to get the mules.

It is probable that in order to facilitate matters the mules will have been classified and separated as follows: The short coupled blocky, round-barrelled, straight-backed mules, suitable for pack service, in one inclosure; the smaller lighter and more active draft mules, suitable for lead-teams, in another inclosure; the larger heavier draft mules, suitable for wheel teams, in a third inclosure.

While waiting to be shod the mules should be tied to a picket line and the harness fitted under the direction of the wagon-master and his assistants. Mules should be unharnessed however when brought to be shod.

As soon as a team is shod the teamster should harness and hitch to his wagon, load any articles at the store house that are to be taken to camp, and drive to where the wagon park is to be established. When his wagon is unloaded he should draw his equipment and extra parts, drive to his proper place in camp, unharness and busy himself in attaching the extra parts and in general getting his outfit in shape for field service.

In the mean time rations and forage will have been drawn and the company mess established.

If the company is to remain in camp for a week or longer the ground around each wagon should be cleared and ditched and harness racks improvised. While in camp a regular routine should be established and strictly adhered to. The animals should be fed at about daybreak, they should be watered before or at least an hour after feeding; groomed thoroughly, and the camp and surroundings policed.

When it is impracticable to feed three times a day, about one half the allowance of grain should be fed in the morning and, if there is time for eating it, a little hay. When possible some hay should be fed before the grain is given. The rest of the allowance of hay and grain should be fed at about 5:00 p. m., after the animals have been watered. The grooming at this time should be as thorough as that in the morning. The wagon master or one of his assistants should always be present when the animals are fed, groomed, and watered. Grain should never be fed on the ground; when hay is fed on the ground the teamster should take care that it is not wasted as will be the case if too much is fed at one time. The old Spanish adage "Elojo del amo engorda el caballo" (the eye of the master fattens the horse) applies here. The animals should be given salt about once a week. The allowance of fourteen pounds of hay and nine pounds of oats is ample and the animal if properly cared for and moderately worked should fatten on it. It is well to cut the allowance of oats down about one-fourth when the animals are not worked regularly.

It is always necessary to have a man on duty at night as watchman to guard the property, catch loose animals, and see that animals do not become entangled in the lines and get rope-burns or other injuries.

The company should be instructed and drilled in taking the formations prescribed in Field Service Regulations.

The wagon companies of a train may be encamped in column of companies, the wagons of each company in line, mules tied to the wagons, or to picket lines stretched between companies, the kitchen on one flank, lantrines on the other.

The wagon master should be held directly responsible for the discipline of the company and for the care and preservation of its property. He should receive the orders given by the

officer in command and be held responsible for the manner of their execution. An assistant wagon master should act as forage master and clerk, make out ration returns, "keep track" of the property, etc. At inspections all leather equipments should be displayed and disciplinary measures taken if these have not been duly cleaned and oiled.

The wagon company should be as independent as possible; that is, the necessity for asking assistance from combatant troops should rarely arise. Occasions may frequently be known when defense from the enemy will be all that can be required of the train guard and escort; or the troops on this duty may not be of sufficient strength to furnish much assistance; here the wagon master will have an opportunity to demonstrate the efficiency of his company.

To promote this independence and to facilitate the execution of any duties out of the ordinary the company should be divided into thirteen units or sections, the last section including the field wagon of the company. The teamsters of each section work together; when a wagon is mired or overturned the other teamster, without waiting for orders, should come to the assistance and attach his lead team as a snatch team. A complete set of extra parts and of tools is carried by each section.

It is of course the duty of the train guard and escort to further in every way the steady advance of the wagon train but it is held that the wagon companies should be able in an emergency to dispense with such assistance.

In December, 1899, the writer was ordered to take a wagon train of thirty wagons from Cabanatuan, Nueva Ecija, to Manila in order to accompany General Schwan's expedition south of Manila. An escort of four cavalymen was furnished. The train proceeded over abominable roads to Malolos thence to Manila down the railroad, utilizing the railroad bridges to cross the many streams. There were no other bridges, no ferries, and the streams were too deep to ford. A flooring about a yard wide made with planks taken from the floors of houses was placed on the bridge for the mules to walk on; the wagons were hauled up the embankment by hand, across on the bridge, and down the embankment on the other side; (here the block and tackle was useful), the mules led over, hitched to the wagons

again, and the march continued to the next bridge where the same operation was repeated.

The cavalrymen were obliged to swim their horses as these refused to walk the planks over which the mules were taken. The wagon train arrived in Manila in time to accompany the expedition under General Schwan.

This account is given merely as an example of what the exigencies of war service may require of a wagon company. With the organization into sections one man of each section can watch the teams and the others are available, with the tools at hand, to fix a broken wagon, repair a bridge, improve a bad spot in the road, etc. The necessity for the use of the teamsters may be of daily occurrence when operating in a theater where roads are bad.

MOVING THE WAGON COMPANY BY RAIL.

When orders to move by rail are received all the company property is loaded in the wagons and the company moved to the place designated for entraining. The company should do its own loading and unloading without asking help from combatant troops.

The equipment, forage, rations, etc., are loaded in box cars; the mules are unharnessed and held or tied; the harness is put in sacks and these placed in the proper wagons; the wagons are run up on the flat cars by hand (the block and tackle is useful here especially if an improvised ramp is used), the tongues are unshipped and placed in the wagons, and the wagons are blocked and lashed. The mules are then led into the stock cars, and if the journey is to be a long one, the halters removed. An ordinary stock car will hold nineteen or twenty mules placed with the heads and tails alternating. The men travel on the cars with the wagons or in the box cars. A day coach or tourist car, while adding greatly to the comfort of the men, is not necessary and in time of war would probably not be furnished.

Travel rations are issued and a boiler for making coffee kept at hand; the cook can make hot coffee in a few minutes during stops. The writer has traveled nearly all the way across

the United States three times under such conditions and enjoyed the trips.

Stock cars should be inspected before they are loaded and no car accepted that is in bad condition. Care must be taken that there are no broken parts, projecting nails, splinters, etc., that might injure the animals.

To prevent shipping fever and other infectious diseases the cars should be disinfected before the animals are put in them.

To disinfect a stock car, spray with chloride of lime, 2 per cent. solution; or creolin solution, 60 c. c. (4 table-spoons) in a bucket of water; or clean thoroughly and white-wash with freshly prepared white-wash. This is important. Troops about to take the field want their transportation available and can not wait to nurse sick animals. An army marches on its belly which, as a rule, is ministered to by the wagon trains.

When the train stops, men previously detailed examine each car to see that all is well with the animals. The lanterns, buckets, and axes on the wagons should be kept ready for use while en route. No straw for bedding should be used in the ordinary stock car. Animals which are down are assisted to rise before they are trampled upon and injured by the others. The wagon master and assistants supervise the watering and feeding, care being taken that no animal is neglected. Animals that are crowded away from the feed boxes should be fed oats in buckets or on a newspaper placed on the car floor; the oats can be poured in through a funnel made out of a newspaper.

THE WAGON COMPANY IN THE FIELD.

Unloading from a railroad train is accomplished inversely as the loading but should require less than one-half the time.

The company is then formed in line or in column as is the more convenient, the teamsters in their places and all in readiness to move when the order is received. While waiting, the wagon master should make a careful inspection of each wagon and team to see that all are fit for field service.

When the column moves out, the wagon master should halt and make a critical inspection of each team, wagon, and load as it passes; he then arranges to make any necessary changes at the first halt. The wagon master should march at

the head of the company, one assistant at the tail, and one opposite the center.

The wagons should be kept closed up. If a teamster has to stop to arrange something about the wagon or harness, he should drive to one side in order not to delay the others in rear and should return to his place in column at the first halt. The left side of the roadway is kept open whenever possible. An assistant wagon master, and if necessary the other wagon of the section, should fall out to help the one in trouble to close up promptly.

The Field Service Regulations prescribe a distance of two yards between wagons while on the march (this of course being exclusive of the road space occupied by each wagon and team). It is believed that it would be as difficult to keep wagons closed to this distance (unless marching over excellent roads) as it would be to keep a column of infantry closed to facing distance while marching over a rough trail and that some lengthening out must be allowed for.

A wagon train cannot be placed in the formations prescribed in Par. 171, F. S. R., quickly and without confusion, unless the teamsters have had much previous instruction.

The brakes should be used when descending inclines, however slight these may be, as this saves the necks of the wheel mules. The whip is not an instrument of torture and should be used as little as possible. Its principal use is to keep the lead team out of the way of the wheelers and to prevent the former from "jack-knifing" and breaking the tongue.

It is a mistake to suppose that mules are naturally vicious and require rough treatment. They are far more intelligent than horses and respond quickly to kind treatment becoming as gentle as kittens. If handled properly they will work as long as they have strength to move.

To start a wagon when heavily loaded the teamster should gather the team, release the brake, and give a short whistle, followed by the word for starting. Mules soon become accustomed to "dropping into the collar" together at the word of the teamster; the whistle prepares them for this.

When a wagon is stalled in deep mud, a fifth chain should be attached around the felloe and tire of the hind wheel deepest in and to the lead bars of a snatch team. The additional force

of the snatch team, if applied from the front nearly parallel to the wagon will usually extricate it. The chain should not be attached to the axle or to any of the spokes. A rope is better than a chain for this as it does not cut the felloe. The chain or rope should be hooked or hitched so that it will come loose when the wheel turns. One lead team attached in this way gives a better result than four extra mules on the tongue.

When a muddy stretch of road is encountered the sections should "double up" before attempting the passage. It is better to do this than risk getting several wagons badly mired, besides it saves the mules. The same method should be adopted before attempting the ascent of a very steep incline.

A good teamster when driving through mud or up a hill will never allow his team to stop of its own accord; when he sees that the load is too heavy and the mules are about to give out, he stops them; it will then be less difficult to start them again. They are inclined to give up if allowed to pull until exhaustion stops them.

A wagon is sometimes stalled in fording a stream and may be necessary to drive another wagon alongside and transfer a part or all of the load.

A mounted man should precede the leading team when fording. A mounted man approaching a team in running water to assist the teamster should do so from the downstream side; if approached from up stream, the team will invariably turn down stream and perhaps break the tongue or overturn the wagon. The writer learned this to his cost when fording the Bagbag river, a swift and dangerous stream in the Philippines.

To cross sluggish streams too deep to ford; the wagons can be unloaded and the loads sent across on rafts or in boats the mules made to swim over, and the wagons dragged across on the bottom. A rope is tied to the center of the front axle hitched around the front end of the tongue, carried across the stream, and a snatch team attached. The wagon is run quickly across under water. This method was often used to cross "esteros" in the Philippines and always successfully. Boats should be used, if available, when crossing animals by swimming. A man sitting in the stern holding a halter chain in each hand can guide two mules over. When swimming with a mule the

teamster should swim on the down-stream side, one hand grasping the mane above the withers; if the mane is clipped the collar is left on to afford a hold. The mule can be guided by splashing water with the other hand. This method is dangerous for inexperienced men.

The writer once had to cross a swollen river in Northern Luzon with five wagons loaded mainly with eighty thousand dollars in bullion for the pay of laborers on the Benguet Road. There was no bridge, the river was too deep to ford, too swift to use a raft, and a few small "banicas" were the only boats available. The responsibility for a hundred Bilbid prisoners with only a small detail to guard them was a further handicap.

The situation was similar to that of the farmer in the children's puzzle who had to cross a river with a fox, a goose, and a bag of corn, in a boat which would hold only himself and one of his encumbrances at a time.

In this case it was necessary to take the wagons entirely apart and send them over by bits in the small boats; the mules were made to swim behind the boats; the money was sent in the boats, a piece of bamboo was tied with a long cord to each box of money as a buoy to locate it in case of an upset; twenty of the prisoners were turned into a working force, the rest shackled together and left under guard until the wagons and mules were crossed. The crossing took about five hours and is mentioned to show the expedient used. Though the problem may appear difficult there is nearly always some way to get a wagon train across a stream.

When the company is in the field the wagon master and assistants may have to work from before daylight until after midnight. They should not sleep until the last wagon is brought into camp and its team properly cared for.

The wagon train accompanying General Lawton's command on his advance through Northern Luzon rarely got into camp before dark and, as there was no forage carried, it was then necessary for the teamsters to seek a rice field and, knee deep in mud and water, to cut green rice enough for four mules and carry it to camp on their backs. Some of the men were usually sick so the wagon-master had his share of rice cutting, in addition to providing for his own mount. The work became

so arduous eventually that several of the teamsters (civilian) refused duty; as their services could not be spared they were "spread-eagled" against the hind wheels of wagons and left there until they became amenable to discipline.

The wagon master should make a daily inspection of the collars to see that they are kept clean. If dirt is allowed to accumulate on the surface bearing against the animals' shoulder, a sore will soon result. The collars should be rubbed clean not scraped and no oil placed on the bearing surface.

A mule can be led behind the field wagon when necessary to rest it because of sickness or injury and one of the extras substituted; if none is available, the team can be used as a "spike team" until another mule is secured.

Some tentage would probably be necessary in a cold climate. Ordinarily the teamsters sleep in or under the wagons and in this respect are sometimes better off than the troops.

In 1899, when General Lawton's command was crossing the Rio Grande at Cabanatuan the troops in bivouac on the banks of the river had no protection from the rain other than improvised out of cogon grass. Late in the night when the rain was falling in torrents some line officer approached one of the ammunition wagons and in an ingratiating tone asked the teamster if he "had room for a captain in there." The teamster stretched luxuriously and replied "no" that he "had a major in with him already." The captain sighed and splashed away into the darkness. The teamster lodged better that night than did General Lawton and the officers of his staff who spent the night on the shore hastening the crossing and encouraging the men at work by their presence and example.

Opportunities often occur for grazing and this can be resorted to, even at night, when forage is scarce. Mules are different from horses in that they are not so easily stampeded and of their own accord remain in the vicinity of the wagons.

Though night alarms were frequent in the early days in the Philippines the writer never witnessed but one stampede and that occurred not in the Philippines but in Japan on the before-mentioned night when disembarking from a transport. The ship was brought alongside the dock in Kobe at about dusk and the unloading was not completed until nearly midnight.

By that time about two hundred mules were running loose in the city, enjoying their freedom hugely after a month on board ship but spreading consternation and terror among the natives. The entire police force was called out to round them up and eventually cornered them on Motomachi Street. The chief of police, himself well in the rear, ordered his men to close in, and the lines of policemen slowly advanced each carrying a paper lantern on the end of a stick. This stampeded the mules; cut off from the street they ran through some houses in the rear which, judging by the way they crumpled up; were constructed of match boxes and paste board and from the outcry raised must have harbored several hundred sleeping Japs. The mules were collected the next day from all parts of the city and suburbs. It was not learned who settled for the damages to the Japanese, the mules were unhurt.

The writer wishes to state in conclusion that in preparing these notes he has consulted no book or authority other than the Field Service Regulations and that the methods and expedients mentioned, for which however no originality is claimed are recommended as having been successfully used in actual campaign.

CAVALRY REORGANIZATION.

BY COLONEL J. H. DORST, U. S. ARMY, RETIRED, LATE COLONEL
THIRD CAVALRY.

THE following scheme for the reorganization of the cavalry arm is taken bodily from a report made by me to the War Department in 1905.

In that report I recommended for the the first time, I believe, a reorganization of our cavalry and also the adoption of a system of orderlies for each regimental headquarters which has been since adopted in part. I should have suggested about fifteen orderlies for each regiment instead of six, but that would have made the total enlisted strength for the cavalry arm exceed the authorized number of 12,700. I merely suggested six as a starter until the principle of having orderlies should be established.

With reference to the suggestion that the number of second lieutenants for the six troops of a regiment be eight, my idea was to urge later that every second lieutenant, of the line of the army at the end of two years' service, with troops, should be sent to a service school for two years, at the end of which he should be dropped from the service unless he passed satisfactorily a certain prescribed examination. In case he did pass the prescribed examination and it was found that his habits, physical condition and temperament were such as to warrant his advancement, he was to be at once promoted to first lieutenant in whatever arm he was best fitted to serve, regardless of the branch to which he belonged as a second lieutenant, taking relative rank according to his graduating standing at the post graduate school. This would eliminate the unfit while still young enough to take up work in civil life and keep them from being a drag on the service until they reach the grade of field officer and then be shelved at the cost of much heartburning.

The number of second lieutenants should be just sufficient to fill the vacancies in the list of first lieutenants after four years' service as second lieutenants and would have to be determined by experience and the number eight as suggested is merely tentative.

I also had in mind having the troops large enough so that all the guard could be taken from one troop ordinarily, without the grooming, stable duty and horse exercise being neglected.

I may add that I believe a cavalry band in the field is very much of a nuisance but I provided for bands in the reorganization because I thought it useless to urge their abolishment. If abolished the number of men in the 18 bands of the suggested 18 regiments would be quite sufficient to form a 19th regiment.

REPORT.

Referring to the shortage of officers with troops, I have the honor to say that I have a plan for the organization of the cavalry arm which, if adopted, would materially alleviate the present conditions in that respect, and I see no reason why it should not also be applicable to infantry and field artillery. So far as cavalry is concerned, it offers a much more military organization than the present one, permits better instruction of more men, is more economical, reduces paper work, gives opportunity for contact of the troop officers with a greater proportion of their men and gives the Colonel more opportunity to get away from his office to observe what his officers and men are doing. At the same time it enables him to become better acquainted with them and better known by them.

I have had this plan in mind for nearly ten years, intending one time to mention it, among many other things, in a magazine essay on the subject of the military education of officers, my theory being that the best part of an officer's education is that which troops teach him by his contact with them, and that a really military organization of an army has also a great educational influence. My opinions have not changed as to the proper method of educating our officers, but I have not the time now to go into details of that subject. The time does seem opportune, however, to offer my views on the proper organization of the cavalry arm.

It is, in brief, to divide the present authorized enlisted strength among eighteen instead of fifteen regiments and reduce

the number of troops in each regiment to six instead of twelve, the total number of officers in the whole arm being increased by six. Each troop should have two captains, while the number of field officers in each regiment should be as at present. The organization would give each regiment forty-two officers instead of fifty as at present, with thirty-seven captains and subalterns to five field officers, instead of forty-five captains and subalterns as at present, and therefore provide for more rapid promotion.

No modern army, except ours, fails to provide for a reasonably rapid rate of promotion by seniority. In the former artillery regiments, as organized prior to 1901, there was much complaint of stagnation in promotion caused by having fifty captains and lieutenants to five field officers. The present organization of all our regiments has helped matters but very little by providing as many as forty-five captains and lieutenants to five field officers, whereas the old cavalry organization had only thirty-eight captains and lieutenants.

Both the lessons of our former organizations, and those we might learn from continental armies where a large number of young captains and lieutenants resign, retire or pass into the reserve after a few years of military life and make room for those below them, were apparently unknown to or undervalued by the person or persons who devised the present organization. For emphasis I repeat that abroad no regimental organization is adopted unless it secures a reasonably rapid rate of promotion through all grades, the fact that many young officers of wealth and title will certainly resign, retire or go in the reserve being one of the considerations peculiar to the armies of Continental Europe. By preventing too great stagnation in our regiments through better organization, various detrimental schemes for getting relief by legislation at a later date are obviated. This threatened stagnation is one of the arguments now used for the much dreaded promotion by selection and advanced by one of the very officers who is reported to have assisted in devising an organization that would create stagnation.

According to the proposed plan the regimental officers would be as follows:

- 1 colonel;
- 1 lieutenant colonel;

3 majors;
 12 captains;
 17 first lieutenants;
 8 second lieutenants;
 Total: 42 officers.

To this should be added for each regiment 1 chaplain and 2 veterinarians.

Each troop should have:

2 captains;
 2 first lieutenants;
 1 second lieutenant.
 Total: 5 officers.

The five extra first lieutenants should perform the duty of regimental staff officers. The two extra second lieutenants are supernumerary officers for whom the regimental commander can always find work. If there were nothing else for them to do they could be sent to one of the service schools, as long as such details are required from regiments, and save detailing good senior officers away from their troops.

So long as the present organization of the supply department continues, the five regimental staff lieutenants should be classified as follows:

1 regimental adjutant;
 1 regimental quartermaster;
 1 regimental commissary;
 1 assistant regimental adjutant;
 1 assistant regimental quartermaster.

The non-commissioned staff and band of each regiment should be as follows:

NON-COMMISSIONED STAFF.

1 sergeant major;
 1 quartermaster sergeant;
 1 commissary sergeant;
 3 squadron sergeant majors;
 3 squadron quartermaster and commissary sergeants;
 2 color sergeants;

1 chief trumpeter;
 1 regimental blacksmith;
 1 regimental saddler;
 1 regimental farrier;
 3 squadron trumpeters;
 1 regimental printer;
 1 regimental clerk;
 6 regimental orderlies.
 Total: 26.

BAND.

1 chief musician;
 1 principal musician;
 1 drum major;
 4 band sergeants;
 6 musicians, first class (privates);
 6 musicians, second class (privates);
 8 musicians, third class (privates);
 2 cooks;
 1 wagoner
 1 quartermaster sergeant;
 Total: 31.

Total non-commissioned staff and band, 57.

Now this seems large, but the organization really saves detailed men. The three battalion quartermaster and commissary sergeants will save extra duty clerks and storekeepers drawing higher pay; also, perhaps, the detail of some troop non-commissioned officer away from his command as provost sergeant. Every detail of that kind has a certain deleterious effect on discipline. The chief trumpeter should not be a part of the band, but what his name indicates, a trumpeter and nothing more. He will then have more time to instruct trumpeters, also to discipline them; and at all regimental formations, as well as on the march, he can be with his regimental commander where he rightfully belongs instead of with the band where the musical conditions require him to be so long as he remains a band musician.

The reason for a regimental blacksmith, a farrier and a saddler, should be obvious. At present the whole field, staff,

non-commissioned staff and band are dependent on the civilian employees of the post quartermaster or men that can be spared temporarily from their troops. At my last post, Fort Assiniboine, Montana, I was compelled to order the quartermaster to hire a civilian blacksmith at a high rate of pay, as an emergency measure, to shoe the horses of the field, staff and band. The horses of the fifty-seven non-commissioned staff and band, five regimental staff officers, and five field officers, make a total of sixty-seven horses, provided each officer has but one horse. In the field, the chaplain and veterinarians would also be mounted and medical officers and hospital corps men would be attached. It is both foolish and wrong to deprive the regimental headquarters of such special enlisted men. The effect in the field is to rob the troops of them by attaching such skilled men to headquarters, either on special or extra duty, or to hire high priced civilians. To deprive the headquarters of them in the organization does not do so in fact, but merely conceals on paper the loss to the different troops. It is better to acknowledge the matter openly by providing for them. It prevents bitterness of feeling on the part of captains whose men are detailed, and the positions provide places in the way of promotion for meritorious troop blacksmiths, farriers and saddlers of long service.

The three squadron trumpeters also provide a slight advancement for troop trumpeters who can be used as orderlies and strikers for majors without the latter begging such men from captains, always a source of dissatisfaction. Some officers may think that the major, with his squadron sergeant major, squadron quartermaster and commissary sergeant and squadron trumpeter has quite a large staff, but it is a much better one than the present with a squadron adjutant, squadron quartermaster and commissary, each with the major having a striker detailed from troops, while a trumpeter is detailed for squadron headquarters besides.

The regimental printer saves a detailed man.

The regimental clerk, one of the most important and most trusted men in the regiment, who must necessarily be familiar with many private matters concerning officers and the regiment in general, saves another.

The six orderlies save possibly the detail of more than their own number. They should be selected old soldiers, good

riders, good scouts and good shots. In the stables of the non-commissioned staff and band more than half the horses will not belong to the band and therefore should not be cared for by the band. The horses of all field and staff officers will be there, as well as those of a number of non-commissioned staff officers, such as the sergeant major, quartermaster sergeant, etc., who will usually not have time to attend to them. Somehow men must be obtained to take care of these horses. Now, they are deliberately taken from troops, and neither the men like the job nor the captains the details. Here again it is better to acknowledge facts and provide for such men in the beginning as a part of the headquarters force and avoid letting captains feel that they are deprived of men.

The number of band musicians is not changed. Only four are to be sergeants, however, and these are to be real sergeants, for administrative and disciplinary purposes. Twenty are privates, graded into three classes of musicians, with different pay for each class. The device of calling a man a sergeant or corporal in order to give him the pay of those grades is unmilitary and degrades the military title. A military mind can never assent to it. Besides, because musicians are now dignified with such titles, there are not enough privates left in a band to do work which cannot be required of non-commissioned officers. There are too few privates for the daily kitchen police, room orderly, stable police, stable orderly and other fatigue duties. There are too few to groom extra horses and to go on band herd guard duty. It is not only militarily correct but better in every way to call them just the plain musicians they actually are, with the rank of private and require them to do private's duty.

If two cooks are now needed for a troop of sixty-five men, they are also needed for the fifty-seven non-commissioned staff and band as proposed. In the field the non-commissioned staff may often have to separate from the band when there should be a cook for each. If they remain together, the field and staff officers, including the chaplain, veterinarians, and perhaps one or two surgeons, may have to mess with them, as well as attached hospital corps men. Two cooks will then keep things running smoother at headquarters, while in barracks they will make necessary one cook's police less, who will then be available for

band practice and concerts. No organization needs every available man more than a band when it has to play.

A band wagoner makes one more musician available and saves a detailed man or a weakened band.

The reasons for having a quartermaster sergeant to look after the band property, the forage and messing, are manifest. The addition of such a non-commissioned officer is one of the things that insures smoother working and more contentment worth far more than the additional expense involved.

With such a non-commissioned staff and band it must be apparent why an assistant to the adjutant, who will fill toward the adjutant the place of subaltern to a captain, is advisable and desirable. Every adjutant has a hard time in trying, alone, to attend to all his office work and at the same time act as troop commander for the non-commissioned staff and band. An assistant is equally desirable for the quartermaster with whom to divide the outdoor and indoor work and police of the post. This assistant could be ex-officio police officer and save such a detail from a troop. The commissary has less exacting work but should be a good business man and ex-officio post exchange officer.

The adjutant, quartermaster and commissary should each receive the pay of captain mounted; the assistants the pay of captain dismounted. The work and responsibility devolving upon them is worth it. The extra pay will make the places sought by the best officers and will make even indifferent ones try to obtain and retain them. At present no cavalry captain gets extra pay as a regimental staff officer and therefore the work and responsibility connected with those positions are not sought. A colonel also injures his best troops when he takes from them their captains and puts them on his staff.

The proposed composition of the troop is as follows:

- 1 first sergeant;
- 1 quartermaster sergeant;
- 1 commissary sergeant;
- 6 sergeants;
- 8 corporals;
- 2 cooks;
- 2 farriers;
- 2 blacksmiths;

- 1 saddler;
- 2 wagoners;
- 2 trumpeters;
- 2 clerks;
- 78 privates;
- Total: 108.

The propriety of a troop commissary sergeant, not provided for at present, is apparent. He would have charge of the rations and messing.

The two farriers and two blacksmiths will be needed in troops of 108 men, especially in mountainous and rocky country. Often a troop must be split up into two or more detachments in which case the farriers and blacksmiths will be required for distribution among them.

Two wagoners are also needed for the large troops. They will get the manure removed from the stables quicker than one wagoner; there will remain more hours after cleaning the stables for the stalls to air and dry out; forage can be handled in half the time and the stable police will finish their work sooner, and in more workmanlike manner, instead of dawdling all day.

The troop paper work will be increased, and hasty work causes mistakes, neglects and omissions. Time and paper work correcting errors in the adjutants' office will be saved through having two clerks in each troop who have the leisure to be careful and do their work well. One important reason for having two clerks, as well as two farriers, two blacksmiths and two wagoners, is that one at least will almost always be available for drills and field exercises, so that by alternating each would attend at least half the time, while with but one man of each class in a troop the opportunities for such instruction would often occur less frequently. This is a condition that must appeal to every one who has ever commanded a troop.

As above constituted the regiment would have the following enlisted men:

Non-commissioned staff and band	57
Six troops	648
Total	705

Total for eighteen regiments, 12,690 enlisted strength.

The last Army Register, 1905, shows the cavalry arm as having 12,700 enlisted men. The one for the year previous shows a less number.

The whole organization would be as follows:

18 colonels;
18 lieutenant colonels;
54 majors;
216 captains;
306 first lieutenants;
144 second lieutenants.

756 officers. Present organization, 750.

18 chaplains;
36 veterinarians.

18 regimental Sergeant majors;
18 quartermaster sergeants;
18 commissary sergeants;
18 chief musicians. } Pay as at present.

18 regimental blacksmiths;
18 regimental saddlers;
18 regimental farriers;
18 regimental printers. } at \$18.00 per month.

18 regimental clerks at \$20.00 per month.

54 squadron sergeant majors, at present pay.

54 squadron quartermaster and commissary sergeants,
at pay of first sergeant.

36 color sergeants, present pay.

18 chief trumpeters at \$18.00 per month.

54 squadron trumpeters at \$15.00 per month.

108 regimental orderlies at \$15.00 per month.

18 principal musicians at present pay.

108 first sergeants, at present pay.

18 drum majors, at present pay.

108 musicians, first class, at \$17.00 per month.

108 musicians, second class, at \$15.00 per month.

144 musicians, third class, at \$13.00 per month.

720 sergeants.

126 quartermaster sergeants;

108 commissary sergeants;

864 corporals;

252 cooks;

540 saddlers, farriers and blacksmiths

} Pay as at present.

216 clerks at \$16.00 and \$18.00 per month.

234 wagoners

216 trumpeters

8,424 privates

} Pay as at present.

12,690 total enlisted.

As above organized, the pay of the whole cavalry arm will amount to about \$100,000.00 more yearly than at present. It must be remembered that the above rates of pay are based on the rates in force in 1905. The economy appears in the cost of barracks, stables and supplies. There are barracks and stables to be provided for the noncommissioned staff and bands of the three extra regiments. On the other hand there are but 108 troops to be sheltered as against 180 at present. At Fort Assinniboine, Montana, where there are sets of double barracks, each double set has cost the Government about \$45,000 for construction and remodeling. Each set accommodates two troops of sixty-five men each. For \$55,000.00 each could have been built, or built and remodeled* to hold two troops of 108 men each. Six sets of double barracks for twelve troops of sixty-five men each have cost \$270,000.00. Three sets of double barracks for six troops of 108 men each would cost not more than \$165,000.00, a saving of \$105,000.00. There also would be a saving in constructing six stables for six large troops instead of twelve somewhat small stables for twelve small troops. The saving in cost of construction of first class barracks and stables for eighteen Regimental Posts would more than balance the increased cost for pay for twenty years. There would be fewer

*The old barracks at Ft. Assinniboine had just been remodeled with increase of interior space, and the introduction of steam heat, baths, lavatories, etc.

kitchens, fewer utensils, fewer fires, and a yearly saving in fuel and light which alone would perhaps exceed the increased pay. The saving in material and labor for the constant repairs on fewer barracks and stables would also be a large item.

The fewer organizations would require fewer printed blanks and government publications. In fact in about every respect, except in the matter of pay, the proposed plan would be more economical and as a whole much less costly, while the concentration into fewer organizations would facilitate the dispatch of administrative business. The six troop morning reports could be consolidated in half the time required for those of twelve troops. The details by roster for six troops would be expedited in like manner. While the cases of individual men requiring attention would not be much reduced and the troop muster and pay-rolls, reports, returns, requisitions, and books would require more time, the captains would each have two clerks to keep up this work, while that in the office of the commanding officer would be very greatly reduced, giving him time to get away from his desk to look about the post and to observe his officers at their duties.

A colonel, like a captain, must know those under him in order to command them most effectively. He must make himself acquainted with the qualifications of his officers, and know personally the non-commissioned officers and old privates as well as the horses they ride. In fact there is a great deal of knowledge he should have that he can only gain by frequent personal contact with, and observation of, his officers and men which will increase their confidence and respect for him and his influence over them. But, tied up with the paper work of twelve weakly troops, he is confined to his office all day, and hardly knows his non-commissioned officers by sight. There is an old-theory that the size of a regiment should depend on the number of men that the commanding officer can control with his voice. It should depend upon the number that, with a favorable organization, he can properly look after out of doors as well as through his adjutant's office. When we have bought a number of small parcels, we often find we can handle and carry them more conveniently by wrapping them up in several large parcels. Small troops are merely picayunish time and energy wasters.

A troop with an authorized strength of sixty-five men has an average actual strength of about fifty-five. These fifty-five men will have about the following number unavailable for an emergency on any one day, viz.:

- 2 sick;
- 2 in arrest or confinement;
- 4 absent—either with or without leave, or at school at Fort Riley, or in Hospital at Hot Springs, or in hands of civil authority, or awaiting trial or sentence at a distant post, or on detached duty;
- 7 on extra or special duty detailed by post order;
- 1 non-commissioned officer in charge of quarters;
- 1 room orderly;
- 2 cook's police;
- 1 stable orderly;
- 2 stable police;
- 3 on guard;
- 3 old guard fatigue;
- 3 recruits;
- Total: 31.

The remaining 24 is about the number to be counted on for drill, that is 44 per cent. of the troop.

In the same ratio, a troop with an authorized strength of 108 men would have an actual strength of 91. The details of non-commissioned officers in charge of quarters, room orderly, and stable orderly, would be exactly as for the troops of fifty-five men. The other figures would be larger, bringing the total unavailable up to about forty-seven men, although it is likely that with the non-commissioned staff and band organization proposed the men on extra and special duty would be proportionately less. This would leave 44 men available, or 48 per cent. In the present organization there are 180 troops. With 24 men available in each, we would have a total of 4,320. In 18 regiments of six troops each there would be 108 troops. With 44 men available in each we would have a total of 4,752, a gain of 432 men *in the arm*. And this gain is exclusive of strikers and orderlies for the field and staff.

Among 78 privates it ought to be much less difficult to find men fit for non-commissioned officers than among 42 privates. Reasons in favor of the proposed plan can be multiplied by any one who will only reflect.

Now as to correcting the scarcity of officers. The organization provides for thirty-seven captains and lieutenants in each regiment. Assuming that about forty per cent. of these are habitually absent which has been the percentage in my regiment in the past year, about twenty-three will be left with the regiment. Subtracting from these the five regimental staff officers we shall have left eighteen officers for six troops, or three officers to each troop, with the prospect that every troop shall fall under the command of an officer of considerable experience and never under an inexperienced second lieutenant. All officers of much service with troops must appreciate the disciplinary value of the above facts.

Of course in the proposed organization a major is to command two troops which he can handle much more easily and accurately than the four elusive fractions now assigned to him. I would, if I had anything to do with the nomenclature, substitute the word "*squadron*" for troop where it appears above, and "*battalion*" for squadron. In all countries, except ours, the squadron corresponds to our troop, to the company in infantry and to the battery in artillery. To call any one of our troops a "*troop*" instead of a squadron and four troops a squadron, is like calling a company of infantry a platoon and a battalion a company. The English formerly had two troops, like ours, which they combined in an organization they called a squadron, which we copied but which they long ago abandoned. The following quotation is from the army book of the British Empire, pp. 195-6:

"*The Squadron System.*—An easy revolution was effected in the regimental organization by the introduction, on the 1st March, 1892, of the squadron system, long since in use amongst European Nations. The system had been tried in 1869 but was abandoned, for we find '*Troops*' again adopted in 1870; that is we went back to the old pattern of Gustavus Adolphus, who was the first to divide his regiments into eight troops. These eight troops, under their own captains, were entirely independent as

regards interior economy, but closely combined into four squadrons during drill and maneuvers in the field. Were it not for the known disinclination of the British nature to adopt changes it would be hard to understand how this arrangement could have lasted so long.

"Instead of having small units equally divided between all the majors and captains, some having considerable service and others very limited experience; in place of a squadron commanded in the field by one or two officers, each of whom in barracks was entirely independent of the other, we now have a considerable body—a squadron—under one commander, whether in the field or in quarters, a senior officer, responsible to his commanding officer, with a double interest in his command, and having for his assistant, as second in authority, a junior captain of sufficient service whose ties and associates with the squadron are only inferior to those of the commander himself.

" * * * What, however, is really the essence of the change from the troops to the squadron system is this: Every squadron commander is an officer of experience in the captain's rank and qualified to be intrusted with command; he is one to whom the colonel can confidently delegate powers, consequently the maintenance of discipline is to a much greater extent his personal concern than it was that of the captain under the troop organization."

As to the size of the regiment under the proposed plan, it is about right. It is as large, with its animals, as a colonel can well handle and the staff provide for in the field. If larger, there would be too great temptation for some generals to divide and scatter it. Nor should it be reduced. On the outbreak of war the troops should be increased to a strength of about 125 men, the increase being made up of old soldiers or good riders. One educational advantage of the organization is the opportunity it gives a young officer to drill, maneuver, and handle about twice as many men as he can with the present organization.

The only objection I can imagine that may be offered to this plan is that other arms will urge that it gives the cavalry an advantage in promotion. So far as that goes, I see no objection to a similar concentration and organization for the infantry,

with very much larger companies in time of war. There is no reason why we should blindly follow a foreign system of four company battalions with regiments strong as our brigades. If I am not mistaken, I have often heard that in the Civil War there was an advantage in our comparatively small and handy infantry regiments that we handled as battalions, but the mistake was made by the North in putting too few together in brigades, so that we had too many small brigades, divisions and corps, while the South had fewer and larger brigades, divisions and corps, which was a better organization.

As for the field artillery, I can imagine no argument for any regimental organization stronger than those that can be advanced for a regiment of six four-gun batteries, with two batteries to each major. Two such batteries of horse artillery would be just right to accompany a cavalry brigade, and the whole regiment of twenty-four guns would fit right in with a cavalry division of three brigades.

"To the practical cavalry officer, I think there can be no question of the improved disciplinary conditions that would result in the cavalry arm from the change mentioned.

Indorsement from the War Department of the above report.

"Referring to your letter of December 13, 1905, submitting a plan for the reorganization of the cavalry arm, I am directed by the Chief of Staff to inform you that your plan has been carefully considered by the Cavalry Committee of the General Staff, and that the Committee reports as its opinion that while the proposed reorganization scheme contains suggestions of undoubted value, the time is not now opportune for recommending a reorganization of the cavalry arm."

THE SAN PATRICIO BATTALION IN THE MEXICAN WAR.*

BY G. T. HOPKINS.

WHILE General Taylor's army was lying across the river from Matamoras, a great many desertions took place. You will find a note on this point in General Cadmus E. Wilcox's "History of the Mexican War," although he fails to give the reasons. Just what was the impulse which led these deserters to abandon our forces does not seem to have been recorded in any historical work or document, but here and there I have learned from sources both American and Mexican, that General Ampudia employed means calculated to undermine the allegiance of foreign-born enlisted men; for instance, it was insinuated to them that the attitude of the United States towards Mexico was merely a masonic plot to destroy the Catholic religion in that country, and that if they bore arms against Mexico they would be waging war against their religion. At the same time offers of land and money were held out to these men, with the result that many of them entered Ampudia's lines.

*These notes have been furnished us by Captain Frank McCoy, General Staff, U. S. Army, as being of great historical interest. The only reference to this matter that we have been able to find is the following from Wilcox's History of the Mexican War, pp. 394-5:

"In the battle of Churubusco among the many prisoners captured was the San Patricio battalion. They were tried by a general court-martial and sentenced to death, all but sixteen being executed; some were pardoned on account of youth when they deserted; two were pardoned because their sons or brothers had remained true to the flag of their country, and O'Riley having deserted before declaration of war, was not condemned to death, but was branded with the letter 'D' on his cheek."—*Editor.*

**The companies of Dominquez, deserters from the Mexican Army and regularly enlisted in the United States service, and of San Patricio, deserters from the American Army on the Rio Grande, mostly of European nativity, and enrolled in the Mexican service with O'Riley as captain, first met in battle in the Convent of Churubusco, and the scorn with which they regarded and the ferocity with which they attacked each other, was a forcible illustration of the odium attached to treachery, even among traitors. Both companies fought bravely and neither seeking nor asking quarter, many were killed."

Among these was John Riley, or Reilly, of Company "K" Fifth U. S. Infantry, who, under pretext of going to mass to be held by a priest on the Texas side of the river, secured a pass for that purpose and immediately crossed the river. This was early in April, 1846, before war had been declared, and Riley was immediately given a commission in the Mexican army as a lieutenant. He was speedily joined by others, and they organized the San Patricio Battalion. It was also known as "The Foreign Legion" and "The Red Company."

This latter name was applied to it, so I understand, because the men had ruddy complexions and, some of them, red hair.

They first appeared in action at Monterey, and again near Saltillo, where they were employed with the Mexican artillery forces. Nothing seems to have been heard from them thereafter until the battle of Churubusco. It seems that, meanwhile, they were brought to Mexico City and were recruited up by the enlistment of some other foreigners (not deserters) and also by the appearance of more American deserters from General Scott's army then occupying Puebla. These latter deserters were of the same stripe as those who had previously abandoned their colors, all foreigners, with the exception of one or two who were legitimately captured while drunk and forced into the battalion. These men were afterwards, when captured, pardoned by General Scott.

On August 20th when the Americans were storming the Convent of San Pablo, at Churubusco, they encountered the San Patricio Battalion in the *tete-de-pont* close by which defended the stone bridge crossing the river. This work was speedily taken, and the San Patricio Battalion captured.

Of course, a great many escaped, and some of the captured were legitimate prisoners of war. The number of *deserters* captured was sixty-four. Within a few days thereafter General Scott, by General Order No. 263, convened a general court-martial for the trial of twenty-nine of these men, all of whom were convicted and sentenced to be hung. The reviewing authority, on September 8th, following, by General Orders No. 281, confirmed the sentence in respect to twenty, and commuted the sentence of seven to fifty lashes with a raw hide, well laid

on the bare back, and branding with a red hot iron with the letter "D" on the cheek of each. Two were pardoned outright both having been legitimately captured by the Mexicans, and, although forced into the battalion, had refused to fight. Sixteen of the twenty were hung at San Angel on September 10th on the limbs of a large tree which still remains, and by which stands a cross painted on which are a skull and cross-bones, dice and a rooster. I can only figure out that this signifies to the Mexican mind that they took a chance, fought gamely, and got bumped off for their pains. The remaining four were hung on another tree the next day while passing under guard, at Mixcoac. The remaining lot, thirty-six in number, were tried by general court-martial, pursuant to General Orders No. 259, at Tacubaya. All of them were convicted and sentenced to be hanged. The sentence was remitted in the case of two, and commuted to branding and lashing as to five. The remainder were hung at Mixcoac, in sight of Chapultepec Castle, and were allowed, by Colonel Harney, Second Dragoons, to live long enough to see the American flag hoisted over the Castle.

Meanwhile, the Archbishop of Mexico and the clergy, and, indeed, many other persons of some prominence residing in Mexico City, plead with General Scott to save the lives of these men, but without any result whatsoever. Indeed, the General, soon after occupying the Plaza of the Capital, issued General Order No. 296 in which he refers to a plot on the part of certain Mexicans to make trouble.

* * * The conspirators have also the services of several false priests who dishonor the religion which they only profess for the special occasion. Their plan is to * * * entice our Roman Catholic soldiers, who have done honor to our colors, to desert, under the promise of lands in California, which our armies have already acquired and which are and forever will remain a part of the United States. Let all our soldiers professing the Catholic religion remember the fate of the deserters taken at Churubusco. These deluded wretches were also promised money and land, but the Mexican government, by every sort of ill usage, drove them to take up arms against the country and flag which they had voluntarily sworn to support, and next placed them in front of the battle in positions from which they could not possibly escape the conquering

valor of our glorious ranks. After every effort of the General-in-chief to save, by judicious discrimination, as many of these miserable convicts as possible, fifty of them have paid for their treachery by an ignominious death on the gallows."

It seems that when Riley with his San Patricio Battalion arrived at Mexico City, they did some duty in escorting foreigners and non-combatants to places of safety. Some of these men, also, got money from the British Consul, under pretext that they had no food. When the former discovered that they were in the service of the Mexican government, these contributions were discontinued.

Assisting Riley as officers were Patrick Dalton, Company "B," Second Infantry, and one Batchelder, who does not appear to have been captured. He was probably killed in action, or escaped.

Inasmuch as Riley deserted in April, 1846, prior to the declaration of war, General Scott was unable to confirm the sentence of death in his case, and, therefore, commuted it to lashing and branding. Contemporaneous writers state that Riley did not stand the test very well. As it was he was lashed by a Mexican mule driver, because General Worth deemed it would be too much honor to have him lashed by an American soldier. I have managed to get a peep at the testimony given in their defense by some thirty or so of these individuals, including Riley, and of course they all plead that they were captured and forced into the Mexican service, but which was disproved by the testimony of some of the other foreigners, not deserters, which was taken, notably by an Irishman, named O'Connor, and an Englishman by the name of Wilton, who knew the whole story from beginning to end. I find that there was also another officer, not a deserter, Captain O'Leary, who was badly wounded as a result of an explosion of ammunition at the tete-de-pont.

This is about all the information I have up to the present time, but I am following the matter up during unoccupied moments, and before I get through with it expect to have every detail.

Meanwhile, I enclose a list of names of those deserters arranged by organizations, which may be of interest.

DESERTERS FROM U. S. ARMY, 1846, WHO JOINED MEXICAN ARMY AND WHO FORMED THE ST. PATRICK COMPANY. THE FOLLOWING WERE CAPTURED AT THE TETE-DE-PONT, CHURUBUSCO, AUGUST 20, 1847. FIFTY OF THEM WERE EXECUTED AT SAN ANGEL AND MIXCOAC, SEPTEMBER 10 AND 18, 1847.

Names.	Co.	Regiment.	Remarks.
Henry Logenhamer	F	2d Dragoons	
Henry Venator	I	2d Dragoons	
Francis Rhode	I	2d Dragoons	
John Klager	K	2d Dragoons	
Fredk. Fogal	K	2d Dragoons	
Geo. W. Jackson	H	1st Artillery	
Wm. O'Connor	K	1st Artillery	
Richard Hanly	A	2d Artillery	
John Appleby	D	2d Artillery	
Geo. Dalwig	K	2d Artillery	
Barney Hart	K	2d Artillery	
Thos. Millet	D	3d Artillery	Committed to lashing and branding
Hezekiah Akles	H	3d Artillery	Committed to lashing and branding
John Bartely	H	3d Artillery	Committed to lashing and branding
Alex. McKee	H	3d Artillery	Committed to lashing and branding
R. W. Garretson	H	3d Artillery	
John Bowers	H	3d Artillery	Committed to lashing and branding
M. T. Frantius	K	3d Artillery	
Henry Mewer	D	4th Artillery	Sentence remitted.
Henry Oetker	D	4th Artillery	
Henry Whistler	E	4th Artillery	
Wm. H. Keeck	F	4th Artillery	
Edw. McHerron	G	4th Artillery	Sentence remitted
Andrew Nolan	D	4th Artillery	
Patrick Dalton	B	2d Infantry	
John Cuttle	B	2d Infantry	
John Price	F	2d Infantry	
Wm. Oathouse	I	2d Infantry	
Wm A. Wallace	B	3d Infantry	
Elizier S. Luck	C	3d Infantry	
Herman Schmidt	D	3d Infantry	
Thomas Riley	H	3d Infantry	Branded and lashed
James Mills	H	3d Infantry	Committed to 50 lashes and branding
Lawrence Mackey	K	3d Infantry	
Francis O'Connor	—	8d Infantry	Recruit
Peter Neill	B	4th Infantry	
Kerr Delaney	D	4th Infantry	
Patrick Antison	E	4th Infantry	

Name.	Co.	Regiment.	Remarks.
Harold Heston	E	6th Infantry	
Robert Heston	I	6th Infantry	
John Heston	G	6th Infantry	
John A. Myers	G	6th Infantry	
John A. Myers	G	6th Infantry	Major St. Patrick battalion
John Reilly	K	6th Infantry	Sentence commuted to lashing and branding
Richard Parker	K	6th Infantry	
Lemuel Wheaton	A	6th Infantry	
Saml. H. Thomas	C	6th Infantry	Sentence commuted to lashing and branding
David McElroy	E	6th Infantry	Sentence remitted
Parian Frits	F	6th Infantry	
John Benedick	F	6th Infantry	
John Rose	F	6th Infantry	
Lachlin McLachlin	F	6th Infantry	
Patrick Casey	F	6th Infantry	
John Brook	F	6th Infantry	Sentence remitted
Roger Duhan	F	6th Infantry	Sentence commuted to lashing and branding
James Speers	D	7th Infantry	
Martin Lydon	D	7th Infantry	
Dennis Conahan	I	7th Infantry	
Augusta Mountaft	I	7th Infantry	
James McDowell	K	7th Infantry	
Gibson McDowell	A	8th Infantry	
Hugh McClellan	A	8th Infantry	
John McDonald	A	8th Infantry	
John Cavanaugh	E	8th Infantry	
Thos. Cassidy	I	8th Infantry	
John Daly		Rifles	Sentence commuted to lashing and branding

+ Reprints and Translations. +

CAVALRY IN THE RUSSIAN-JAPANESE WAR.*

Continued from the July, 1913, number of the Cavalry Journal, page 155.

(d) *Battle of Sandepu.*

The next important part played by the cavalry in the Japanese War was at the battle of Sandepu.

The break in the hostilities which followed after the battles on the Shakhe continued till the beginning of January. During this time the Russian army was increased by three corps which brought up the effective force to twelve corps and two separate cavalry detachments, formed into three special armies.

The cavalry formed part of the armies and numbered 172 squadrons and sotnias (Cossack squadrons).

In the beginning of January the armies occupied the following positions:

Second Army under General Grippenberg (VIIIth, Xth, Ist Siberian and Composite Corps, the cavalry detachment of Major General Kossagovsky and that of General Mistchenko) on the right flank from Syfontsi to Vutchyanin.

Third Army under General Baron Kaulbars (XVIIth army corps, Vth and VIth Siberian corps) in the center from Vutchyanin to the Putiloffsopka.

First Army under General Linevitch (Ist army corps, IIId, IIIId, and VIth Siberian corps and the cavalry detachment of

*Translated from a series of articles in the *Voenny Sbornik* by Captain N. K. Averill, U. S. Cavalry, Military Attaché.

General Rennenkampf) on the left flank from the Sopka till the Gautulinsky Pereval.

The whole front of the armies was strongly fortified; in front of them they had artificial barriers.

The Japanese armies was disposed as follows:

First Army under General Kuroki, from Bensihu through Vaniapuzā up to Fendiapu.

Fourth Army under Nodzu, to the left of the first one up to Kudiatsy.

Second Army, under Oku, on the left flank up, to Lidiatun. The 5th and 8th divisions, with a few reserve brigades formed the general reserve at Liaoyan.

The right flank was protected by the reserve troops occupying the Vafunlinsky and Dalinsky summits.

The left flank was covered by the cavalry brigade under the command of Akiyama, with two batteries disposed between Hagoutai and Lidiatun, and the cavalry brigade of Tomura, on the right shore of the Hunkhe.

In these positions the Japanese awaited the fall of Port Arthur which promised a considerable increase to their armies. When the fortress fell on the 20th of December, it was expected that towards the beginning of February the army under the command of Nogi would arrive from Port Arthur together with the two reserve divisions which had been sent out from Japan. Circumstances demanded that an immediate attack should be carried out on our part.

The general plan of our attack consisted in striking the principal blow on the enemy's left flank. The whole burden of the attack lay on the II^d Army; it was to be supported from the front only when the entire flank would be surrounded. The beginning of the attack was appointed to take place January 12th:

The 1st Siberian corps and the 14th division were ordered to attack the district Chyantān-Buanlatotzy from the west. The Xth corps and the 15th division to support this attack by fire from the front. The Composite Rifle Corps was to remain in reserve behind the right flank. The 1st Siberian corps was assisted by the cavalry of Mistchenko and the Liaohei detachment at Syfontai covered the rear of the whole army.

Late in the evening, on the 12th, the 1st Siberian corps established itself on the left bank of the Hunkhe after a stubborn resistance on the part of the Japanese near the village Hegutai.

Meantime the 14th division advanced slowly towards Sandepu, merely enfilading it with fire. During the day the 15th division and the Xth corps only kept up a slight fire on the Japanese positions, lying before them and entering the villages which had been abandoned by the Japanese, whose troops had been drawn together for the defense of the most important points—Sandepu and Hegutai.

On the 13th a considerable force consisting of several divisions was moved forward against the 1st Siberian corps, obliging the latter to take up the defensive. The fighting troops were supported by the rifle men in the reserve and a hot battle ensued along the whole front.

The 14th division supported by the brigade under the command of Lesh, advanced slightly during the day and even entered Sandepu, but was obliged afterwards to clear the village; towards evening it drove the enemy out of the villages Beitatzy and Siaotaizy, but at nightfall it was forced to leave the same and retreat.

On the 14th the troops were given a rest; operations were limited to preparations for an artillery attack on Sandepu appointed for the 15th of January. The battle was continued only by the 1st Siberian corps, which attacked the villages lying in its front, so as to be able to threaten the Japanese at Sandepu from the rear. After a bloody night fight the corps entered Sumapu.

The inaction of the 15th division and the Xth corps from the front and their inability to move onward in accordance with the general plan of action accepted by the Commander-in-Chief placed the 1st Siberian corp in a very difficult position. Pressed by the superior forces of the enemy the corps was obliged to leave Sumapu, and afterwards, on the 15th, to move back still further, but then the timely support on the part of the Jitomir regiment, sent out from the reserve, allowed it to keep its position and parry the attacks of the Japanese.

On the same day the Xth corps carried on a demonstrative attack on the front and possessed itself of villages Siaotaizy and Labatai. The Japanese position began to be awkward.

On the 16th our troops intended to continue the attack, but towards evening the Commander-in-Chief ordered them to cease the battle and to return to their original positions.

The operation of the cavalry detachment under the command of General Adjutant Mistchenko, consisting of forty-five Cossack squadrons, twenty-four horse artillery and eight horse mountain artillery guns and forming part of the III Army, were as follows:

The task imposed upon the detachment by the field order on the 12th was "To assist the Ist Siberian corps in its attack on Huanlatotsy and then to cross over to the left shore of the Hunkhe and reconnoiter the locality between the river Tait-sykhe and the line of villages Hegutai—Landungau—Tadusampa. But this order was not received in due time and therefore Mistchenko decided to continue the former task set to him, namely, to overtake the column of Japanese forces, which had appeared in the regions of Lokonto opposite the flank of the III Army; for this purpose setting out in the night of the 11th from Asyniu and Ubaniula, he moved to the south in two columns; the right one under the command of Major General Teleshoff, consisting of the Caucasian brigade, a brigade of the 4th Don division and two horse batteries, and the left one under General Pavloff, composed of the Transbaikal Cossack brigade, the 4th Ural Cossack regiment and two horse batteries.

About noon the right column entered into an engagement near the village of Otasiagantzy, occupied by dismounted cavalry. At this moment the above mentioned field order was received, but the battle was already begun and had to be carried out to the end. Mistchenko ordered the left column to march on to Mamakai with the object of taking a firm stand on both banks of the Hunkhe and threatening the rear of the Japanese forces which were acting against the Ist Siberian corps.

The right column was deployed in battle formation, surrounding the enemy from the north, the east and the south-east. The Ural regiment was placed as a screen to the south towards Baidagau, to act against the reinforcement coming up

from Siaobeihe to support the Japanese detachment. The enemy kept his position steadfastly. Seeing that no results were being attained and having in view the task imposed by the field order, General Mistchenko at the coming of twilight gave the order to cease the attack and to move on to the north towards the left column. But while this order was being executed the Cossack squadron of the 25th Don regiment proceeded to attack the position by storm. This attempt was sufficient to make the Japanese take flight, leaving their wounded behind. It was then ascertained that the village was being defended by two dismounted squadrons.

In these proceedings the following is worthy of attention:

The decision of General Mistchenko, namely to march forward to meet the column which was nearing the flanks of the detachment was quite correct. On coming upon the enemy occupying the village the detachment was to dismount and enter into an engagement. At the same time the village was to be surrounded from three sides, which was also well timed. The placing of the screen at the south, to act against the expected reinforcement was also expedient.

The order to the left column to march to Mamakai was necessitated by the desire to secure the crossing of the Hunkhe, which was necessary for the execution of the task, imposed upon the detachment by the field order, and for guarding the operations from being prevented by the Japanese forces on the Hunkhe. This was all. But involuntarily one asks oneself how is it that during so many hours, from noon till twilight, twenty-four squadrons with two horse batteries could not overcome two dismounted squadrons. This must be explained, in the first place, by the absence of reconnoitering; the length of the line front and the density of the skirmishing line would prove the weakness of the detachment. In the second place, by the reason that after the first shots of the enemy, the whole detachment immediately dismounted, without having made the least attempt to enter into the occupied village by means of a cavalry attack, if not from the front, then from the rear, or at least to take a look at it from the rear. Lastly, by their resoluteness of the action, the partiality for firing and the disinclination

to meet the enemy at close quarters. This last is corroborated by the fact, that with the first attempt of attack on the part of only one squadron, the enemy fled.

The method and order of the attack were not of a cavalry nature and did not lead to success even with such an enormous superiority of numerical strength over the enemy. As to the field order there is one circumstance which must be noted, namely, in sending out a cavalry detachment consisting of forty-five squadrons with twenty-four guns to attack an enemy concentrated on the flank of the detachment with movement in advance, the task set was vague: "To assist the Siberian corps in his attack" and the second task more precise: "To reconnoiter the locality in the stated region," thereby making this latter the chief object, whereas it ought to have been done of itself.

The detachment of General Kossagovsky covering the right flank of the army attacked at the same time Mamakai and Tchitaizy, thus securing the safety of General Mistchenko's detachment while crossing the Hunkhe.

On the 13th, for the purpose of carrying out the task contained in the field order the detachment of General Mistchenko proceeded to the left bank of the Hunkhe, while the left column which was directed to the river Shynzia, was ordered to enter into connection with the Ist Siberian corps, and the right moving to Santiazi was ordered to send out patrols to the east towards the railway line and to the south, towards the river Taitsykhe.

At one o'clock the left column entered into an engagement with the enemy near the village Hinge, but could not bring it to an end, because it received the order to join the right column which had been also stopped by the Japanese.

At two o'clock the right column encountered the enemy near Santiazi. A horse battery under the protection of the 4th Ural regiment opened fire from the front, while the Caucasian horse brigade galloping around to the village from the south, vigorously attacked the Japanese from the flank and put them to flight. While pursuing the fugitives, part of the right column took possession of the village Suerpu, but their further advance

was stopped by fire from Tunhenpu, which necessitated the recalling of the left column. The Japanese taking advantage of the darkness evacuated this village also.

In the night from the 13th to the 14th General Mistchenko ordered the left column under the command of General Teleshoff to send out scouting parties to the north, northeast and east; the right column under General Pavloff to send scouts to the east and southeast; and from the Caucasian horse brigade, to the south. The position, however, was not elucidated, but rather by reason of false information it became more unintelligible.

At 9 o'clock in the morning on receiving information that Sandepu was occupied, General Mistchenko based his further operations on this news; he threw himself with his entire detachment to the northeast of Suerpu to pursue the enemy, who was said to be retreating towards Landungau. Taking rapid possession of Suziaopa, he advanced with the Caucasian brigade towards Landungau, but on discovering the presence of a large infantry force at this point, he decided to concentrate the whole detachment in this spot and meanwhile opened an artillery fire upon the village. But the Japanese took up the attack on their own part, and made for the battery. The latter, having fired all their cartridges was silenced. To stop the Japanese General Mistchenko ordered the Daghestan regiment to attack them from the rear, but at this moment he was wounded. The Daghestaners rushed on to the infantry and attacked their battery, but coming upon a ravine, they were obliged to retreat.

Meantime the remaining parts of the detachment had come up; they had been moving to the north for the purpose of coming into contact with the Ist Siberian corps and in common with the latter had attacked the v. Tsuisiapu, when they received the order to hasten to Landungau. The Japanese, however, deploying a considerable force, commenced an energetic attack. Towards nightfall the cavalry detachment was concentrated near Suerpu.

On the 15th the villages near the halting places of the detachment were all occupied by the Japanese infantry. This circumstance obliged General Teleshoff, who had replaced

General Mistchenko when wounded, to endeavor to drive them out from the villages. The cavalry detachment was deployed in dismounted battle order for an attack on Tunhenpu, when the order was received from the Commander-in-Chief of the IId Army to give assistance to the Ist Siberian corps in the direction of Sumupu and Santsianpo, where considerable forces of the enemy were concentrated. General Teleshoff was obliged to change front to the north under cover of part of the detachment on the right flank from the side of Tunhenpu. All day long the battle with the infantry occupying the villages continued. The Japanese having received reinforcement and increasing their artillery fire several times endeavored to attack the cavalry detachment, but each time their attacks were repulsed owing to the machine guns of the Terek-Kuban regiment. The battle ceased with the fall of darkness and the detachment passed over the night to the village Hinge.

By order of the Commander of IId Army, on the 16th, the cavalry detachment was ordered "to carry out the most detailed reconnoitering for the purpose of establishing the forces of the enemy acting against the Ist Siberian corps and if possible of those acting against the Composite Rifle Corps." However, immediately afterwards the order of the Commander was given to stop all attacks, and the troops of the IId Army were to resume their former positions. The reason for this was the information received concerning the threatening operations of the Japanese who were contemplating an attack *en masse* on the IIIId Army. The losses in the cavalry during the four days were 14 officers and 233 men.

In these attacking operations the cavalry was destined to develop independent action and this case was, one may say, the most important occasion for the display thereof during the whole campaign.

In criticising the actions of the cavalry at Sandepu, and beginning from the setting of the task, I must remark again, that in this case the object of the operations in the sense of assisting the infantry to win the battle was not expressed precisely in the general expression: "To assist the Ist Siberian corps in his attack" and was quiet clearly defined in respect to

the carrying out of reconnoitering, which again was made of superior importance.

After imposing the general task, the Commander of the Army only hampered the freedom of action of the chief of the detachment by his further instructions as to the direction of the cavalry, which was in the rear of the enemy's army on the 15th. It is difficult to exact one or another line of direction when the chief is in the rear of the enemy with his detachment. His action must depend wholly on the circumstances with which he is surrounded. All that the Commander can do in this case is to keep the chief of the detachment informed of the state of affairs in the front and of his next intentions.

On the first day, January 12th, the detachment moving to the south in search of the enemy's column, which had been said to have made its appearance, marched about twelve versts and had a skirmish. After that, the next day in obedience to the field order, the detachment turned to the east and moved deeper into the rear of the enemy, marching in the course of two days about twenty-five versts to the east.

Thus in three days the detachment marched about forty versts. On the fourth day the detachment was deployed in battle formation with the front to the north and entered into an engagement with the enemy's forces in that region, so that he could not move further.

Therefore, during these days but a very small distance was passed. It is true, the detachment had before it the enemy's forces occupying the surrounding villages, against which he had to fight dismounted, but still the fact must be explained by a certain irresoluteness and slowness of action on the part of the cavalry, which deserves rebuke.

In the above description it was seen how irresolutely the Cossacks acted, on January 12th, in the battle between twenty-four squadrons with artillery and two dismounted Japanese squadrons. This irresoluteness was observed also by General Mistchenko, who says in his order of the 13th: "Yesterday the troops seemed to hesitate before the enemy. It is necessary to act with energy and courage, remembering that a general battle is going on."

Was there any necessity during the succeeding days to enter into a lengthy engagement with the infantry, which evidently was only forming a screen? The fight in dismounted order in this case was quite expedient and necessary, for the purpose of attracting as many forces as possible. The ominous roar of the guns, the rattle of the musketry, sounding in the rear of the line of battle, even without substantial results, are apt to attract attention, to arouse anxiety, oblige one to look back, excite hesitation; this is inevitable, it is in the nature of mankind; consequently a cavalry force rushing on to the rear of the enemy during a battle must make as much noise as possible to create confusion, make a moral impression, and for that purpose must commence a dismounted battle. But during the development of a fight, in each special case, would it not be better, if profiting by the advantage in the speed of action the cavalry were to commence with the infantry, especially if the latter is entrenched or placed at the outskirts of local objects, a rifle battle from the front and to attack it from the rear on horseback without losing time or force in the methodic development of dismounted fighting. Such a course of action would be more suitable for cavalry. With no danger of being cut off it would better correspond to the nature of a dismounted combat.

In the battle of these days there was a combined action of mounted and dismounted formation, mounted attacks of the Daghestan regiment on the battery and on the rear of infantry lines, but in the rear of infantry attacking cavalry, not defending local objects. The attack on the part of the infantry was called forth by the absence of resolute action on the part of the cavalry. At all events one can only approve of the application of cavalry attacks, a very rare occurrence during this war, in which the cavalry showed a special partiality to dismounting. At all events by rushing to the rear of the enemy and commencing a combat there, the cavalry detachment attracted part of the forces, diverting the same from the fight at the front and thus greatly assisting the 1st Siberian corps.

In general the operations of the cavalry corps under the command of General Adjutant Mistchenko at Sandepu present a splendid example of the fighting action of the cavalry, and if it did not attain any decisive results, it was only owing to the

absence of the requisite contact with the combat going on at the front and the extremely slow fighting of the VIIIth and Xth corps.

On the next day after the retreat from Sandepu it became clear that the Japanese had not concentrated their forces opposite our centre with the object of breaking through the latter and it was decided to repeat the attack in the same order. But whilst preparations therefor were going on, the Japanese Commander-in-Chief having received the last reinforcement took the initiative into his own hands and took up the attack himself. This led to the battle of Mukden, a battle unrivalled for its duration and cruelly stubborn resistance of both sides.

During the whole period of the battle of Mukden it is interesting to follow the operations of the cavalry concentrated on the right flank of the army, as the rest of the cavalry, which was disposed on the mountains, could not develop its activity and its operations were limited only to serving the infantry parts, the cavalry acting only in dismounted order in connection with the infantry.

(e) *Period of the Battle of Mukden.*

Immediately before the battle the Russian Armies occupied positions along the line of Syfontai—Tchantan—Judiatai—Lashanpu—Shakhepu—Shanloidze—Erdagu—Kandolisan—Gautulin—Pereval over a distance of ninety-five versts. The troops were in immediate contact with the enemy occupying positions on the line of Vaniapooza—Fyfiapu—Lidiatun—Sandepu—Tautaitzy. On the right flank of our disposition was the II^d Manchurian Army, whose cavalry extended to the river Liaokhe. Opposite the same there was the II^d Japanese Army from the river Hunkhe to Lashanpu, forming the left flank of the Japanese disposition. Beyond its left flank, in the environs of Siaobeikhe, was concentrated the III^d Japanese Army under General Nogi, the front of which was covered by the 1st and 2d cavalry brigades under the command of Akiyama; this army was destined to turn the right flank of the Russian Army. Our II^d Army was composed of eighty squadrons with twenty-four horse batteries. On the 4th of February our Commander-in-Chief obtained information concerning the intentions of the Japanese to attack the railway, and he sent out

to the rear the 4th Don division, with the Don battery, and four squadrons of frontier troops, weakening thereby the cavalry by twenty-eight squadrons and six guns. To replace these the Commander-in-Chief reinforced the IId Army by means of the 2d special cavalry brigade and the Amur and Ussuri Cossack regiments, but these forces arrived considerably later.

The army cavalry was placed under the command of General Rennenkampf. In the beginning of February the right flank of the IId Army, the Composite Rifle Corps, was disposed on the right bank of the Hunkhe, on the line Tchantan—Tchandio-pa—Hezuanza. The army cavalry corps was placed on the right flank of the army along the line Udiatur—Ubaniula—Tsyiuto, that is to say, at a distance of twelve to fifteen versts from the flank of the infantry and about on the same line as the latter. This cavalry corps placed a protection between the rivers Hunkhe and Liaokhe, from Siaodamyn to Kalama. The cavalry was thus beyond the flank of the Japanese Army, with a free space before it between the above mentioned rivers, but its advanced parts were not in contact with the enemy, and, therefore, could not follow his movements.

The absence of information concerning the enemy and ignorance of his forces occupying the region of Siaobeikhe induced the Commander to order the cavalry of the right flank to clear the right shore of the Hunkhe of the enemy's troops and to carry out energetic scouting in the regions of Siaobeikhe and Liaoyan, also to the south of Siaobeikhe, between the rivers Hunkhe and Liaokhe, to ascertain what troops were disposed there. In this case, therefore, the cavalry did not show personal initiative.

In carrying out the order, on the 1st of February, Lieutenant General Rennenkampf moved with the Ural-Transbaikal division, the Caucasian cavalry brigade and the 19th, 25th, and 26th Don regiments to the south, turning the left flank of the Japanese. On the same day he reached Santinza at a distance of twelve versts from Siaobeikhe. Small parties of the enemy retreated before him, so that our troops moving to the east, to the front line Liaoyan—Shakhe came upon the railway line without encountering the enemy. The next day the detachment advanced five versts to the south, drove back six Japanese

squadrons, reconnoitered Siaboeikhe, and by means of artillery fire drove away an infantry column of the enemy which had made its appearance. After this, on the 3d of February, the detachment moved on to Maimakai, but on receiving the order to dispatch the Don division towards the north, to Guntchulin, it ceased the reconnoitering and turned back. The departure of the 4th Don division weakened the forces of the detachment and prevented them from carrying on the reconnoitering to the end. The position of Nogi's army remained unknown. The scouting operations proved, however, that Siaobeikhe was occupied by infantry troops forming the left flank of the army, all the villages to the north being also occupied by the enemy, whereas the space to the south of Siaobeikhe and between the Hunkhe and Liaokhe along a distance of twenty versts was free.

From the 5th till the 10th of February the above mentioned attack of the four squadrons under the command of Colonel Gillenschmidt took place in the rear of the Japanese army with the object of demolishing the railway line and this being successfully accomplished led to the blowing up of the Haitchen bridge. The detachment returned, having obtained some information regarding the disposition of the enemy.

On the 12th of February, General Rennenkampf was ordered to move to the left flank of the army, and the command over the cavalry on the right flank was entrusted to General Grekoff who had been temporarily commanding the Ural-Transbaikal division; the command of the latter was transferred to Major-General Pavloff. The cavalry of the IId Army after the departure of the Don division consisted of thirty-two squadrons and eighteen guns, of which the right group, fifteen squadrons and twelve guns under the command of General Pavloff guarded the locality between Kalama and Siadomyn with a reserve force at Ubaniulu, and the left group, seventeen squadrons and six guns, under the command of Major General Eicholz, protected the locality from Siadomyn up to the flank of the Rifle corps with a reserve force at Syfontai.

With the return of the cavalry detachment the contact with the enemy was lost again and this circumstance enabled the latter on the 11th to group together on the right bank of

the Hunkhe, unnoticed by us, parts of the turning columns of the army of Nogi. These parts were only discovered by the cavalry on the 14th, when they came upon the advanced posts of the cavalry. This fact proves how unreliably the observation on the flank of the army was carried on. With the first news of the approach of the Japanese forces the Ural regiment was ordered to occupy Kalama and to extend its observations on the right bank of the Liaokhe up to the Sinmitin road, but while on the way thither the regiment received another order from Major General Pavloff to support him by covering his right flank. When the regiment arrived in the evening, Kalama proved to be already occupied by a Japanese detachment consisting of three sorts of arms, and our regiment was unable to cross the Liaokhe. Besides, the Japanese were advancing on the cavalry from the south as well.

On the 15th Major General Grekoff decided to attack the enemy at Kalama, with the reserve brigade occupying Syfortai. The Ural regiment was sent ahead, but before reaching Kalama it encountered a battalion of Japanese infantry and after an exchange of shots it retreated without losses.

Major General Pavloff was ordered on the same day to move with nine squadrons and four guns from Ubaniula to the south towards Ludigantaza and Fansandi. Meeting with considerable forces of the enemy Pavloff took up a position with dismounted forces at Fansandi, but was forced to retreat towards Sandiotsy. His losses on that day were one officer and six Cossacks. It was ascertained then that considerable forces of the enemy were advancing towards the front of our armies and were turning our right flank.

Major General Grekoff with a reserve force of nine squadrons and the 20th horse battery, moved on to Kalama after the Ural regiment. Finding it occupied and noticing a movement on the part of the Japanese to the north, he turned to the north intending to cut off the heads of the columns, but afterwards deeming it unwise to go too far north he left this task to the Ural regiment alone, and himself with the remaining squadrons turned to the north-east, to Syfontai, that is away from the flank of the army thus allowing the enemy to turn

him; that is to say, he stopped in an enclosed space before the front of the enemy, instead of staying on the flank of the same and enjoying full freedom of action. The 5th Ural regiment retreated towards nightfall to Piediauaupu, where it halted with the front towards the west and north-west. The right wing of General Pavloff put out a protection along the line Lanhopu—Hacopinusi; the reserve forces of General Grekoff halted for the night at Erdagou; the left wing of General Eichholz was also forced to retreat to the line Hacopinooai—Tchandiapa. Thus the task given to the cavalry to occupy Kalama, and to pass over and carry on the observations on the other side of the Liaokhe, was not accomplished. By retreating to the north before the enemy and gradually drawing back the right flank the cavalry was outflanked on the 15th and pressed close to the right flank of the general disposition. In the reserve parts one Cossack was wounded on that day.

During the last two days the cavalry detachment learned that near Kalama a force of not less than one infantry division had broken through to the north, the head of which towards the evening of the 15th reached the parallel of Davangapu, that is our right flank had been turned at a depth of twenty-five versts; from the south about ten battalions were advancing towards Syfontai and had already reached Toohanchipu—Tootaity. In other words, it was clear that the Russian Army had been outflanked by considerable forces.

The action of the cavalry during the period described may be commented on as follows: The cavalry detachment although placed aside from the infantry flank at a distance of fifteen versts, was disposed nearly on one line with the same and its operations were only passive. In covering the flank of the army, occupying a fortified line along a front of ninety-five versts, the cavalry ought certainly to have moved on from the side of the flank and advancing forward have established a contact with the enemy, so as to follow all his movements. Only in such case could the cavalry properly warn the army of all that was going on. As regards the manner of carrying out the reconnoitering service the same did not answer the purpose either. The cavalry detachment remaining on the same line as the infantry, sent on ahead a line of protecting parts along

a front of thirty-five versts. What a number of men were required for such a long front; how the forces of the detachment were weakened thereby; and, at the same time, how little did it answer the purpose in view. Such passive form of action and the absence of contact with the enemy did not allow the turning movement of the enemy to be noticed in due time and permitted his infantry to come right close to the cavalry detachment. The cavalry gave information regarding the flanking movement on the 14th, whereas if it had carried out the reconnoitering and protection of the flank in any other way, it would have noticed the movement of Nogi's army when quite at the beginning, when only parts of that army were crossing the Hunkhe, that is, two or three days earlier, which would have made a great difference.

The discovery of the turning movement called forth the occupation of Syfontai by eight battalions of the infantry; eighteen squadrons of the Dragoon brigade were moved through Soobodiapu to Gavohooapu and Tuitavooan and a brigade of the 41st division under the command of Birger were sent on towards Sinmintin to Kaolitoon, as a screen, for the protection of the right flank of the army and for the purpose of reconnoitering the locality beyond the river Liaokhe.

On the 16th General Grekoff was ordered to find out what forces of the enemy were moving on both banks of the Liaokhe, and to determine the line of the enemy's movement. For this purpose he was advised to occupy the road to Sinmintin on both banks of the Liaokhe and to send out numerous scouting parties.

On the morning of the 16th the Japanese on the other hand, advanced on Syfontai with the forces which had been moving towards it from the south; part of them deployed opposite to Syfontai and the remaining columns, forming about a division continued to turn Syfontai from the west, drove back the 5th Ural regiment and passed to the rear of Syfontai. General Grekoff also retreated and reached Hoodiatai towards evening, without having accomplished the task which had been set him.

Meanwhile General Pavloff's detachment continued to keep its position between Syfontai and Pendiauopa, stopping the advance of the enemy, General Pavloff received the order to

move on to Kalama for the purpose of reconnoitering the tail of the Japanese columns, which were moving to the north, and of harassing them from the rear. But it was already impossible to reach Kalama and General Pavloff moved on to the north with the purpose of coming into contact with the detachment of General Grekoff and of making an attempt to reach the Liaokhe, outflanking the Japanese columns from the north, at their heads, but at the request of General Eichholz, he halted at Tuerlto, for the purpose of protecting the Syfontai detachment from the north. Thus, the detachment of General Pavloff was detained near Syfontai without having reached Kalama and without having joined General Grekoff's detachment.

In the course of the day the Japanese thrice attacked the Syfontai positions, but without success. Towards evening General Eichholz ordered the Syfontai troops to retreat and himself moved on to Tuntaitzy to join the Rifle corps, under the protection of General Pavloff's cavalry, which was disposed at Sathaitza.

While the battle was going on with the right column of Nogi's army, the other column of the same had already moved further on and began to pass on to the east towards Mukden. Thus again during the operations on the 16th of February the cavalry remained near the infantry, losing its freedom of action and all possibility of developing active operations. The cavalry detachment kept receiving contradictory orders all that day from the Commander of the II Army, from General Grekoff, as Commander of the Cavalry, and from General Eichholz, Commander of the Syfontai detachment.

General Stepanoff's brigade of Dragoons was ordered to march to Tuitavooan and across the Liaokhe, for the purpose of reconnoitering the locality between the Liaokhe and the Sinmintin Railway, and arrived at Salimpu, where it halted for the night near the cavalry detachment of General Grekoff which was stationed for the night at Hoodiatai at a distance of several versts, and near the 5th Ural regiment at Tchizanpuza at a distance of seven versts. Thus, in such a small space, at about twenty versts to the north of Syfontai, on the night between the 16th and 17th of February, twenty-one squadrons and six guns were concentrated. The Japanese got before this

7th Transbaikal battery, in all 450 mounted men. Out of these parts had to be given away into the newly formed detachment of Major General Golembatoffsky and to form the flying post, after which under General Eichholz remained only 230 Cossacks, which were disposed in Sathaitza; there they joined the Zamoecz regiment and did not undertake any active operations, General Eichholz was ordered to give up the command of the detachment to Major General Tolmatcheff.

General Tolmatcheff's detachment received the following order: "to reconnoitre the locality on the side where the turning movement of the enemy was being executed, keeping to the right bank of the Hunkhe, and directing the scouting operations towards the north," the execution of this order being laid on the cavalry of the detachment.

The information obtained by the cavalry on the 17th proved that considerable forces of the enemy, about two divisions, moving between the Hunkhe and the Liaokhe, successively turned to the east and advanced to the front line Salimpu—Madiapu, likewise the Sinmintin was occupied by Japanese cavalry. In fact, along the right bank of the Hunkhe the 9th Japanese division supported by the 8th division from Oku's army was advancing towards Shuango and Siasinmentin.

The 7th Japanese division, which was being observed by General Pavloff's cavalry, was advancing on Gauhuapu and Tatchindooiza. To the left the reserve brigade, having come up to Salimpu, was moving on to Hudiatai. Further, the 8th division which had been moving on the exterior line of the bow formed by the general front in the movement of the turning columns of Nogi's army, was advancing to the north, in the direction of Tchinguntai; it was under the observation of the 5th Ural regiment. Lastly, on the extreme left flank, General Tomra's cavalry detachment with two battalions was moving towards Dafanshin.

In this way, General Grekoff's cavalry passed directly before the front of three Japanese columns without coming into collision with them anywhere.

Thus, during the preceding two days, the 16th and the 17th, the task set to the cavalry was to move up to Liaokhe and

develop scouting operations on the right bank of the river, and at the same time by surrounding the advancing columns from the flanks and in the rear to impede their movement. But the cavalry did not succeed in accomplishing this. General Pavloff's detachment failed to get before the enemy's column, by gaining its head, on the contrary the Japanese infantry got in advance of him, and having cut him off from General Grekoff, prevented his coming into contact with the latter, and obliged him to remain on the interior flank of the Japanese columns.

General Grekoff's detachment succeeded in reaching Liaobian and Kaulitoo, that is, to come out on the exterior flank of the enemy, but he did not profit by his advantageous position, and did not venture to attack with his twenty squadrons the rear of the Japanese troops, moving to the east in the direction of Mukden. He remained in inaction at Sandiapu the whole of the following day, only sending out four squadrons of the Tchernigoff regiment across the river, and trusting to the information obtained from local inhabitants that Sinmintin was occupied by a small force of 700 Japanese mounted men.

Thus, the night from the 17th to the 18th, the cavalry was disposed in the following order:

1. Major General Grekoff's detachment of twenty squadrons and sotnias with six guns:

(a) Four squadrons of the Tchernigoff regiment and two sotnias of the Chita Cossacks on the right bank of the Liaokhe between Matchan and Voitsiavopen, near Sinmintin.

(b) Four sotnias of the 5th Ural regiment near Tchindusta in contact with the scouting patrols of the enemy.

(c) A reserve force of ten squadrons and sotnias with six guns at Sadiapu.

2. General Tolmatcheff's detachment consisting of nineteen sotnias with twelve guns, partly near Aidiapu, partly on the left bank of the Hunkhe, near Saovantchinpu.

On the 18th the Ural regiment received an order to observe the enemy on the left bank of the Liaokhe, from the north, and to enter into contact on the right with the Tchernigoff regiment, which was observing the enemy on the right bank of the Liaokhe, that is to say, again only to observe the enemy without carrying out any active operations.

The Ural regiment moved on towards Sishelikhe, that is, four versts in advance, disclosed the approach of two infantry regiments of the enemy with one battery towards Dafashan, informed General Grekoff thereof and retreated towards Liaobian, having received the order from General Grekoff to keep up the contact with the brigade of General Birger, which was moving on from Kaulintoon to Mukden and to cover the left flank of General Grekoff's reserve, remaining on the spot. At Liaobian the regiment halted for the night.

Towards nightfall General Grekoff's reserve moved to Siaotsylampao, that is, to the east. On that day, during the time, when the Japanese columns were continuing their movement to the east and their left flank detachment came into collision near Dafashan with General Birger's detachment, General Grekoff's cavalry, after remaining inactive all day, towards evening, without having been molested by the enemy, moved away in the direction of the northeast, the consequence of which was that the detachment of Birger and Topornin were left unsupported. In his reports of that day General Grekoff gives very vague information, and only concerning operations in the rear of the Japanese columns moving to the east. This information was founded on the reports of the scouting parties, which had not been verified, as the main body of the detachment, ten squadrons and sotnias, was at a distance of twenty versts from scouting patrols on that day, and the right flank, six squadrons and sotnias, at a distance of ten verst.

General Tolmatcheff's cavalry detachment acted on that day in direct contact with the newly formed infantry detachment of General von der Launitz, which was protecting Sukhudiapu by means of two rear guard parties placed on both banks of the Hunkhe. The task set to the cavalry consisted in carrying out near scouting, and the protection and keeping up of the contact between the parties on both banks of the river, also the protection of the right flank of the troops on the right bank of the river (General Golembatoffsky's detachment) during their retreat from Shuango towards Tunsonpu.

Thus on that day General Tolmatcheff's cavalry did not undertake any independent operations. During the day six sotnias were sent out to be placed at the disposal of General

Baron Kaulbars, and only thirteen sotnias and twelve guns, remained in the detachment.

The nature of Major General Tolmatcheff's reports is note worthy. They contain such expressions as "one of my scouting parties observed that the Japanese were marching in three columns," and so on. This proves that the reports were founded on information obtained from casual scouting patrols, whereas such important information ought to have been verified by the operations of the entire detachment.

About 3 o'clock p. m., General Tolmatcheff reports that he, "in view thereof that the infantry was protecting his front, passed over to Sukhudiapu with the purpose of crossing the Hunkhe on that spot, and moving on to Tuntaitzy, to the right flank of the IId Army." The reason for this is quite incomprehensible. During the day no reports were received from General Tolmatcheff, which proves that no reconnoitering operations had been carried out on his part on the left bank. The occupation of Tsantaopu by the Japanese remained undiscovered. On the same day General Tolmatcheff's detachment, however, again crossed over to the right bank of the Hunkhe, then at 8 o'clock in the evening returned to the left bank and halted for the night near Sukhudiapu. From the above it may be assumed that General Tolmatcheff's cavalry hung about all day near the infantry without any defined object and confined itself to near scouting.

Towards nightfall Sukhudiapu was occupied by the Japanese in the rear of Lieutenant General Ivanoff's detachment, disposed in the region of Inoerpu—Tuelpu—Totai.

The Japanese penetrated to that spot by crossing over to the left bank of the Hunkhe, near Tsantaopu, after the detachment of General Golembatoffsky had retreated along the right bank. This was overlooked by Tolmatcheff's cavalry, who gave no information concerning the occupation of Tsantaopu by the Japanese.

Towards the night of the 18th, the Commander-in-Chief gave orders to concentrate the main body of the IId Army on the right bank of the Hunkhe, on the lines Sathaitza—Iansyntoon of the morning of the 19th. The division of Major General de Witt reached the northwestern front of Mukden and

took possession of the line Tabetoon—Sahedtsza—Tschuan-toon. Besides this, the 1st Siberian corps also arrived at Mukden, and was left in reserve for the time.

During that time General Topornin's detachment was engaged in a battle near, and in front of Salimpu, after which towards nightfall on the 18th it retreated to Niusementoon and Uhuantoon, that is, to the left flank of de Witt.

After the engagement near Defanshan the detachment of General Birger passed to Hushitaki, to the north of Mukden. Part of the troops of the IId Army remained on the left bank of the Hunkhe between Tuntaitzy—Madiapu—Elthaitza—Vasuchuanzy—Lashanpu in the region of the IId Army under the command of General Baron Bilderling.

On the 19th the Commander-in-Chief intended to assume the offensive with the troops which were concentrated on the right bank of the Hunkhe. However, General Baron Kaulbars deemed it inexpedient, by reason of the utter exhaustion of the troops and the incomplete concentration of his army. The attack did not take place.

The cavalry of the IId Army occupied the following positions on the day of the 19th: The main body of General Grekoff's cavalry detachment was placed on the left bank of the Liaokhe near Siaoutszylampu; four squadrons of the Tchernigoff regiment and two sotnias of the Chita Cossacks continued the reconnoitering operation on the right bank of the Liaokhe; the 5th Ural regiment occupied Kaimapu.

On the 19th General Grekoff decided to take advantage of his favorable position at the back of the left flank of Nogi's army moving on to Mukden, and to attack the same from the rear. For this purpose he ordered the Ural regiment to pass to Laobian, only one and one-half versts from the halting place, and, "to observe the columns of the enemy from the north, distribute sentry posts at Binlopu through Shelikhe along five versts in that direction, to keep up a contact with General Birger or any other right flank force of the disposition at Pinlopu, and to be in touch on the right with three sotnias of the 1st Chita regiment, which were to move on to the line Ivathaj—Shelikhe."

The Ural regiment was thus ordered to deploy itself along a distance of fifteen versts on the front and the line Ivathaj—Shelikhe, along which the regiment was to keep up the contact with three sotnias of Chita Cossacks had a length of twenty-five versts. Hence, the part assigned to the Ural regiment was exclusively for guard protection, that is, a passive one.

General Grekoff himself decided to move on with his detachment to the rear of the enemy; that is, in the space between the troops of the latter and the river Liaokhe, which necessitated a movement to the southwest, but he moved on to Kaultoon, to the west and to the north of the road Mukden—Simintin, which did not bring him nearer to the enemy, but on the contrary, farther away.

The Ural regiment moved on to Shelikhe in the morning, but on finding that General Birger's detachment had retreated during the night towards Kutchenzy, leaving seventy of its men wounded there, the regiment dismounted and proceeded to transport the same to the detachment under cover of the sotnias. At 10:30 the remaining three sotnias returned to Kaimapu, one of them occupying Laobian, and disposed themselves for the night at Syzangai. Consequently, the regiment did not accomplish the task set to it, which was to observe the front Shelikhe—Pinlopu and to enter into contact with the right flank of the army. On that day one Cossack was wounded.

The main body of General Grekoff's forces reached Lidigantzy at 11 a. m., from where he sent reports concerning the movements of small parties of the enemy and of the Hunhuze, on the right bank of the Liaokhe. Seeing that the Ural regiment had not accomplished the task set to it, General Grekoff decided to execute the same by means of the reserve force and for that purpose returned to Laobian from where he ordered the Ural regiment to seek to enter into contact with the main forces.

Towards night on the 19th, the Tchernigoff regiment with two sotnias on the right bank of the Liaokhe, to the south of Simintin; three sotnias of the Ural regiment halted for the night at Syzantai; the reserve disposing itself at Sindiafan—Latore, with outposts picquets along the line Shelikhe—Pinlopu. The

detachment had experienced no losses except the above mentioned wounded Cossacks.

Thus on that day, General Grekoff, without any reasons, desisted from his originally good idea of attacking the rear of the Japanese army. Instead, his detachment advanced towards Mukden for the purpose of acting in concert with the other troops and took its place on the flank of the disposition of the Japanese armies.

The cavalry detachment of General Tolmatcheff, on the 19th, crossed to the right bank of the Hunkhe and remained near the detachment of Lieutenant General Herschelman at Madiapu carrying out scouting operations during the battle in immediate contact with the infantry and towards night crossed the Hunkhe again.

During the 19th the Japanese remained passive facing the western front of Mukden; they proceeded to draw up their columns and only sent out advanced posts. The flanking movement was executed by three divisions, which were joined on the 19th by four reserve brigades. Along the valley of the Hunkhe the 8th division was moving, and to the south of the latter parts on the 4th and 5th divisions. On the left flank of the Japanese disposition, in the direction of northeast moved four cavalry regiments and two battalions with fourteen guns and twenty-four machine guns under the command of Tomura, and a cavalry brigade under Akiyama.

Notwithstanding the presence of forty squadrons and sotnias on our left flank and their carrying out exclusively reconnoitering operations, we were in utter ignorance of the forces of the enemy outflanking our right flank, likewise we knew nothing of the sphere of action of Nogi's army and the position of its left flank; we did not know precisely where the sphere of action of the armies of Oku and Nogi ended.

Towards night on the 19th the disposition of the Russian troops on the eastern front was as follows:

On the right flank, a composite division under Major General de Witt, occupied the line Takhentoon—Matuensa; on the extreme right flank near Saitazsa were located the forces of Colonel Zapolsky, six battalions.

In the center, thirty-two battalions of the 25th division and a composite division of the Xth Corps under the command of General Topornin, from Niusementoon to Yukhuantoon. On the left flank, General Zerpitsky with the forces of General Tchurin, nine battalions of Rousanoff, eleven battalions of Hershelman, twenty-five battalions and the 15th division—thirteen battalions. From the left flank the troops of General Topornin through Madiapu and up to Vasuguanzsy.

The reserve of the army, for the right flank in the region of Takhentoon, eighteen battalions and six squadrons of the 1st Siberian Corps; beyond the left flank near Sotkhosa, thirteen battalions of the 8th rifle regiment and the Vth Siberian Corps. Total on the eastern front: 130 battalions, over an area of thirty versts.

For the 20th Baron Kaulbars had an order to take the offensive and to repulse the enemy's forces which were outflanked by attacking the enemy's left flank, namely, to advance with the right flank.

Baron Kaulbars, having given the requisite instructions ordered his cavalry "to continue carrying out the task given it in the rear and on the enemy's flanks."

General Grekoff reported in the morning to the Commander of the army that there was no fresh news of movement by the Japanese troops from Liaoyan, where their extreme flank was located. On the eve, however, he had reported that one battalion and three squadrons of the Japanese passed from Liaoyan to the northeast. This shows that by morning of the 20th the extremest point of the left Japanese flank had not been exactly defined. General Grekoff ordered in the morning the Ural regiment to occupy Pinlopu and to deploy sotnias on the front so as to link on the right with the Tchitinsky sotnia and on the left with the right flank of our troops defending Mukden, and to establish the whereabouts of the left Japanese flank coming from the west. On establishing the above to watch the flanking movement, and also to cover the routes on the north in the rear of the Russian troops and on the railway Mukden—Tielin.

As the Ural regiment started its advance its Commander was informed that all the nearest villages were occupied by

Japanese. This shows that on the night of the 19th and 20th, as the cavalry left flank was at Pinlopu, ten versts from the right flank of the army near Saitassy, they were not linked together, and the enemy had slipped through this space unperceived.

On this being reported to him General Grekoff sent four squadrons of dragoons to Kuzsyan to dislodge the enemy and occupy the line of protection.

The dragoons after an insignificant skirmish occupied the adjoining villages left by the Japanese and during the night linked themselves with the right flank of the army. The Russians lost only one dragoon that day. Eventually Grekoff's main force reached Lidiapudsy where they were joined by the Ural regiment. The forces of General Tolmatcheff remained throughout the 20th in Lanua without taking part in that day's fighting on the western front.

Hence, the entire activity of the twenty squadrons and sotnias with six guns concentrated in the region of Lidiapudsy restricted itself on the 20th to an insignificant skirmish of four squadrons of dragoons near Kutsyan, to the establishment of a link with the army and was brought down to a passive protection of the flank of the army and to covering of the routes to the north which were not threatened at all. In other words, in spite of the order received for that day "to continue carrying out the task regarding the rear and the enemy's flanks," it was brought down to the nearest protection of the flank which according to the disposition was charged to the Primorsky Dragoon regiment. The eleven sotnias of General Tolmatcheff remained quite inactive five versts from the battlefield.

On the morning of the 21st the mounted troops were located thus: five sotnias of the Tchitinsky regiment on the line Bugensivo—Sindiafan extending over nineteen versts, fronting west, towards Liaokhe, whence according to latest reports nothing could be expected. Four squadrons of the Tchernigoff regiment on the route from the right bank of Liaokhe to join the main forces. Two squadrons of the Niejin regiment guarding the line Sinthoiza—Taudiapoon with the front to the enemy's flank. The main forces ten squadrons and sotnias with six

guns were near Lidiapudsa beyond the left flank of the entire posts.

From General Grekoff's report to the Commander-in-Chief on the morning of the 21st it is seen that he recognized his task to be the covering of the route to Tielin. Hence, the cavalry played this purely passive part of protecting the routes to the north without there having been the least attempted movement by the enemy in that direction. Some trifling skirmishes took place that day in front of the outposts. The Ural regiment took up advanced positions at first but withdrew immediately fire was opened against it. On the left flank the Japanese seized Kunuyatoon, forcing the Niejin squadron to retire. This compelled General Grekoff, lest the Japanese might break through, to remove the reserve to Khaituon, although he might have prevented this by remaining at Lidiapudsa. Thus for two days the cavalry of General Grekoff remained inactive, offering no assistance to the army in its efforts to take the offensive.

Late at night the cavalry took up the following positions: The Niejin regiment, two squadrons, occupied the sentry posts from Taudiatoon to Lidiofan, ten versts. Five sotnias of the Tchitin regiment occupied the sentry posts from Lidiofan to Bugetsivo, eighteen versts. Five sotnias of the Ussuri regiment drew their posts along the right bank of the Liaokhe from Bugetsivo to Ulachaopudsa covering a distance of four versts. The main forces, thirteen squadrons and six guns were near Lidiapudsa. Thus, towards night the troops occupied almost the same positions, having only lengthened the line of protection beyond Liaokhe. Facing them the enemy had occupied the villages Pinlopu and Eltkhaiza; in the latter with two battalions and four squadrons. The cavalry lost two dragoons that day.

Meanwhile a combat was taking place over the entire west front, and the flanking movement of Nogi's army was going deeper and deeper, and threatened the railway, which was Russia's line of communication.

On the morning of the 21st Major General Orbeliani took over the command of Major General Tolmatcheff's cavalry. After some modifications had been made in the orders Major General Pavloff was sent with two sotnias to reconnoiter ahead

of General Zerpitaky's advance guard. As a combat was proceeding along the entire front this reconnaissance was to be carried out between the two fighting lines. It could clearly give no results and was quite useless. On this occasion the cavalry was given a task which should have been left to the infantry forces leading the combat; for it was from the combat itself that the answers to the questions could alone be learned. The Caucasian mounted brigade remained inactive throughout the day and far from the battlefield.

The attempts of the II^d Army to take the offensive on its right advanced flank on the 20th and 21st were unsuccessful.

On the following two days, the 22d and 23d, the positions of General Grekoff's cavalry changed but little. It remained inactive and did not furnish even passive protection to the routes to the north, seeing that small groups of the enemy broke through in that direction. From General Grekoff's reports it was seen that the Japanese infantry had occupied the villages in his vicinity. On the morning of the 22d the Japanese, whose forces General Grekoff estimated at two regiments of infantry and eight squadrons with two mounted guns, took the offensive against the advanced forces on Madiaten—Kautsyen, gradually spreading northwards by an outflanking movement on the right of the cavalry. In view of this General Grekoff's forces retired through Tasitooon to Zkhailuopu and further to Taushu for the night, having left the Ussuri, Tchita and Ural regiments to protect the line Makudsa—Bugetsivo—Ulagaoputsi.

The forces that took part in skirmished sustained no losses on these days.

Hence, on this day the Japanese forces advanced on the cavalry, outflanked it, compelled it to retire, and, disregarding the presence of the twenty-five Russian squadrons and sotnias, having placed a protection against them, openly continued the flanking movement on the right of the army and embraced it.

General Grekoff's cavalry passively yielded to the enemy, and retired without any losses that day. For the last two days the Japanese forced General Gerngross and the northern forces to occupy the line Fansitooon—Ungentooon with their front facing northwest and north, eight versts from Mukden with their right flank resting on the railway. With the advance and

the outflanking of the Russians on the right from the north, the Japanese exposed their flank and rear to General Grekoff's forces and in order to cover them advanced cavalry and infantry slowly northwards, threatening the railway and the Russian communications. All General Nogi's forces were meanwhile attacking the entire western front of the Russian army.

General Pavloff, on the 22d, having joined his two sotnias with four sotnias of the IVth Ural regiment received orders to cover the nearest stages towards Mukden from the north. The Caucasian brigades of Prince Orbeliani remained inactive on the 22d. On that day the Japanese took energetically the offensive and made a series of attacks on our entire western front. This resulted in the right flank being repulsed to Tansitooon—Podisa and the Japanese began to threaten Mukden from the north by cutting off the line of retreat to the Russian army.

The Commander-in-Chief, having ordered the Ist and III^d Army to retire to the line of the river Hunkhe, organized the defense of Mukden from the north by special forces under General von der Launitz whom he charged to cover entirely the approaches to Mukden and to prevent the destruction of the railway. The northern forces consisted of twenty-six battalions, fifty-two guns and the mounted forces of Prince Orbeliani, seventeen squadrons and sotnias and twelve horse guns. Now the mounted forces of General Grekoff remained also on the north of Mukden and were not united under the northern command, although the radius of action of Grekoff's and Orbeliani's forces adjoining each other. The total number of mounted forces north of Mukden were forty-two squadrons and sotnias with eighteen guns.

Beginning from the morning of the 23d the Japanese continued to advance against Grekoff's forces. The Ural regiment was ordered to move on Zkhailuopu and to occupy it. The Japanese openly under the eyes of the Cossacks began strengthening themselves in Tasitooon. The mounted forces did not prevent this and when one battalion and two squadrons were collected there and moved ahead the Ural regiment retired to Tchidiasa, where they rested for the night. The regiment sustained no losses. On the right flank two squadrons of the

Niejnsky regiment were sent in the morning to Sifasi to support the Tchitinsky regiment, but as they did not encounter the enemy the squadrons turned back. No other action was taken by the troops.

Prince Orbeliani's cavalry was given the task of scouting the enemy north of Mukden, namely, in the region where Grekoff's cavalry was assisting the infantry in the defence. The combined regiment of General Pavloff passed the night at Santiasa in touch with the enemy. During the attack of the Japanese it remained on the spot protecting the right flank of the infantry. Meanwhile the IVth Ural regiment commenced an attack on the enemy's battery left behind, but encountering infantry fire, it retired about 400 paces, having lost only five horses. That was all the regiment did.

Thus, General Grekoff's forces were again given an opportunity of attacking the enemy's rear. Action on the part of cavalry in this direction would have been most valuable if only to stop the enemy and gain time. But the cavalry concentrated north of Mukden in two bodies, one of twenty squadrons and sotnias under General Grekoff near Taushu and the other consisting of ten sotnias at Tsuertoon only kept the defensive on the 23d.

On the 24th Grekoff received instructions from the Commander-in-Chief to break through the line of the enemy's protection and after outflanking it, to penetrate into the rear of the left flank and ascertain the force and disposition of the reserve beyond this flank. The staff of the II^d Army gave him the task of performing: "a precise and decisive reconnaissance west of the railway between the stations Houshitai and Tielin, in order to establish the forces and grouping of the Japanese in this region." These were again quite conflicting instructions. The cavalry remained at Taushu, having sent out only scouting parties to get in touch with the enemy. After this it remained on the same place, and the advanced forces were sent ahead from two to ten versts and established the weakening of the former protection. Even this, however, did not induce General Grekoff to advance against the rear of the left flank of the Japanese. He remained for the night at Taushu, having his ad-

vanced lines at Bugetsivo—Yadashan and the Ussuri regiment on the right bank of the Liaokhe. On the night of the 25th a general retreat of the army to Tielin was decided upon.

In the last five days the general situation had changed in favor of the Russian cavalry. The Japanese columns who were marching northwards all turned to the east and continued their advance on Mukden. Having begun the combat with the west front of the Russians, they started a series of attacks which lasted several days. When the Japanese turned eastwards on the 18th, Grekoff's cavalry had the rear of their flank facing him and hence was able to strike freely into their rear. This was quite evident at the time. When the Japanese were attacking fiercely the stubbornly resisting front of the Russian troops, action by Grekoff could have had a sweeping effect. Self-sacrificing and energetic action by the cavalry in the rear would have had effective results, particularly on the 20th and 21st., when it was proposed that the Russian front troops should take the offensive. At the very least the moral effect would have served to check the Japanese advance and we could have gained time to collect our forces and concentrate for some chosen purpose. General Grekoff saw well the importance of such an attack and was about to make one on the 19th, but he lacked courage and remained entirely passive. He created quite unnecessary task for himself of covering the routes to the north which were not threatened at all.

However, Grekoff was not the only one to blame, as he acted in accordance with instructions given him by the staff of the II^d Army, which ran as follows: "It is at present necessary to maintain a close communication with the infantry located in front at the station Hushitai and prevent the spreading out of small bodies of the enemy northward. In the event of success on our part the cavalry should strike at the enemy's flank and nearest rear." Thus he was ordered to strike against the rear only in event of general success, whereas it was just this activity that would have assisted success.

The cavalry of General Tolmatcheff, subsequently of Prince Orbeliani, also refrained from effective action, and only kept direct touch with the infantry by short range scouting,

which is not the cavalry's first duty. In fact it kept hiding behind the infantry.

Thus from the moment that the enemy's flanking movement on the right of the Russian army was established the operations of the cavalry divide themselves into two periods. During the first days, from the 14th to the 17th, when the length and direction of the movement was not yet known; and from the 18th, when the line became generally known. In the first period it was important to learn whether the columns already disclosed facing our right flank were the chief forces of the engaged troops or only a screen, the side vanguard, in whose rear the movement of the other troops could be expected.

Naturally, at that time the Commander-in-Chief insisted that the cavalry should develop scouting on the right bank of the Liaokhe, but later on it became known that the Japanese forces advancing between Hunkhe and Liaokhe had turned eastward in the direction of Mukden and only small patrols and groups of Hunhuzes remained behind. In view of this the scouting became useless. Yet, it was continued in the expectation of some deep thought out flanking movement, and thus the opportunity was missed of the cavalry attacking the Japanese in their rear while they were in the act of flanking.

Summarising all that had been stated of the work of the cavalry on our right during the period of the Mukden battles one must admit the following:

Before the beginning of the battle the cavalry detachment ordered to protect the right flank of the army was not able to reconnoiter sufficiently, owing to its unfavorable disposition on the flank and also its passive action; and although it discovered the outflanking movement of the enemy only two or three days later than it should have done and consequently did not warn the army in due time.

Further, all the cavalry's efforts were directed to discovering the enemy's outflanking force and the direction of its movements. Scouting patrols were sent out and brought in information; and the cavalry commanders contented themselves with this information without verifying it by reinforced reconnoitering, by sending out larger parties.

The commanders frequently even were content with information obtained from local inhabitants, of Chinese travellers, and without further verification reported it to the Commander-in-Chief. In a word, the reconnoitering was carried out with insufficient force, not energetically, not actively, and thus it elucidated the position only slowly and wasted much time.

On the 17th and 18th, when conditions were sufficiently defined, all the cavalry work was directed to the carrying out of distant reconnoitering, to the prejudice of rear reconnoitering and other services. The cavalry was content to play only a passive part, and all its work during this period was marked by slowness and dilatoriness. Instead of surrounding the advancing columns of the enemy from the flanks and the rear and taking advantage of favorable occasions for sudden attack on the rear of the enemy in large masses, in mounted or dismounted formation, the cavalry was so slow that it could not overtake the enemy's infantry. On the contrary, the infantry each time, got before the Russian cavalry stopped its way, and cut off separate parties; and, finally the Japanese infantry took the offensive and obliged our cavalry to give up its object and retreat.

As to developing independent action in the rear of the enemy to strike the rear, our cavalry not only did not venture to do so when ordered.

The passivity and absence of desire to take independent action passes all limit and amounts to this that the cavalry actually endeavored to avoid fighting under various pretext, yielding to the enemy in everything. With even small forces against it our cavalry retreats hurriedly, takes cover behind the infantry and remains passive witness of battles in which the infantry troops heroically lay down their lives.

All this is eloquently confirmed by the cavalry losses during the terrible days of the Mukden battles. From the 14th to the 25th of February the eight regiments and three batteries lost only five officers and seventy-three men; Grekoff's detachment only two officers and twenty-seven men. Of all the losses of the Russians during the period of the Mukden battles 97 per cent. were borne by the infantry, and only 0.1 per cent. by the cavalry

It is noteworthy that the cavalry of the right flank, that is

of the II^d Army, was not joined under the command of one chief. In one region four cavalry detachments worked in complete independence of one another. Parts of the cavalry frequently received different orders from different persons, and orders direct from the chiefs, not through their immediate commanders. All this led inevitably to confusion and disorder.

The cavalry showed a decided disinclination to mounted fighting; and on meeting the enemy it generally dismounted, that is to say, it gave up on its own accord its strong side and adopted a course of action which answers only in exceptional cases. It is characteristic also that the cavalry, while acting in close touch with the infantry, adopted the unnatural role of scouting within the zone of the battle order of the infantry which should not concern the cavalry at all.

With the retreat of the army towards Tielin and farther north towards the Sypinkhai positions the cavalry under General Mistchenko, the Caucasus, Ural and Transbaikal brigades, supported by General Morosoff's detachment, covered the right flank of the strategic front to prevent it being turned from the side of Mongolia. The exhaustion of both armies after the Mukden battles caused them to cease further hostilities, and, therefore, a long pause ensued until the losses would be replaced. We were waiting the arrival of three new mobilized corps, after which two more were to be mobilized. The Japanese, on their part, did not venture to take the offensive. At the same time the arrival of our Baltic Fleet in the Japan Sea was expected, and the encounter with the Japanese Fleet might create a new state of affairs.

It was during this period that General Mistchenko's cavalry forces of forty-five sotnias carried out its raid on the rear of the enemy, at Fakumin, from the left flank, as mentioned above.

This raid, which was without practical results but had rather a moral importance after the Mukden defeats, was the only important operation of our cavalry, whose activity up to the conclusion of peace was limited to scouting operations and only small skirmishes.

THE NEW RUSSIAN CAVALRY DRILL REGULATIONS.*

(Regulations for the Instruction of Cavalry Troops—Edition of 1912.)

THE important modifications affecting Cavalry Drill Regulations have rendered necessary the recasting of the regulations governing the instruction of troops, which, dating from 1896 (general scheme of instruction), and from 1901 (instruction of recruits, recruit companies and depots) presented some gaps to be filled.

As the men serve four years in the Russian cavalry, we should not expect to find the exercise and distinctions that are found in Section I of our Drill Regulations. On the other hand, we must note the extreme differences of season and climate in Russia, the distinction between the winter and summer periods.

GENERAL PRINCIPLES.

Instruction should always be directed toward practical ends, with the exclusive purpose of preparation for war; it should develop in all a desire for the offensive and the exercise of the initiative. In all degrees of rank, superiors should not interfere with their subordinates in the choice of means and manner of instruction, provided these latter are not contrary to the spirit of orders and regulations. They should assure themselves that all their subordinates are instructed in all matters within the scope of their military obligations.

The winter period extends, for example, from October 1st to April 15th; the summer period, from April 15th to October 1st; but this division of time is fixed by division commanders, conformably with general instructions of territorial department commanders. Moreover, regardless of this division of time of instruction, every cavalry unit should be ready for campaign

*Translated from the *Revue Militaire des Armees Etrangeres*, February, 1913, for the War College Division, General Staff, by Captain Edward Calvert, Ninth Cavalry.

throughout the year, in other words, the individual instruction of the troops ought not to hinder during the winter the execution of field exercises by the constituted tactical units.

WINTER PERIOD.

The exercises of this period are intended, first of all, to render the trooper capable of marching individually in campaign and to give a progressive training to the horse. In mounted instruction, principal importance is given to cross-country riding. The exercises of this period comprise: For officers—riding hall training, mounted gymnastics, cross-country riding, use of the saber, revolver and carbine firing practice, instruction in Drill Regulations, tactical exercises, map and field exercises. For troops—riding hall exercises, cross-country riding, mounted and dismounted* preliminary exercises for firing, instruction in care and adjustment of equipment, interior economy and barrack discipline, field service, hasty entrenchment, and the training of young horses in each squadron.

SUMMER PERIOD.

This instruction emphasizes the necessity of making understood the use of each movement or formation, of instructing the units in the direction of the offensive, of cultivating the spirit of activity and audacity. As regards, the horses, it indicates the importance of confirming them in regular gaits, and of so training them, that at the end of the maneuvers of the regiment, the squadrons can sustain the extended gallop † for four kilometers.

It is well known that in Russia, instruction is followed in a very methodical fashion, from one year's end to the other; so we should not be surprised to find in these drill regulations a very comprehensive schedule of instruction.

The following allotment of time is prescribed: Four to six weeks, school of the squadron (troop); four weeks, school of the regiment; three weeks and a half to four weeks and a half, brigade and division maneuvers with horse artillery, followed by

*The entire effective strength should be skilled in handling the saber and lance mounted and dismounted and the bayonet.

†420 meters per minute.

grand maneuvers. The regulations indicate the minimum number of exercises that will be had in each class of instruction.

SCHOOL OF THE TROOP.

Platoon instruction:

Dismounted.....	1 or 2 periods
Mounted.....	3 or 4 periods
Fighting on Foot.....	4 or 6 periods

Troop instruction:

Dismounted.....	1 or 2 periods
Mounted.....	12 or 16 periods
Fighting on Foot.....	5 or 7 periods*

Field exercises:

Platoon.....	3 or 4 periods
Troop.....	6 or 10 periods*

SCHOOL OF THE REGIMENT.

Instruction by regiment:

Mounted.....	14 periods
Dismounted.....	6 periods*
Field exercises.....	4 periods
Maneuvers.....	5 periods*

MANEUVERS OF SEVERAL REGIMENTS.

Tactical exercises of regiments.....	2 periods
Brigade exercises.....	4 periods
Brigade maneuvers.....	2 or 3 periods
Division maneuvers.....	6 or 8 periods

Some exercises are had with the enemy outlined by flags, but the regulations look less with favor on this method, as being open to the objection of being too conventional and conducive to unreal situations. On the contrary, they emphasize the importance of maneuvers and prescribe the means for developing them.

*One to be a night operation.

The field exercises comprise exclusively practical instruction in the service of security, communication and reconnaissance.

The regulations indicate the great importance of night operations and consequently prescribe not only exercises in security and reconnaissance, but also in marching and combat.

INSPECTIONS.

The regulations lay down the principle that inspections should not hinder the normal course of progressive instruction. The best method by which regimental and brigade commanders may assure results is to direct and constantly follow the progress of instruction.

"While making inspections, commanders should not limit themselves to compiling criticisms, but should give clear and precise directions as to the means and methods to be employed to correct the deficiencies noted, and should give troops the benefit of their own experience and personal example."

THE HORSE SHOW FOR SERVICE HORSES, 1913.*

IN our issue for April, being hampered by the necessities of choice, we were obliged to limit ourselves to a very condensed account of this important test. But it seems worth while to return to the subject, as a study of the showing of the entries for this year may easily lead to erroneous deductions. Among the eight horses taking first rank, may be counted five half-blood and three full-blood horses, the latter gaining only fourth, fifth and eighth place. The half-blood had a still more notable victory over the full-blood, as the entries in the latter class were in the majority; since, taking into account the defections at the start, as well as the eliminations resulting from the different tests, of the thirty-six horses remaining in line last day, twenty-one were full-blood and only fifteen half-blood.

*Translated from *The Revue de Cavalerie* for May, 1913, for the War College Division, General Staff, by C. F. Herring.

In the face of such a result, it might with reason be assumed that the full-blood is the less suitable for the requirements of a service horse. * * * But this would mean that all the sacrifices, especially those of the "Society for the Encouragement of Horse-Breeding," for the purpose of procuring for the army full-blood horses of quality, will go for nothing. It is well, however, not to accept the results of the contest of 1913 as by any means conclusive. They are far from being definite and seem rather the result of the special conditions of the trial, demonstrating that these conditions answer but imperfectly to the end contemplated by the institution of the "Service Horse Championship." This meeting, in reality, has for its object the improvement of officers' chargers most suitable to the different functions demanded in time of war. For instance, the mount of a cavalry officer must be swift, full of endurance, dexterous and supple; the winner of the contest should be one showing superiority from these different points of view.

It is impossible to deny, that, under the present conditions of competition, except perhaps in the training test, the horses are not put to it to give proof of their superiority. From the point of view of endurance, dexterity and speed, only a mediocre effort is required of them,—they are never given opportunity to demonstrate their highest capabilities. But that is the very end to be aimed at in establishing the system of trials, and it should not be an insolvable problem. While not in the least belittling the importance of training, would it not be possible, for example, to institute a service test consisting of a long run over a varied terrain broken by genuine obstacles well distributed? The country around Paris is marvelously adapted to such an experimental course. The horses competing would be divided into small groups, their performances compared very rigidly, and their relative standing would be determined by the time consumed in making the trip. With some such system as this, it would be possible to estimate the endurance skill and speed of the horses, as well as their agility.

This solution of the problem is not the only one; there are others conceivable and perhaps more satisfactory. In any event, the lesson to be deduced from the horse show of 1913, judging by all the correspondence we have received on the sub-

ject, is that the present conditions seem to be perfectible and that they are not giving entire satisfaction. We intend shortly, in another article, to make known the wishes of officers on this subject.

THE HORSEMANSHIP TEST—BIARRITZ, PARIS.*

THE test, as before published, consisted of covering a distance of 750 kilometers divided into three parts: First, from Biarritz to Bordeaux, 185 km., at forced pace, in three stages; second, from Bordeaux to Versailles, 550 km., at free gait, following fixed itinerary; third, from Versailles to Paris, 15 km., at forced gait. One hundred and twenty-two reserve officers were invited, and eighty-four set out on April 18th. Seventy-seven contestants remained in line at Bordeaux on April 21st, and applied themselves to the formidable task of making 550 km. at free gait. They had until Monday, April 28th, to reach Versailles, and eight of them registered there on the 24th, having completed this course of 550 km. in less than four days.

On April 25th, twenty-one participants arrived at Versailles, and there were thirty-three arrivals April 26th-27th. A total of sixty-two officers completed the trip, and the showing of some of them was more remarkable as, owing to delay in organizing the ride, they had so little time for preparation. It should also be added that the weather conditions were rather unfavorable.

The following are the hours of arrival at Versailles and the time made by the eight principal contestants.

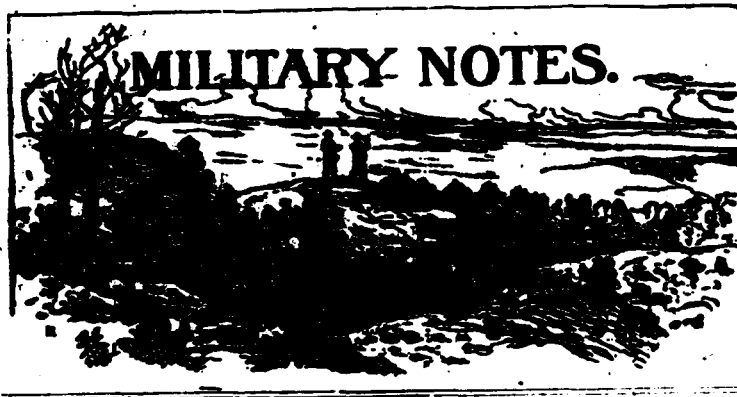
1. Lieutenant Crespiat, of the First Chasseurs, Thursday, at 3:25 P. M., 160 km. per day.
2. Captain Lebrun, 20th Artillery, at 6:50 P. M., 153 km.
3. Captain Nathan, 14th Train Squadron, at 7:00 P. M., 153 km.

*Translated from *The Revue de Cavalerie* of May 13, 1913, for the War College Division, General Staff, by C. F. Herring.

4. Lieutenant d'Amboix de Larbont, 6th Dragoons, at 7 P. M., 153 km.
5. Lieutenant Pichon, 10th Chasseurs, at 8:35 P. M., 150 km.
6. Lieutenant Jabet, 20th Dragoons, 10:50 P. M., 147 km.
- 7-8. Captain Dossaud, 95th Territorial, and Lieutenant Marcel Guyot, 6th Chasseurs, at 11:25 P. M., 146 km.

On Wednesday, March 30th, the distribution of awards took place at the Military Club, the Minister of War, presiding. M. Etienne congratulated, in most felicitous terms, the officers of the completment upon the energy they displayed and the magnificent results attained. "I am sure," he said, in closing his remarks, "that this great lesson of endurance and of moral and physical strength will bear fruit in the future. I offer to all officers who participated in this test my admiration and my gratitude."





PROFESSIONAL NOTES.

(Amplifying Paragraph 856 of the Cavalry Drill Regulations.)

THE RAID.

"Raids are isolated, independent cavalry operations, conducted with secrecy, by rapid marches, usually avoiding general engagements.

"The raiding force should be composed of the best mounted and most self-reliant troops, and should consist of complete organizations; as, regiments, squadrons, etc.

"The objects of raids are:

"To harass and weaken the enemy by drawing off in pursuit his cavalry or other troops, or by causing him to guard a great number of points; to threaten, interrupt, and destroy his communications; to destroy his depots and source of supplies; to gain information; to cause alarm in the enemy's country, or create a sentiment unfavorable to the prosecution of the war; to interfere with the mobilization of the enemy's forces at the beginning of a campaign; to affect the release of prisoners." (Par. 856, C. D. R.)

In order to accomplish such results the command should consist of one or more regiments of cavalry; a detachment of field artillery; a wireless telegraph detachment; a motorcycle detachment; a detachment of pioneers having a demolition outfit and canvas pontoons; numerous scouts; guides, spies, and interpreters; and a sufficient pack train.

Wagon trains cannot be used, since in wet weather or mountainous country they impede quick movement.

A sufficient sum of money should be carried for purchase of services, supplies, and animals.

In order to preserve the necessary mobility for such command, the loads on horses should be cut down to the minimum; at the same time there should always be carried a reserve supply of grain for the horses, of rations, and of ammunition.

Such a command in many cases will have to live off the country. When cattle are to be found the meat component need not be carried in full, and the remainder of the ration may be reduced, replacing it in weight with beef. In dry countries canvas bags for carrying water on pack mules are desirable.

As a rule the pack train will not be able to carry all the supplies needed, and part of the ammunition, rations and grain must be carried on the horse.

The greatest attention should be paid to the conserving of the strength of the horses. Marches of extreme length should be made only when necessary. Saddles should always be taken off when in camp at night, even when in the presence of the enemy. To leave the saddles on for a great number of hours, as was done frequently during the Civil War, ruins the horse. With good troops, with a sufficient strong and active outpost line, it should always be possible to unsaddle even in the presence of the enemy.

Every effort should be made to keep the horses fit for the supreme effort of the raid. After long marches extra grooming and hand rubbing should be practiced. When at a walk troops should frequently dismount and lead. Men with sorebacked horses should always dismount when at a walk. Grain should be fed at every meal. It is as necessary to the horse as meat is to the man. It can always be found in a populated country. To obtain hay or grass usually requires extra labor of the trooper,

but nevertheless a full supply should be fed daily. Only by feeding the horses well can a long raid be made successful. In cold or rainy weather the horse should be covered at night. In warm climates, to reduce the weight of the horse, the following articles will be left behind:—overcoat, bed blanket, extra clothing.

Two emergency rations will always be carried. On occasions when there is no train or when the pack train can not carry sufficient rations, four days' rations additional may be carried in the saddle bags, reducing the haversack ration by deducting half the bread and half the bacon, each half-ration to be supplemented each day by two pounds of beef and such vegetables as may be obtained by foraging parties.

In view of the fact that the regulation mule train can carry only one day's grain for a regiment, it will ordinarily be necessary to carry grain on each troop horse. This extra grain may be carried in canvas tubes five feet long and three inches in diameter, strapped on the saddle, or it may be carried in the feed bags, so arranged as to lace up at the top and strapped to the saddle. Ten pounds may be carried in this manner.

It is recommended to officers and officers' messes that they employ their own animals to carry extra baggage and luxuries.

JAMES PARKER;
Brigadier General U. S. Army.

CONDEMNATION OF PUBLIC ANIMALS.

The Editor:

I WAS very much interested in an article by Veterinarian Griffin on how to assist an inspector when acting on un-serviceable horses.

The article was good and timely, but there is more to be said. General Orders No. 252, War Department, 1909, requires that:

"A memorandum of the dates on which each public animal is unfit for duty and of the disease or injury causing the unfit-

ness will be kept by the officer who is responsible for the animal. When a public animal is transferred from one responsible officer to another, any important ailment the animal has had since his preceding transfer will be noted on its descriptive card. No blank form will be furnished by the War Department for the purpose of keeping the memorandum referred to in this order".

In my inspection of eight cavalry regiments, I find that there was about one troop commander in twenty that knew of the existence of this order or if he knew of it he did not obey it.

The requirement that the record will be kept for each animal would seem to exclude a running sick report such as is used for enlisted men.

In no case did I find that when regiments transferred horses that the sick record of the horse was on the descriptive card as required.

Suppose this order were literally obeyed instead of being systematically disobeyed, how would it assist the inspector? When a horse is presented the sick record is also presented. That is, presented as it was originally made and not made at time and for the occasion of the inspection.

In this case, the inspector can see at a glance what duty the horse has done and what he has failed to do; and with little difficulty decide whether it is profitable for the government to keep or to get rid of him.

Further, the inspector will not have to listen to the tiresome "spiel" of the quartermaster sergeant or other interested person about what duty the horse has done or has not done.

How many troop commanders and commanding officers are acquainted with the requirements of Par. II, Bulletin 19, W. D., June 9, 1913, which requires that "Form 277 Adjutant's General's office, Descriptive card of public animals, edition of January 4, 1913, will be used for all public animals in the army, and the card for each animal will be kept up-to-date at all times."

How many such cards are up-to-date this minute? There probably is not half a dozen in the whole army. If any person succeeds in complying with this order, and they should all be

made to do so, there will be little additional information the inspector will desire.

ALONZO GRAY,
Major, Inspector General.

A GOOD MARCH.

The Editor:

THE Tenth Cavalry marched from Fort Ethan Allen, Vermont, to the Cavalry Camp of Instruction near Winchester, Virginia, and arrived in such good condition as to win the praise of the Camp Commander, Colonel C. H. Murray, Twelfth Cavalry. The regiment was on the road thirty-four days, four of which were spent in rest. The distance of 705.90 miles, therefore, was made in thirty marches averaging 23.53 miles.

Parts of five states and several ranges of mountains were crossed; most of the way the dust and heat were stifling, and several days the thermometer stood around 100 degrees. We left our post June 16th and finished the march July 19th. One horse died of colic, three were shot to prevent suffering, and eight were left in pastures en route. These casualties were mainly due to accidents.

The average age of the horses was 12.2 years and would have been considerably higher but for the presence of a number of very young animals, chiefly Morgans. These horses stood the march remarkably well.

"H" troop came through without a sore, and Troops "A" and "I" nearly as well. In the other troops the sores were uncommonly few.

What sores there were came from old setfasts of previous years. No new ones were developed.

Many of the horses are veterans and have served in many regiments. Some still carry the old hip brands of the Second and Third and other cavalry regiments.

The oldest horse is twenty-three and the youngest five years old; but the young are in small numbers.

The actual time on march was divided evenly, as nearly as possible, between the trot and walk. Reveille was at 4:30 and the start at 6 A. M.

To lessen the effects of dust as well as to be able to trot on level ground, great latitude as to distances was given both to squadrons in the regiment and troops in squadrons. At the hourly halts, bridles were removed, cinchas loosened, grazing encouraged and saddles adjusted. Animals were watered on every possible occasion.

McClellan saddles were used.

The 138 mules came in as well as the horses.

J. C. GRESHAM,
Colonel, Tenth Cavalry.

BREEDING ARMY REMOUNTS.

THE Bureau of Animal Industry has received reports from its officers in charge of the breeding of army remounts in cooperation with the War Department which show that the Government's plan is very popular with the owners of mares. At the close of business on August 16, 1913, 41 stallions were in service. These stallions have covered 1,452 mares during the season, an average of slightly over 35 mares per stallion. Twenty-seven of the stallions were five years old or over, and covered 1,097 mares, an average of a little over 40; ten were four year olds and covered 292 mares, an average of better than 29 per head; four were three year olds and covered 63 mares, an average of more than 15.

The number of mares covered in Vermont and New Hampshire was 241, an average of over 34 for seven stallions, including 3 four year olds, and one three year old; 583 mares were bred in Virginia, an average of over 31 for 18 stallions, including 4 four year olds and 3 three year olds; 208 mares were bred in

West Virginia, an average of 52 for four stallions, including one four year old; 376 mares were bred in Kentucky, an average of better than 37 for ten stallions, including one four year old; in Tennessee, a mature stallion and a four year old covered 22 mares each.

The number of mares covered by mature stallions of different breeds were as follows: Three Morgans averaged 45 mares; ten Thoroughbreds averaged 38 mares; eight Standardbreds averaged 40 mares and six Saddle stallions averaged 42 mares. All ages by breeds are as follows: Seven Morgans (including 3 four year olds and one three year old) averaged 34 mares; fifteen Thoroughbreds (including 3 four year olds and 2 three year olds) averaged 32 mares; ten Standardbreds (including 2 four year olds) average 39 mares; and 9 saddle stallions (including 2 four year olds and 1 three year old) averaged 37 mares.

In placing these stallions, care was taken to select communities in which there was a scarcity of good stallions. Therefore, the mares bred during the past season, are, to a great extent, mares which would probably not have been bred in the absence of Government encouragement.

The number of mares bred in 1913 will be increased somewhat. In New England, breeding continues until October 1, and in Virginia the fall season is commonly used. Both conditions will operate to the advantage of the remount breeding work.

The Department is not able to draw any deductions as to the advantage of one breed above another. Local preferences were considered in placing stallions and no breeds placed in a community which were not wanted. Regardless of breed or locality, however, the desire of farmers to breed their horses to good sized stallions is noticeable. In almost every case where stallions have had a comparatively good season, it is because they were somewhat undersized.

Congress has provided for the continuation of the remount breeding work during the current fiscal year, but no considerable extension will be possible and no new breeding districts will be organized at present.

Office of Information, U. S. Department of Agriculture.

ENDURANCE RIDE.

AN endurance ride will be held in Vermont on September 15th to 17th, 1913, under the following conditions:

ENTRIES.

This endurance ride will be free for all, and open to all horses of any breed. No entrance fee will be charged. All entries should be sent to C. C. Stillman, Secretary, The Morgan Horse Club, 165 Broadway, New York City, on or before September 1, 1913.

ROUTE.

Northfield to Waterbury.....	23 miles
Waterbury to Stowe.....	10 "
Stowe to Morrisville.....	10 "
Morrisville to Greensboro Bend.....	21 "
Greensboro Bend to St. Johnsbury.....	28 "
St. Johnsbury to White River Junction.....	62 "
	154 "

The above distances have been approximated only. The route has not been specially measured.

POINTS.

Condition on arrival at finish: Excellent.....	50
Good.....	25
An average of six miles per hour.....	50
An average of five miles per hour.....	35
An average of four miles per hour.....	25
For each five pounds carried over 160.....	2

CONDITIONS.

Total distance traveled must not be faster than six miles per hour, including all halts, nor slower than four miles per hour, including all halts.

The ride to terminate in front of the judges' stand State Fair Grounds any time between 11 A. M. and 4 P. M., September 17, 1913.

Each contestant to leave Northfield at any hour he may elect, provided he arrives at the destination within the time limit set, viz: Earliest hour for leaving Northfield is 8:30 P. M., Monday, September 15, 1913, and is determined by dividing the total distance by four and subtracting this result from 11 A. M. of the date set for the termination of the ride. The latest hour of leaving is 2:20 P. M., Tuesday, September 16th, which will be determined in the same way, only using six for a divisor, and subtracting result from 4 P. M. of the date set for the termination of the ride.

Each horse to carry not less than 60 pounds. Any kind of equipment.

Arrangements will be made for feeding and stabling horses at Waterbury, Stowe, Morrisville, Hardwick, Greensboro Bend, Summit, St. Johnsbury, Wells River, Bradford, Thetford, and the State Fair Grounds.

As soon as each horse arrives at the Fair Grounds the judges will inspect it, noting its condition and crediting it with the necessary points. The following day at 10 A. M. these horses will be again inspected, and if this last inspection warrants it, the points given for *condition* the previous day will be changed. All necessary information about stabling arrangements, etc., will be furnished later to the actual contestants.

PRIZES.

1st prize.....	\$100
2d prize.....	50
3d prize.....	25

In addition to these premiums, there will be given to each one of the first ten contestants who finish the Endurance Ride a small cup suitably engraved.

MILITARY RIDING.

(From the Broad Arrow of July 25, 1913.)

AT a place like the International Horse Show at Olympia it is certainly a mistake that officers should take part who are not likely to do reasonably well in the competitions. Show jumping is an art in itself, an art that requires much practice and training, added to natural aptitude. A man may be able to hold his own over the stiffest line in England, may be able to steer a horse over the Grand National course, and yet not be able to do more than moderately in the show ring without long special training. It is a moot question whether there is much to be gained by show jumping, but there can be no doubt that to be successful, or anything near successful, at Olympia both man and horse must be exceptionally well trained. To shine the man must be an exceptionally good horseman in every respect, and his horse must have a natural aptitude for jumping, and they must be both specially trained in this particular line. It is all wrong for an officer of the British Army in uniform to enter the ring at an International show unless he and his horse have a reasonable chance of doing credit to that army in the task they are essaying. There are always men to be found who have ambition to shine in lines for which they have no aptitude and no real qualifications. In some ways this ambition may be very laudable, but when they are wearing the uniform of their army in an International show they are representatives of that army and should be restrained from making fools of themselves. The remedy seems to be in the hands of their commanding officers; they can very easily prevent officers entering for competitions at Olympia unless they are up to the proper standard. An International show is not a place for the army to be represented by any but the best. Our place is very good indeed, although up to now they have not quite succeeded in winning.

TELEGONY DISPROVED.

The Bureau of Animal Industry has recently obtained data confirming Ewart's classic work on telegony—the influence of a previous impregnation on subsequent progeny.

The registered Morgan mare Baby Gates, bred by the Department, was bred for the first time to a Grevy zebra by artificial impregnation. She foaled a female hybrid on June 2, 1912. At the first period of heat she was bred to the registered Morgan stallion, Pat Murphy, and on May 14, 1913, foaled a filly which is an excellent individual of the breed and absolutely free from any markings or other characteristics of the zebra. Ewart's investigations with the Birchell zebra gave the same results.

Farmers therefore need not hesitate to breed their mares to a jack for fear that the mare will become "saturated" or "impregnated" so that subsequent progeny by a stallion will show the characteristics of the jack. Although the Bureau has made no experiments on this subject with other animals it is very doubtful whether telegony occurs in any species of animals. In animals which give birth to more than one offspring at a time, it is possible for the characters of more than one male to appear in different individuals. For example, if a Berkshire sow is bred to a Duroc-Jersey boar and Chester White boar in the same period of heat, some of the resulting pigs will probably be red in color and others white.

Only one spermatozoon is required to fertilize one ovum. Where several ova (eggs) are given off at each period of heat, as is the case with sows, it is possible for a sow to give birth to such a litter, when bred in this way. The same probably is true of bitches, cats and similar animals.

Three cases have been noted this year where mares have foaled twins, one a horse foal and the other a mule. The mares were bred to a stallion and a jack during the same period of heat.

Supposed cases of telegony will usually be found to be due to promiscuous service or to a reversion to some remote ancestor.

UNIVERSAL POLO AT PANAMA-PACIFIC INTERNATIONAL EXPOSITION.

(International Cavalry Contests and Army Remount Demonstrations also a Feature. Will Demonstrate what Constitutes Best Cavalry Horse.)

UNIVERSAL Polo will be the opening feature incident to the Department of Live Stock at the Panama-Pacific International Exposition.

There will be many stables on the site, and the race track, infield will afford an ideal location for polo grounds.

Polo enthusiasm is spreading all over the world, and it is proposed to have ten or fifteen days of polo beginning with the opening day of the Exposition.

A series of elimination matches will be arranged and because of climatic advantages a number of the established teams will winter their ponies in California.

"It is not generally known that three California ponies were used in the recent international match at Meadow Brook," said D. O. Lively, Chief of the Live Stock Department, "two on the American and one on the English side. These ponies were in at the finish, and their general excellence attracted much attention to California as a polo breeding ground. The hills and dry air of this state are especially conducive to breeding for wind, nerve and action, and California can be counted on to supply a large part of the constantly growing demand for first quality polo ponies. An expert has agreed to supervise the maturing of the field, the location of which is ideal.

"We will have a grandstand which will seat 18,000 and its capacity will be taxed during the great tournament which will be held on the Exposition grounds.

"The question of cups and prizes is now being considered. If the Hurlingham cup still remains in this country it is possible

that the International Polo Match can be held at San Francisco. That of course is a question which can only be decided by time, but in any event representative teams from many countries will be attracted to a universal meet at San Francisco in 1915.

"The International Cavalry Contest would come at a later date, but between polo and the army remount demonstration there should not only be attracted to the Exposition a great many visitors, but the lessons derived therefrom will show to the world at large what constitutes a horse suitable for cavalry purposes.

"Polo is being played with larger sized horses these days, and a number of experts declare that a horse suitable for polo is an ideal army remount. Be that as it may as the result of the universal polo meeting and an international cavalry contest to which will be added the saddle horse futurity, harness races and the utility or draft horse competitions, the horse will receive due recognition at San Francisco in 1915."

THE SELECTION BOARD.

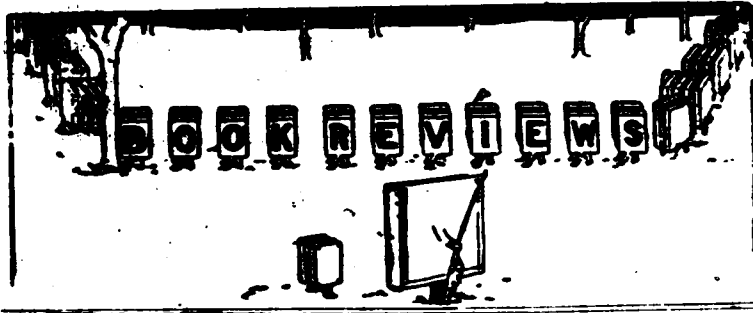
(From the Broad Arrow, July 11, 1913).

SO long as a man's fitness for employment depends wholly upon the opinion of a Board of General Officers, to many of whom it is unlikely that he is personally known by name or even by professional reputation, it is, of course, inevitable that there must be a certain amount of criticism of the action of the selecting body, and even a good deal of fairly legitimate complaint. These "growls" find expression from time to time in the columns of such papers as take any real interest in military matters, and the decisions of the Selection Board come in for such criticism as cannot reasonably be resented and is certainly anything but unhealthy.

It has lately been pointed out that there is good reason for remarking upon the somewhat in-an-out selection apparent in a recent *Gazette*, whereby an officer was lately passed over for

promotion from Colonel to Major-General when an appointment carrying the latter rank and for which he was specially fitted fell vacant, only to be later promoted over the heads of many of his seniors, for some purpose which was not very obvious, and in a manner which conveyed an impression—probably a wholly false one—that this particular promotion was an after-thought, due to strong representations in the officer's favor.

In another case an officer was suddenly promoted, out of his turn and again over the heads of many seniors, avowedly to save him from being run out for age. It is not suggested by anybody that this officer is not worth saving, though no doubt his employment at the psychological moment at the War office gave him just the chance denied to others, possibly of at least equal merit, who may be serving their country further afield. It has been proposed, and the proposal seems one worthy of consideration, that some modification in the terms of the Royal Warrant governing promotions seems to be called for, and that the Selection Board ought to have the power of recommending a colonel for temporary higher rank, rendering the age clause in his case inoperative, the temporary Major-General thus falling automatically into the next vacancy without superseding anybody.



**Fredericksburg
and
Chancellorsville***

In the preface of this work, Colonel Gough the author, informs us that the book is an attempt to follow these two campaigns from the Federal point of view. He hopes that this study will in part, at least, supplement Colonel Henderson's "Life of Stonewall Jackson," since he considers that, in the latter work, the Confederate point of view is necessarily predominant.

The author does not claim by any means to have exhausted his subject, nor has he. As to his sources, he tells us that he has found his data mainly in the "Rebellion Records," "The Story of the Civil War," by Ropes, and "The Campaign of Chancellorsville" by Bigelow. It will thus be seen that his work is based on solid foundations.

The author comments on McClellan's mysterious and inexplicable popularity with the rank and file of the army. He considers it a serious error to have relieved that General from command in the very presence of the enemy and at a moment when a great battle was imminent in order to put a

*FREDERICKSBURG AND CHANCELLORSVILLE, A Study of the Federal Operations." By Colonel J. E. Gough, V. C., C. M. G., with an Introduction by Brigadier General H. H. Wilson, C. B., D. S. O. Hugh Rees, Ltd. London. 1912. Price 6 shillings, net.

man like Burnside in his place. The evil effects of changing the organization of the army in the midst of a campaign, as did Burnside, is clearly pointed out; as is also the unwieldiness and unsuitability of the forming of the army into three Grand Divisions. The slowness of both Burnside and Hooker is freely commented upon. He considers that neither had good excuses for this. The Battle of Fredericksburg is pictured as a series of disjointed and unsupported attacks in which infantry not only attacked without artillery support, but also one division or one corps at a time, while the rest of the army looked on as interested spectators. Burnside's artillery on Stafford Heights was well posted to assist in forcing a crossing of the river and in covering the retreat, which later became necessary, but it gave absolutely no support to the infantry attacks.

The author notes that the principles involved in the placing of the Confederate trenches at the foot of Marye's Heights were the same that were invoked by the Boer's later on in the South African War on a number of fields. These trenches which caused the English such surprise and consternation when first encountered might have been learned about from a study of the Fredericksburg campaign. The author points out clearly the fatal effects resulting from the improper use of cavalry by both Burnside and Hooker. The latter improved some on Burnside's methods, but he spoiled his campaign by sending his cavalry away on a useless raid at the critical time.

Colonel Gough thinks that some excuses should be made for Burnside, during the time he commanded the army, because he did not want the command, protested against its being given to him, and was not served loyally by his subordinate commanders. The Army of the Potomac had lost thousands of men in useless slaughter at Fredericksburg but it was not long after Hooker took command until the morale improved greatly. Hooker was somewhat slow in stepping off, but when he did, all thought that the hour for decisive action had come and all welcomed it with enthusiasm.

The author shows us some interesting side lights on the part which politics in general and the Halleck brand of strategy in particular played during the months of March and April,

1863, in Hooker's attempts to get the campaign started. Colonel Gough points out how completely Hooker failed after having gained the wonderful initial success of placing four corps in the vicinity of Chancellorsville. These four corps made a force superior in strength to Lee's whole army, yet Hooker at 1 p. m., May 1st, ordered them to desist from their attack and fall back. From that time on, until his army was again safe on the north side of the river he never issued an order without an "if" in it. He seems to have been under a spell to do the wrong thing. His action in this campaign is sufficient reason alone, to justify paragraph 78 of our Field Service Regulations (1910).

The author evidently joins hands with a number of Union Generals in considering Mosby a guerrilla. Colonel Gough calls attention to the danger of night attacks in close country, citing as an instance, the battle during the night of May 2d-3d between part of Birney's Division of the Third Corps and the left of the Twelfth Corps. These friendly troops fought each other for some time. The losses were few but the morale of both Corps was terribly shaken. The book is of excellent print and contains very good maps.

To any one desiring a short account of these campaigns bringing out the salient features, this book is recommended.

N. F. M.

The Resp.* This, the second of the Annuals of the Mounted Service School at Fort Riley is a large book—3¼" by 10½"—of nearly 350 pages. It is a handsome work, printed on heavy calendered paper and beautifully illustrated with over 360 half-tone cuts. These cuts not only well and fully illustrate the work done at the Mounted Service School and the mounts used thereat, but also shows the mounts of officers, typical chargers, as well as illustrating the

*"The Resp." Mounted Service School, U. S. Army. Fort Riley, Kansas, 1913. Published by the Class of 1913. Lieutenant C. F. Goetz, Business Manager. Price \$2.00.

equitation work being done at other stations, polo teams, etc., etc. The half-tone cuts were made by the Teachenor-Bartberger Engraving Company, of Kansas City, that well known firm that has furnished the half-tone and line work for the CAVALRY JOURNAL and Army Service Schools for so many years.

The first part of the book—twenty-seven pages—is devoted to a general account of the year's work of the Class of 1913 in the Department of Equitation. This is followed by about seventy pages giving the daily diary of the equitation work of the several classes from October 1, 1912, to May 31, 1913. These several classes are: First Training Class; Schooled Class; Jumper Class; Second Training Class; and the Breaking Class. There is also given the diary of the work in stable management to which about a month is devoted.

There is a well illustrated description of the work of the department of horseshoeing and hypology, which is followed by an account of the instruction given under the head of Explosives and Demolitions.

The Field Officers' Course, for both the autumn and spring classes is fully described and the daily diary of their work given in detail. To the older officers of our cavalry service, this part of the book will prove extremely interesting as it not only shows what these "old men" did there and what those who follow them at the School may expect. They certainly had no picnic while there and the "Roll of Honor" indicates that they took a fair share of the falls. It is believed that this course for Field Officers, although very short, as it is necessarily, is of the greatest importance to our cavalry service, if it is hoped to thoroughly disseminate throughout the service, the prescribed Fort Riley methods of instruction in equitation. The influence, advice and example of these older officers will be more graciously received on their return to their respective regiments than will that of the younger graduates, although the latter may be and probably are more finished and accomplished riders under this system. Of course, if these young graduates of the Fort Riley School are tactful and rub their colonels and other older officers the right way, their influence in developing these prescribed modern methods in the regimental equitation work will also be of great assistance.

The above mentioned "Roll of Honor" reports an even one hundred instances of student officers having been "policed" during the year. Several of the names appear two or more times, the champion having been dumped ten times. In case the old custom of setting up the champagne when thrown prevails at the Mounted Service Schools, several of the student officers must have left there as bankrupts.

A very interesting and instructive part of the work is included in the thirty-three pages devoted to the subjects of "The Methods of the Mounted Service School Applied to the Enlisted Man and the Service Mount" and "Jumping and Cross Country Riding" by Captain Henry and Lieutenant Chaffee, respectively both of which are instructively illustrated.

The other sub-heads of the various subjects discussed in the book are as follows:

The care of leather equipment by Captain Edward Davis.

Notes on European Cavalry by General James Parker.

Serving with a regiment of French Cavalry by Captain Hawkins.

Recruit and remount instruction in a German Cavalry Regiment by Captain Whitehead.

Hints on Hanover by Lieutenant H. W. Wagner.

Value of Racing, steeplechasing, polo and the contests of the show ring in the training of the mounted service, especially in the training of the young officer, by Colonel Greble.

Polo in the Philippine Islands by Governor General W. Cameron Forbes.

The Manila Polo Club by Lieutenant S. C. Reynolds.

The Regimental Hunt Club by Lieutenant Colonel Morgan.

International Contest from *Bit and Spur*.

American officers in the riding competitions, Stockholm, Sweden, by Captain Ben Lear.

Jumping competitions in the Eleventh Cavalry.

Riding instruction on the Mexican border by Lieutenant Merchant.

The concluding part of the book gives a report of the work of the experimental squadron at Fort Huachuca a synopsis of which appeared in the last number of the CAVALRY JOURNAL.

As a whole this book does great credit to those in charge of its publication and it is one that should be in the hands of every cavalry officer in our service. The only criticism that we have to offer as to the entire makeup of the work is that the type used was too small. It is very hard for old eyes to read and especially so as it is printed on such highly calendered paper.

E. B. F.

Musketry Training.*

This is a small volume—4¼" by 5½"—by Captain J. N. Pickering, U. S. Infantry, who has been for some years on duty at the School of Musketry.

The scheme of instruction now in force in the army contemplates a fairly extensive course of tactical training, both theoretical and practical, in the non-commissioned officers' schools, the garrison schools, in the Post Graduate courses, in the Army Service Schools, in field maneuvers, etc., all leading up to the fire fight conducted mainly with the rifle. While the cavalry will not perhaps always depend on the rifle, yet it will do so frequently and in all cases upon its use mainly will depend the result of the battle.

If matters are at all evenly balanced otherwise, the best tactical handling of cavalry, artillery and infantry may go for naught if the fire effect of the rifle is not developed to its maximum. This is the important lesson that every man and officer of the rifle bearing branches of the service should keep constantly in mind and which a careful reading of this book will teach.

The first one hundred pages treats of the rifle, or the musket if one prefers to so call it, as a machine, of its care and preservation and of the tests to determine its reliability. Much of this may be found elsewhere and it is probable that the book would not have been written for this alone. However, a logically complete treatment of the subject required this preliminary discussion and while many of our officers will find little that is new in this part, yet many will find valuable suggestions here.

*"MUSKETRY TRAINING." By Captain J. N. Pickering, U. S. Infantry. 1912. Price \$1.50, or \$15.00 per dozen.

The following seventy-five pages will be found, by the average officer, the most interesting and the most important part of the book. It covers the several subjects of Rate of Fire; Estimating Distances; Description of Locations; Using the Field Glass; Adjustment of Fire; Influence of Ground on Fire Effect; Combat Firing; and Commanding.

The rate of fire is treated in the light of experience gained at the School of Musketry and under conditions which the officer serving with troops cannot duplicate. The prescribed course of rifle fire and the allowance of ammunition do not give sufficient latitude for such experiments, nor is it necessary that they should. Carefully conducted experiments made at the school can furnish us with more reliable data and which we can accept with more confidence than we could our own average results. The thing is to get these results into the hands of the personnel of the army and to get them interested in the subject. The results are here given as well as the author's thoughtful discussion of them.

To the average officer nothing is more tiresome than giving instruction in estimating distances and many shirk it whenever possible. A casual reading of the chapter on this subject will bring home to him, however, the absolute necessity for accuracy in estimating or obtaining the distance, and will show how it must go hand in hand with improved individual marksmanship.

It is believed that "descriptions and locations" and "adjustment of fire" are incidents of commanding but certainly each of these subjects are worthy of a separate chapter.

The subject of the effect of ground slopes belongs perhaps more to that of the tactical handling of troops than to that of musketry training, but, as the author says, there is no distinct line of demarcation between them and here is the place where they merge.

The chapter on combat firing will be found especially valuable to those called upon to devise problems of this sort and to the company officers in training themselves and their commands for actual firing exercises. Having taught the lesson of the extreme necessity for working the rifle to its maximum effect, the author goes on to show where, how and when the

training should be done, who should do it, and gives valuable suggestions as to ways and means.

No company officer can read this book without an increased sense of his responsibility for the result of the fire fight and a realization that this important element of success in battle can and should be learned by painstaking and intelligent work with his company or platoon and requires no detached service in attendance at any school.

It is practical a work on a subject which should receive daily attention and it is based on extended practical experience. The service is indebted to Captain Pickering for putting the results of his years of labor and thought at the School of Musketry in shape for ready assimilation by those not so fortunate.




 Editor's Table.

BRIGADE POSTS.

Now that the Secretary of War has completed his inspection of nearly all the larger garrisons of the country, it is presumed that he will be prepared very soon to outline his policy as regards the concentration of the forces of the mobile army into posts of not less than a brigade each and will make his recommendations to Congress accordingly. According to the press reports he has been besieged by the representative citizens of the adjoining city or town of every large garrison for information as to his intentions regarding the retention or abandonment of that particular post and has been given advice galore as to the merits of that location for its being retained or even increased and made more important. It is understood that the Secretary will favor having at least four large garrisons but nothing is known as to the location or size of these proposed posts.

It can be and has been shown that larger garrisons are in the interest of economy, certainly in the long run, and that the money saved in the upkeep, in walks, roads, sewers, in water supply, etc., etc., would in a few years pay for the construction of the larger posts. However, the main point and the one that the mobile army is most interested in is that of the opportunities that these brigade or division posts will offer for the instruction of troops, their better training in all that fits them for service in war.

It is very well to recommend and to show the advantages of having these brigade posts but it is another thing to induce

Congress to see it in the same light and to furnish the necessary appropriations for their construction. One of our prominent cavalry officers refers to this question in a letter recently received as follows:

"Collective instruction is favored by concentration, though it is to be doubted if this or any other military reason were really the moving cause leading to the enactment of the legislation creating a cavalry brigade post at Chickamauga Park. So far, this act, carrying with it no appropriation, is like the play of Hamlet with the title role omitted. Many military reasons exist for such a post—climate permitting year around out-of-door instruction and training, large available maneuvering area, diversified terrain, central location, railroad transportation, etc. This is also a location for one of the posts in the concentrated distribution of the mobile army as recently recommended by the Secretary of War to Congress. Now that the post has been authorized it is to be hoped that those interested in its political fortunes will push the matter to its logical consummation.

"Just where the additional cavalry regiment for this post is to come from cannot at present be foreseen. Other localities may be expected to protest against withdrawing troops from their vicinity to build up this one. The creation of brigade posts is thus seen to be an antidote for suggested cavalry reduction."

It is to be regretted that this scheme of having brigade posts had not been agitated and carried forward to a logical conclusion some twenty or twenty-five years ago at the time when our frontier posts, being no longer required for the purpose for which they were created, were being abandoned and the several posts near the large cities were built. Then, however, the army thought it was a great step in advance to have regimental garrisons and but few army officers had ever seen one.

Now that these regimental posts are established with the necessary quarters near many of the larger cities, it will be extremely difficult to convince Congress that they should be abandoned and others built elsewhere. The delegations from every state that has one or more of such garrisons will fight long and hard for their retention. For these reasons it is

believed that there is very little hope for having brigade posts in the near future. However, it will do no harm to keep up the agitation which may at least prevent the building on any more small posts and may lead to the much to be desired result of obtaining brigade posts at some time in the dim and distant future.

A CARBINE.

It has been learned from no less an authority than that of the Chief of Staff of the Army that experiments have been made in the line of producing a satisfactory carbine for our cavalry to replace the altogether too heavy rifle. It is said that this new firearm has a shorter barrel by four inches and weighs two pounds less than the present service rifle, and this without sacrificing any of its ballistic qualities.

The bugbear of the cavalry having a firearm that was inferior to that in the hands of any enemy that it was liable to encounter, induced us to adopt the same rifle as that with which our infantry was armed and has prevented our returning to a carbine. While it is possibly true that the inferiority of the carbine, small as it was, might effect the morale of untrained cavalymen, yet it is not believed but what our cavalry, by proper training and instruction, could be convinced that the small difference—four per cent or less—in the ballistic properties of the two arms would entirely disappear on the field of battle. A proper course of instruction in field firing would have demonstrated that this small difference would have been practically eliminated there, and that in firing on an enemy the superiority of the rifle would be infinitesimal.

However, it is of course much better to have an arm as perfect as that carried by other troops and it is certainly to be hoped that the above mentioned experimentations may prove successful. Then the solution of the problem of how to carry our cavalry firearm could be easily solved and our poor cavalry horse be relieved of some of the excess weight that they are now

compelled to carry. Nor only that but it will then be possible to remove the carbine from the saddle entirely and thereby rid the horse of this ten pound hammering weight that has caused more sore backs than all other causes combined.

THE ARMY LEAGUE.

A year or more ago a movement was inaugurated towards establishing an Army League, along the lines of the Navy League that has accomplished so much in creating a sentiment in favor of a larger navy. At that time we received from one of our active and progressive members a letter on this subject from which we quote:

"You have undoubtedly seen notices in the various daily and weekly papers of a meeting in Washington at which was discussed the question of organizing an Army League. The object of the League is to arouse public interest in the army. The idea was probably suggested by the existence and work of the Navy League of the United States and the similar organization in Germany, both of which are accredited with having largely aroused public sentiment in favor of a larger and more efficient navy.

"The idea of the Army League is good and it is suggested that the Cavalry Association would do well to take official cognizance of the organization and make mention of it in the CAVALRY JOURNAL, etc.

"It is recognized that the Army League should be broad in its scope, considering the interests of the service as a whole and not advancing those of any arm in particular. On the other hand, in order that the organization may be led to give due consideration to the needs of all arms, there should be among its prominent members men who understand these varying needs. An attempt should be made to interest in the organization of the League men of national standing who have had cavalry affiliations."

Owing to larger interests along other lines regarding the welfare of the cavalry arm, this question was overlooked for a time, important as it was, and finally, as the proposition to organize such a League had dropped out of mind, no further attention was paid to it.

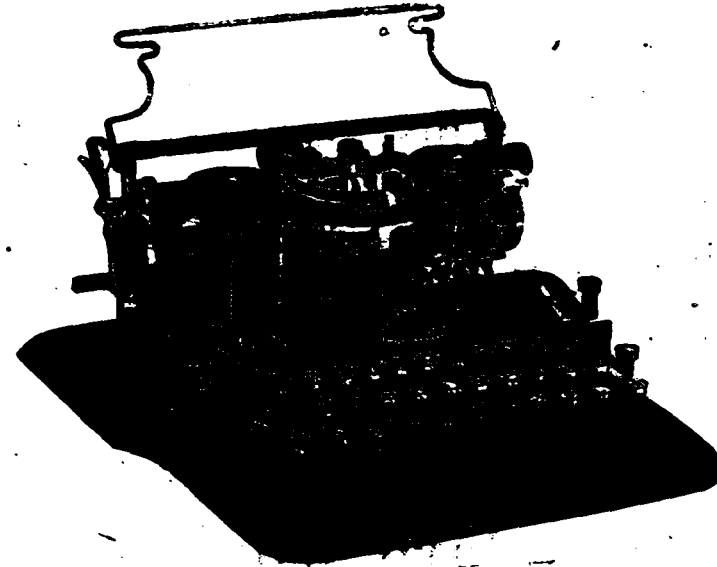
It appears that little progress was made in promoting this scheme and nothing has been heard of it for the last several months.

Now, however, the new Secretary of War has revived interest in the matter and has made it the prominent feature of his talks to the several Commercial Clubs, etc., by whom he was entertained on his recent tour of inspection throughout the country. While at Fort Leavenworth, in his address to the student officers, he outlined his ideas and plans relating to this subject and stated that he proposed to follow up the matter and to keep in touch with the prominent gentlemen that he had met on his tour and who seemed interested in it.

With such influence backing this measure, there should be no difficulty in arousing interest in it and in establishing branch leagues in every one of the larger cities of the country, especially in those not situated on the coast where they are naturally more interested in the navy and in coast defenses. However, even this should not prevent the really patriotic citizens from belonging to both leagues as they both have a common interest in the welfare of the country.

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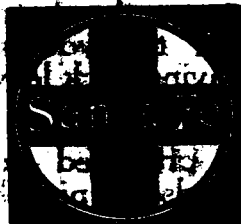
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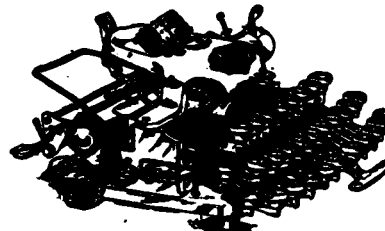
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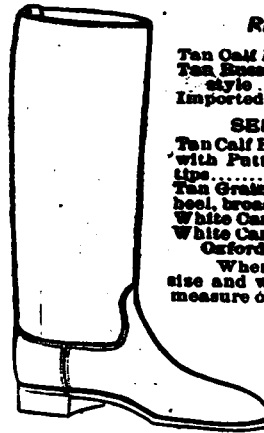
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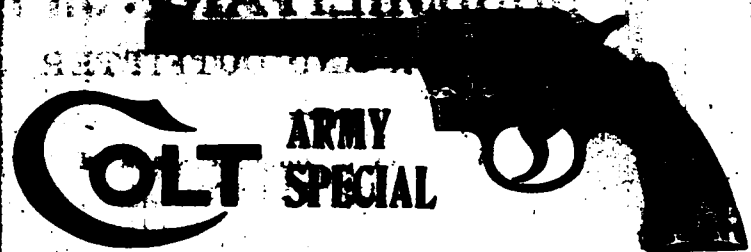


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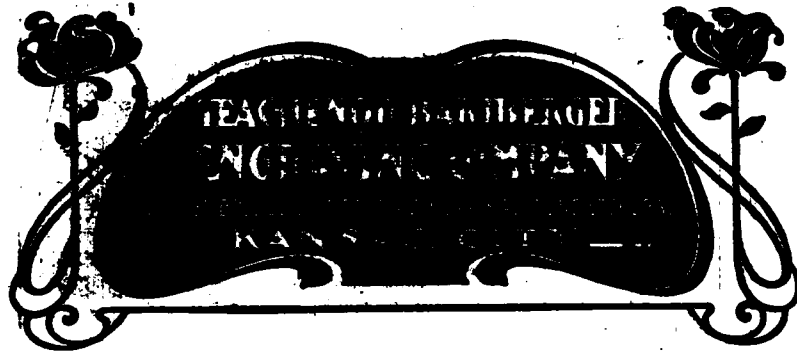
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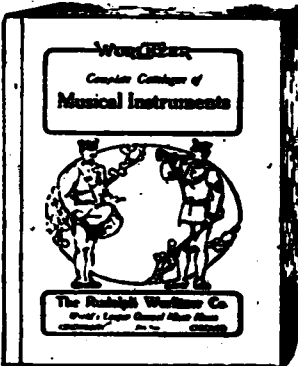
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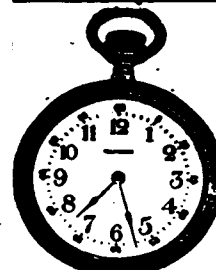
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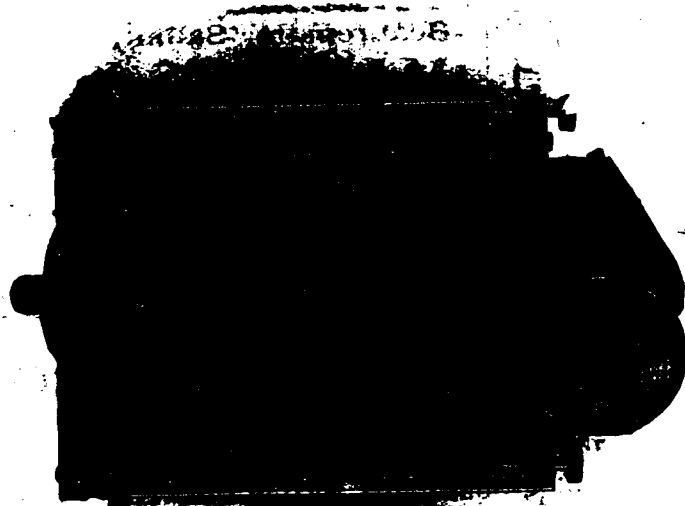
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PUBLISHED BI-MONTHLY
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FORT LEAVENWORTH, KANSAS.

\$2.50 per Annum. 50 Cents a Copy.

Foreign Postage, 80c per year.

LIEUTENANT COLONEL EZRA B. FULLER, U. S. ARMY, RETIRED,
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JOURNAL

OF THE

United States Cavalry Association.

Vol. XXIV.

NOVEMBER, 1913.

No. 99

THE CAVALRY OF TODAY.*

BY MAJOR CHARLES D. RHODES, FIFTEENTH CAVALRY.

OPINIONS regarding the organization, equipment, instruction and tactical use of cavalry, are at the present time so divergent, and in many ways so contradictory, as to leave the casual student wondering just what and what not to accept as true.

Cavalry experts had every reason to believe that the two latest wars would clear up many conflicting opinions as to the modern use of cavalry. But the war in South Africa, fought over an abnormal terrain between an illtrained, poorly led British cavalry and a meager but exceedingly mobile force of Boer mounted infantry, has furnished indeterminate data only. In Manchuria an illtrained and poorly officered mass of Cossack cavalry opposed the wonderfully systematic advance of the Japanese armies; while a poorly horsed minority of Japanese cavalry, well trained in the services of exploration and protection, rarely ventured beyond supporting distance of their splendid infantry and field artillery. The Japanese cavalry was too

*An address delivered before the Corps of Cadets of the Virginia Military Institute at Lexington, Va., November 9, 1912.

valuable an asset for reconnaissance duties to risk disaster by seeking serious combat, and it was held well in hand throughout the war.

PERSONNEL AND ORGANIZATION.

Nothing has stood out so clearly, however, in these later wars, than the fact that cavalry personnel both officers and men, must be of a higher standard than ever before to meet the tremendous demands imposed by modern campaigns. The greater dispersion of cavalry required by present-day tactics involves high physical superiority to withstand fatigue and this very dispersion also renders discipline more difficult to enforce. In his evidence before the Esher Commission on the conduct of the South African War, Lieutenant General Sir Ian Hamilton remarked:

"I would preface these remarks by venturing to express my opinion that it is more difficult to be a good cavalryman than to attain distinction in any other branch of our service."

As evidencing this fact it is worthy of note that following the Boer War, the British War Office issued an order giving the preference for cavalry service to the cadets graduating highest at the Royal Military College, on the ground that in wars of today there falls upon the cavalry officer duties of such weighty importance as to require the highest professional knowledge as well as physical ability of a special order.

The entire question of cavalry organization of today, appears to revolve about the probable use of cavalry as a mounted force or as a dismounted force; whether the horse is to be considered as the formidable weapon of the mounted arm, or merely as a means to an end.

While there is little or no doubt that improvements in arms and ammunition have imposed a greater amount of dismounted action on the cavalry than ever before, European militarists still believe in a cavalry organization which will furnish the maximum mobility, rather than an organization which will put the greatest number of rifles on the firing line. Consequently, we find European cavalry regiments usually of a strength of from 600 to 800 sabers which is about one-half to two-thirds the strength of our own regiments. This is be-

cause abroad, the use of the *arme blanche* is still strongly upheld in the tactics of the battlefield; while with us, the teachings of the great Civil War still control us in extending the strength of our regiments to the greatest number which, fairly mobile in the exceptional occasions of mounted combat, can be quickly utilized for dismounted work.

It must be confessed, however, that a regiment of 1,200 troopers is too large to be directly controlled by the colonel and that if our present organization be retained, more initiative must be delegated to squadron commanders. In many respects our cavalry regiments corresponds to European cavalry brigades with the important exception that our training does not contemplate a double-rank formation, which, if authorized might transform our rather unwieldy cavalry regiments into more compact, mobile, and efficient fighting units.

One lesson, however, is clearly defined by the experience of recent wars: *That cavalry should in peace time be either kept on a war footing, or be capable of immediate expansion when war is imminent.*

As long ago as the year 1866, that distinguished soldier, General Emory Upton said:

*"Keeping in mind the fact that the 60,000 to 80,000 Federal cavalry maintained from the beginning to the end of the Civil War did not become really efficient till the battle of Beverly Ford, in 1863, after it had been trained for nearly two years * * * we ought from our own experience to follow the example of European nations and as far as practicable maintain our future cavalry either on a war footing or else on a basis capable of such expansion as to meet quickly the demands of war."*

ARMS AND EQUIPMENT.

As the question of the proper use of cavalry is closely related to the subject of arms and equipment, there is still much difference of opinion on this subject, both at home and abroad. Consideration of saber *versus* pistol, saber *versus* lance, rifle *versus* carbine, have all been threshed out in the service Journals *ad nauseam*. But there is almost complete unanimity of opinion that the cavalryman of today must be armed with a first-class long-range firearm.

Germany, France, and Italy still retain the lance as part of the equipment of certain cavalry regiments; and it is worthy of note that Russia, which discarded the lance during the early part of the war with Japan, is now rearming her regiments with this weapon. However, both the Boer and Russo-Japanese wars showed the unsuitability of the lance for dismounted work, just as the Civil War saw the early abandonment of this weapon by the one Federal regiment which carried it in the first year of the great conflict.

It seems logical to retain the saber for moral reasons if for no other, i. e., the trooper should feel that he must at every opportunity attempt to push boldly forward and close with the enemy. In other words, the cavalry which is prepared on the least show of resistance, to dismount to fight on foot, will lose much of its value as a reconnoitering force. For a similar reason the revolver, now of automatic pattern, is retained as an incentive to close contact, when conditions permit. But it is possible that ultimately either the saber or the revolver may be discarded in our service, the time available for the training of a trooper not permitting of expert instruction in both arms.

For the present, there appears to be nothing in the teachings of modern war calling for a change in the weapons with which both the Federal and Confederate cavalry emerged from the Civil War,—the carbine, the saber, and the revolver—except that the carbine is at present replaced by a short rifle superior perhaps to any fire-arm now in the hands of the soldiers of any nation.

Consideration of the question of equipment would not be complete without a word as to the enormous losses in horseflesh in campaigns of today, not so much through wounds from projectiles as from the extraordinary hardships and fatigue incident to the work of the cavalry. This is the more in evidence where the cavalry must be recruited to war strength from untrained levies, ignorant of the limit of endurance of horses and careless of their duties.

We cannot forget that during the first two years of the Civil War, the Federal cavalry was furnished 284,000 horses, when the maximum number of cavalymen in the field at any one time did not exceed 60,000 during this period. During the first

two years of the Boer War, the British Remount Department furnished over 200,000 horses and 94,000 mules, when the War Office had estimated that but 25,000 animals would be required for the war. As compared with this enormous expenditure of 250 per cent. of horses for the British cavalry, the Japanese requisitions called for but 50 per cent. of remounts during fifteen months in the field.

The lesson of these great losses in horseflesh is that remount depots have become as essentially necessary for good cavalry, as recruit depots for all classes of soldiers, to supply losses in the firing-line during a severe war. Casualties among the horses must be promptly filled with good remounts or cavalry loses in *morale* and efficiency.

THE USE OF CAVALRY.

Careful study of the responsibilities imposed upon modern cavalry, seems to show that although the role of cavalry on the battlefield has been more or less contracted and limited, the *strategic role* has expanded to immense proportions.

In the period covered by the military operations of Frederick the Great, opposing armies marched and camped in such dense masses and within such comparatively short distances of each other that generals or their staff officers could usually make personal reconnaissance of the enemy. The strategic service of cavalry was therefore little developed, but as armies grew more complex in the Napoleonic era, it assumed new importance. And in the armies of today, the necessity for putting into motion thousand of different units before giving battle, demands ample and accurate information of the enemy's strength, *morale*, and probable intentions. To the cavalry falls this important duty.

Why is cavalry reconnaissance more difficult than ever before?

Cavalry is unable at the present time to tell from opposing fire, whether it has hostile cavalry or infantry in its front. Furthermore, artillery fire is "serious" to cavalry at 4500 yards, and "effective" at from 3500 to 2000 yards. At the same time, small-arms fire is "serious" at from 1800 to 1200 yards, and "effective" from 1200 to 600 yards. Reconnoitering cavalry

patrols can ordinarily, even with the aid of the best glasses, distinguish little or nothing of hostile battle-lines at distances over 1800 yards, while if they advance closer, they risk destruction by artillery or rifle fire. One modern rifle can deliver a heavier fire than several rifles used in former wars, and unless cavalry reconnoitering forces are prepared to fight for their information, they can usually develop the outline of the hostile screen in front only by negative information as to where the enemy is absent.

Again, decisive battles are no longer engagements of a day, but of a succession of days. Deployments of modern armies no longer cover a front of but a few miles, but of vast distances. At Mukden, the battle lines extended for nearly 100 miles.

And this tremendous difficulty in the way of cavalry reconnaissance extends from the operations of armies down through the maneuvering of army corps, divisions, brigades, regiments, and battalions.

During the past summer, in the State of Connecticut, a most ambitious maneuver campaign was undertaken by our regular forces and National Guard. A Blue Division interposing between New York and Boston, attempted to prevent a Red Division from destroying the sources of water supply of New York City.

Each division had a regiment of cavalry at its disposal, but such were the difficult conditions imposed by the umpires on the cavalry reconnaissance that it was rare when information of the enemy's principal dispositions reached the division commanders before 12 or 1 o'clock at night. Patrols found it impossible to penetrate the barrier of infantry outposts, and officer's patrols at times covered fifty miles in order to encircle the enemy's flanks, and obtain authentic information of his main forces. Under such circumstances, intelligence comes in piecemeal, much of it of doubtful authenticity, since based on inference. The drafting of orders for the movements of the morrow are delayed until the last moment, hoping for additional news from the cavalry. And in the Connecticut Campaign the staffs of division commanders were oftentimes forced to delay the issuing of important orders until the small hours of morning, when the commanders of brigades and regiments should have

been apprised of the movements for the next day before officers and men had retired for the night.

What does all this mean? It means that when this information is not obtainable by patrols, cavalry commanders must be prepared to fight for it. If the enemy be strong in cavalry this fighting will be severe, and the mounted action of cavalry against cavalry will not be uncommon. If the enemy be weak in cavalry, opportunities will occur in the usually widely dispersed hostile lines for bold cavalry leaders of the Jeb Stuart type to slip through breaks in the screen and gain contact with the enemy's real position.

As a corollary to these modern conditions confronting cavalry comes the statement that however premissible was formerly the combination of the two duties of screening and reconnaissance, it is now absolutely incompatible with efficient work to perform this double function. Cavalry must be specially designated for the strategical reconnaissance and do nothing else. And again, other cavalry must take up the screening duties as a special function and do nothing else. Between the two there must be complete independence.

In a recent and important military work by General von Bernhardt of the German Army,* the author says:

"Modern armies indirectly influence reconnaissance in so far, too, owing to the long range and effective indirect fire of artillery, we must deploy for action sooner than formerly. It will be very exceptional for superior commanders to reconnoiter personally before such deployment. They are thus almost entirely dependent on the results of cavalry reconnaissance, not only for their operations but also for their dispositions for battle. This makes cavalry reconnaissance all the more valuable, but also calls for greater efficiency of that arm.

"The cavalry must precede the armies as far forward as possible to beat the hostile cavalry and push it back vigorously so as to allow our own patrols to approach rapidly the hostile column and discover their movements."

One interesting development of the two latest wars in facilitating the gaining of information was the creation of trained bodies of scouts. The British in South Africa found squadron

*War of Today.

and regimental scouts, specially selected for their natural intelligence, boldness, and eye for country, exceedingly useful and even indispensable. Similarly the Russians in Manchuria organized in each Siberian regiment, detachments of *okotniks* or volunteer scouts which did excellent service throughout the campaign.

It is worthy of note that although the long breathing spells which followed each Japanese victory in Manchuria have been generally attributed to the Japanese desire to perfect the *etape* or supply system up to the new advanced lines, as well as to recover from the shock of the preceding struggle, it is extremely probable that with insufficient cavalry available to reconnoiter the new positions of the Russian Army, much of this time was necessary to perfect the Japanese information of their adversaries and to plan their attack accordingly. As a matter of fact, much of the intelligence obtained by the Japanese army was through spies.

The initial contact of the strategic reconnoitering bodies of cavalry in advance of two great armies, may be likened to two great hostile fleets, whose initial clash has such an important bearing on the operations which follow. Command of the sea insures the steady advance of the land forces following, just as the crippling of the enemy's cavalry at the outbreak of war places the hostile commander at the terrible disadvantage of impaired vision and hearing. And the army commander who feels himself deficient in cavalry, will, like the Japanese, push his infantry supports well behind his cavalry, and avoid risking chance of losses in his mounted arm which he can ill afford.

SCREENING AND PROTECTIVE DUTIES.

As has already been said, the screening duties of cavalry are entirely separate from those pertaining to reconnaissance and include the giving of timely information of the enemy, furnishing topographical and statistical information of the country, and seizing important points in advance of the main force and holding them until the latter arrives.

If there is sufficient cavalry available for the purpose the screening duties will be performed by bodies of cavalry specially

designated, and marching from one-half to one days' march in advance of the corps or division they are protecting. But if there be insufficient cavalry for this duty, it must be performed by the "divisional cavalry," which in our Field Service Regulations consists of one regiment for each division.

Modern battle conditions impose upon the protective or screening cavalry the same formidable difficulties which have been discussed under reconnaissance. Their duties are such as to require great dispersion of units, and when the front is not covered by independent cavalry the screening force must oftentimes bear the brunt of fighting against infantry and field artillery, as well as hostile cavalry.

It should be impressed on the minds of all officers, whether of the mounted arm or not, that the screening duties of cavalry under modern conditions of warfare, are more arduous than ever before. Troopers are in the saddle for long periods at a time; all the usual routine arrangements for watering, feeding, and grooming the horses are liable to be upset; and a large proportion of the men are often detached for unnecessary orderly, patrol, and outpost duty. Consequently the day duties of protective cavalry should always be lightened as far as consistent with the proper performance of their task, and as few horses and horsemen employed on night work as possible.

It should be recalled that in the earlier period of the Civil War, the cavalry on both sides was made more or less ineffective by excessive outpost duty which could have been better performed by infantry, conserving for the mounted troops the mobility which renders them most useful to the army commander.

Under modern conditions, the commander who keeps his cavalry continually on night as well as day duty, will soon have no cavalry worth the name.

CAVALRY ON THE BATTLEFIELD.

As has already been said, collision of two powerful armies will usually see a fierce cavalry fight preceding the struggle proper, in which each side attempts to cripple or destroy the opponent's "eyes and ears."

Following this cavalry fight, the weaker cavalry will usually be held well in hand with infantry, machine gun, or artillery support; while the victorious cavalry, may according to two schools of thought, be either detached on a special mission against the enemy's flanks or rear, or be held in hand for the psychological moment when the interposition of the cavalry may turn the tide of battle or reap the fruits of victory through pursuit.

Eminent tacticians there are, who now consider the sphere of cavalry on the battlefield to be so far contracted as to be almost absolutely *nil*: While there is little doubt that modern munitions of war have greatly curtailed the activity of mounted troops on the battlefield, it would seem that there will still be opportunities for the cavalry to intervene, especially in dismounted action. Therefore the cavalry commander who is expected to cooperate must be in close touch at all times with the army commander, and stand ready to contribute to the success of his plans, even though it means heavy losses. Thus, the cavalry will often be able to take part in the preliminary advance-guard action of the infantry; to give timely warning of the great enveloping movements which are so largely utilized in modern battle tactics; to interpose between the enemy and our own enveloping movement around the hostile army's flank; and finally by concealing the horses, to deceive the enemy into believing themselves opposed by infantry, and thus cause them oftentimes to make an unnecessary and costly deployment.

But the great mass of cavalry during a battle, will doubtless most often occupy a "*position in readiness*," where the supreme commander may utilize their quality of mobility at the psychological moment. The tremendous length of ordinary lines of battle may even give opportunity to this reserve force of penetrating the enemy's front, especially if the element of surprise or demoralization contributes.

That the great mass of cavalry should ordinarily be kept well in hand preceding and during a great battle, was exemplified at the battle of Chancellorsville, where Hooker sent Stoneman with the cavalry on a raid towards the city of Richmond, thus depriving the Army of the Potomac of a reconnoitering and screening force, when "Stonewall" Jackson made his celebrated

turning movement around the Federal right flank resulting in the well-known panic which seized a portion of the Federal army.

On the other hand, the detachment of General Jeb Stuart's splendid cavalry force preceding the battle of Gettysburg, on a raid in rear of the Federal army, deprived General Lee of his information troops, and left him in comparative ignorance of the dispositions and intentions of the Federal commander.

AFTER THE BATTLE.

Should the battle result in victory for our arms, the cavalry will be needed to cooperate in pressing the defeated troops, the infantry and field artillery in direct pursuit, the cavalry by the flanks.

A keen British observer of the war in Manchuria has stated that if General French, with 10,000 British cavalry had been attached to the Japanese army at the battles of Mukden or Liaoyang, there would have been no Russian army in Manchuria to sue for terms of peace.

Should the main battle result in defeat for our arms, the cavalry must be prepared to guard the flanks against enveloping movements, and in case of retreat by our main force, to interpose between the pursuers and pursued and even to counter attack in order to minimize the losses and demoralization which nearly always follow a decisive defeat. Newspaper reports from the Balkans credit the only success of the Turkish arms to a counter-attack of the Turkish cavalry which succeeded in surprising the pursuing Bulgars, reckless and over confident in the high-tide of victory, only to be themselves overwhelmed by the fire of artillery and machine guns.

AEROPLANES.

So much has been said and written in regard to aeroplanes, that a brief discussion of these air scouts in their relation to cavalry, will not come amiss.

That the aeroplane, when developed, will be a very powerful aid to reconnaissance, goes without saying. But that it will replace cavalry, or will materially affect the value of cavalry is such an absurdity as to hardly merit consideration. As a

matter of fact, it will facilitate cavalry reconnaissance, and we can expect to see cavalry corps, divisions, and even separate brigades, equipped with their own aeroplanes, thus adding tremendously to both the reconnoitering and combat value of the mounted arm.

At the present time, the aeroplane is greatly handicapped by conditions of wind and weather, which improvements in its construction must overcome before it can be truly indispensable to the army commander. It seems probable, too, that in the mere *peace* trials of this wonderful auxiliary device, too much value has been put upon the ability of the aeroplane operator to observe and report upon the dispositions of hostile forces. It has been the writer's conclusion that unless an aeroplane approaches within 800 yards of troops, the folds of the ground vegetation, smoke, fog, and other local conditions make it most difficult to accurately observe hostile troops. On the other hand, any aeroplane which approaches within 800 or even 1200 yards of rifle or shrapnel fire, is quite likely to be put out of action. The use of the aeroplane at maneuvers, unattended by the actual use of bullets has, it is believed, led to an exaggerated estimate of the value of the machine as an air-scout.

While the aeroplane might cause considerable panic and demoralization by dropping high explosives among cavalry troops, its effect would be *entirely local*, and the loss of a dozen men and animals, however undesirable, would have little less effect than that produced by the burst of a modern high explosive shell. It must be remembered, too, that the capacity of these modern air-ships to carry high explosives is quite limited, and the difficulty of dropping these projectiles in the right spot is considerable, especially if the aeroplane operator be under fire, is operating in a high wind, or is opposed by hostile aeroplanes.

CAVALRY LEADERS.

After all is said with regard to the qualifications of the personnel of the cavalry and of their mounts, it is a truism to add that cavalry may be almost perfect in all other respects, and yet be absolutely useless unless properly led.

Of all the arms, it is the one which relies most on moral effect. The cavalry leader who can combine boldness with

caution, who possesses dash without recklessness, who has a working knowledge of all arms in addition to an expert knowledge of his own, whose physical make-up is such that he is able and willing to bear all extremes of fatigue, hunger, cold, heat, and other privations, who is willing to sink personal exaltation in contributing to the tactical success of other arms than his own, who has such an eye for topography as to grasp the possibilities of the terrain at a glance, and who possesses such instinctive, sub-conscious appreciation of the psychology of the battlefield as to seize the opportune moment for cooperation of the mounted arm—the cavalry leader, we say, may have all of these qualifications, and yet not prove the man whose magnetic temperament and lovable qualities impel men to follow and do his bidding, even to the extent of cheerfully laying down their lives in his service.

CONCLUSION.

It is no small satisfaction to us children and grandchildren of the gallant men who, fifty years ago, participated in that gigantic struggle between these now United States, to note that the military tacticians of the Old Country, have at last come to recognize on the military operations of the Civil War, that the final development of the cavalry, both North and South, was along logical lines.

The glorious deeds of Stuart, Sheridan, Forrest, Wilson, Lee, Custer, Wheeler, Merritt, Hampton, Kilpatrick, Butler, Buford, Lomax, Grierson, and others, which for so many years were apparently little appreciated by other than the serious military student of this country, are at last securing the long-delayed recognition they deserved.

And should war with a foreign foe again call to the colors the youth of our country, may those of us who, feeling the fascination of the mounted arm, strive to follow in the footsteps of these brilliant soldiers, be able to hand down to our posterity the record for bravery, leadership, devotion, and self-sacrifice, which they have left indelibly emblazoned on the walls of the temple of fame.

THOUGHTS ON THE GOVERNMENT OF A REGIMENTAL CAVALRY POST.

BY BRIGADIER GENERAL JAMES PARKER, U. S. ARMY.

THE experience of a post commander is instructive, desirable and unique. He commands an independent body of troops. Like the chief of an army he has under his command line troops, a supply department, a medical department, an engineer department, an ordnance department, a signal department, a territorial district, a cantonment like a small city, with all its shops, storehouses, repair shops, streets, water supply, etc. He is invested with much responsibility and much discretion.

While he is limited by the Regulations, he can accomplish much more than they contemplate. Further, it depends on the post commander whether there is secured efficacy in the training of horses and men, in discipline, in neatness, in contentment. These things depend upon him more than on troop commanders or on squadron commanders or regimental commanders or brigade commanders.

Formerly, all officers above the grade of captain of the line were likely during their service to obtain more or less of the training which comes to a post commander. Now, with larger posts it is a more infrequent experience.

Without detailing all the duties of a post commander, I propose to mention a few things which in my opinion are of advantage in commanding a post.

Have officers' call once per day. At this call officers assemble and get their mail and orders. The post commander should always spend a few minutes in explaining printed orders, making criticisms, etc. In this way the junior officers understand the desires of the commander and team work will be produced.

Make things competitive as far as possible. Have once a month competitive inspection of quarters, made by the commanding officer; also of stables, also of grooming and equipment at monthly mounted inspection; also of individual horse training and drill of troops once per year; also in the number of men turned out for drills. Only by competition can we produce zeal.

Insist on neatness of officers' uniforms, of men's uniforms when about the post, at drill, when in town. Require the blue uniform to be worn as soon as work is finished, at parades, at guard mount. The service uniform is suited for work, only.

Look after your regimental pride, your *esprit de corps*.

It depends upon excellence in the conduct of men, neatness of clothing, preëminence in drill and discipline, and appearance of horses.

It can be greatly fostered by superiority in football, baseball, polo, etc.

Do not imagine that inspections, parades, reviews, are unimportant. When well conducted they add to the pride of the regiment.

With two formal parades per week the dress uniforms are kept in good order. The spectacle attracts admirers. Every soldier feels that he is the especial object of attention. He learns as a consequence some of the pomp and circumstance, as well as the drudgery, of war.

Reviews are also a test of discipline, steadiness and precision of drill. In this connection it will be found that the handsomest review of a regiment is in line of platoon columns, four platoons deep. For the march past the regiment should move in double rank column of platoons, and after passing the reviewing officer at a walk and trot, to charge past by successive squadrons.

Encourage civilians, conventions, visiting delegations, etc., to inspect your command and your post.

Included in these conventions are men of importance in their community, who make public opinion, and their approval will be of value to the army and enhance the pride of the soldiers of your command.

Work for the contentment and pleasure of your men and officers. On the enlisted man's contentment largely depends his discipline. Not only should the commanding officer look after his sports, such as baseball, football, polo, etc., but he should see that a large portion of the revenue of the post exchange is employed for the soldier's amusement.

The ration, as supplied by the Government, is, when properly cooked, sufficient. Big dividends and big company funds are unnecessary. The post exchange is a coöperative store for the benefit of the soldier, and, like other coöperative stores, it should be run less for a profit than for the opportunity to purchase cheaply. What profits there are should be used mainly in making the post exchange perform its additional function of the soldier's club, and also in helping along sports and evening entertainments. A large proportion of the men can be kept at home in the post three of four days in the week by investing the profits of the post exchange in a free moving picture show, which, combined with music from the band, boxing contests, etc., form a most popular entertainemnt.

The post commander should also encourage the formation of men's social dancing clubs. A dance to be had once a week.

The chaplain, by taking charge of such amusements for enlisted men and seeing that they are conducted in an orderly and systematic fashion, can be of great value to the regiment.

Another cause of contentment in a post is a married enlisted men's line of quarters. It often happens that the commanding officer, by making proper concessions, can greatly aid in the construction of quarters in the post for the wives of married soldiers.

Soldiers will marry, and when they are married it is better their wives should live within the post than at a distance. There thus results a social circle among the soldiers which gives them something to think about and brings them into contact with good women.

In the same way it is necessary that the commanding officer take a leading part in the social affairs of the officers and their ladies. To make a contented garrison he should favor them by all means in his power, organizing frequent hops, dances, and social gatherings. These things bring the officers

together—bring about a spirit of fellowship—and even serve as places where official matters may be discussed. Officers should be informed that it is their duty to attend them. The commanding officer should, if necessary, use his authority to encourage these events. They should not be left wholly to the will of an idolent committee of officers. It is a sad sight to see a post where the officers and women refuse to take part in post social functions.

In the same way the post commander should aid, and if necessary organize, sports for officers, such as polo, cross country riding, drag hunts, horse shows, horse racing, etc. It takes some little trouble to start these things, but when once started they are kept up by a feeling of regimental pride and add greatly to it.

Another form of military sport, which also adds to military efficiency, is the athletic meet. These meets should be had monthly. Thus a continued interest is kept up in them and training goes on all the time. As far as possible the events should be military in character or connected with equitation and horse training. Suitable events: fencing, polo, mounted wrestling, mounted tug of war, dismounting to fight on foot, grooming, packing, running at heads, tent pegging, etc. The exhibitions should be widely advertised so that numerous spectators will be attracted.

The value of troops for war depends more on training than any other attainment. Troops without training are worthless.

The necessity for extensive training grounds immediately adjacent to the post does not seem to be appreciated sufficiently in our service.

These should be large enough for the most extended problems of a regiment—for the attack of a position dismounted and for the numerous field exercises which illustrate the hazards of war.

The value of the exercise depends primarily upon the number of men present in ranks. Thus, if only thirty are present out of a total effective strength of sixty, the efficacy of that drill is, other things being equal, less than fifty per cent. of the possible.

The appearance and smartness of the trooper has much to do with his real efficiency.

A ten minutes' setting up exercise immediately after reveille not only improves the soldier's carriage, but adds materially to his health.

Neatness must be enforced. A soldier who is careless about his dress reflects upon his organization.

In the same manner the appearance and smartness of the horses reflects the efficiency of the organization.

Our cavalry is credited with having inferior horses. The fact is it is only their upkeep that is inferior.

The training of a horse properly conducted is a setting-up exercise.

Our horses are often not properly set up, not properly groomed, nor are their coats, manes and tails properly cared for. In camp they undergo the hardships of standing on the torrid sun without shelter.

All this should be corrected as far as practicable. If in camp, shelters from the sun should be improvised. In rain the horse should be protected.

As a rule each horse should be groomed for a short period before exercise, and for a half hour after exercise. The act of grooming should be strenuous—not carelessly done.

Our men need individual instruction in grooming. The mane, tail, forelocks and fetlocks should be kept trimmed to a uniform length in each troop. In the summer season in this climate the horses' coats, in the interest of appearance, comfort and health, should be clipped.

In order that a troop should be able to maneuver properly at high gaits, and then be fit for combat, the horses should be thoroughly responsive to hand and leg. This can only be accomplished by the annual training of every horse of the command on the riding track.

To properly train and handle a horse the use of the double bit is essential.

Practice in swimming horses, fording and jumping, is a necessary preliminary to active service.

No cavalry is fit for war unless it has thorough confidence

in the sword. The sword thrust reaches farther than the sword cut, and it is the point not the edge that kills.

"Fencing on horseback being generally impracticable," the first thrust that reaches usually ends the combat.

The principal thing is to impart to the trooper the determination to reach the adversary first, using the point.

With this in view troopers should be exercised in running at heads and dummy figures on the track. In practicing the thrust to the front the trooper should stretch as far as possible to reach the object, at the same time bending low, being thus partly sheltered by the horse's head. The gait should be the extended gallop. The use of the edge should be discouraged.

Drill evolutions mounted should be had at rapid gaits.

Particular attention should be paid to the practice of the charge against the imaginary, outlined, or represented enemy; the use of ground scouts and combat patrols; the employment of supports and enveloping wings.

When armed both the rifle and saber should always be carried.

The saber, as a rule, should always be carried drawn, in order to accustom to it the horse and rider.

In order to oppose the solid double rank formation of foreign armies, charging formations of more than one line or in mass should be at times practiced.

In order to quickly return the fire of an ambushed enemy, troops should be able to dismount and open fire in ten seconds or less. The led horses should be trained to lead to the rear in an orderly manner and at a gallop.

The attack of a position dismounted should be frequently practiced.

To determine the state of instruction of troops of cavalry in equitation and close order drill, a commander should make use of a competitive test.

The test should be as follows:

(a) On the riding track: Column of troopers at the walk, trot and gallop to determine the degree of excellence of horse equipments; of uniform of men; of grooming; of care of coat, mane and tail; biting and length of stirrup; position of trooper.

(b) To turn on forehand, to passage at walk and trot, to back, to change lead in the gallop, to pass from a halt to the several gaits, and vice-versa.

(c) Jumping hurdles 3 ft. high.

(d) Saber exercise, including running at heads, using point of the saber.

(e) Troop drill: Movements by fours at a walk and trot; the charge; dismount to fight on foot.

In this competitive test proficiency in each detail should be indicated by marks which should be published to the regiment by the commander.

In like manner competitive tests should be arranged to determine the relative efficiency of troops and squadrons in the field exercises.

As to target practice, for which a competitive test has already been arranged by the War Department, it should if possible, be postponed until after the spring drilling of the troops has been conducted for several months.

In northern posts especially, if the target practice is had in the early spring and the drilling is postponed until after target practice, the troops are liable to go to maneuvers with their ranks full of men who can not ride and horses that cannot be controlled.

It should not be forgotten by the authorities that the same rules as to training can not apply to cavalry as to infantry. In the cavalry we have to train the horse as well as the man.

Cavalry, as a rule, requires from three to five hours drill per day, the principal drill being mounted.

Cavalry recruits require eight weeks of drill six days per week, including three or four hours per day mounted, and two hours dismounted. The recruit is anxious to learn the duties of a soldier and will work willingly if his interest is kept up.

The former system of placing a raw recruit on a barebacked horse and hazing him until he fell off was barbarous, made him afraid of his horse, and often ruined him as a rider. The recruit should drill, from the first, in the saddle. He should be worked hard but not allowed to fall. He should be protected from unauthorized interference by other soldiers.

At West Point it requires 125 hours training to ride fairly. The enlisted recruit gets about the same experience in eight weeks.

READINESS FOR FIELD SERVICE.

The troops of our army should always be ready to leave their stations at a moment's notice for field service beyond the border or within the limits of the United States, or for a change of station. In either case all property belonging in the post should be turned into the quartermaster, and all property which goes with the troops should be packed in boxes and crates, listed, and either taken with the troops or left behind for future shipment. Experience has shown that this can be accomplished within two hours—the troops fully equipped and prepared for field service, being ready to entrain. But to bring this about, troops should be provided with the necessary boxes and crates, and should be trained in preparation for the field.

The property that is stationary in the post and the property that is removable should be borne on distinctive memorandum receipts so that the latter can be transferred to the quartermaster of the moving column without verification.

There should be from time to time a field preparation drill in the garrison to secure these results.

GUARD, FATIGUE AND PRISONERS.

To secure the best results from your guard have the officer of the day make his headquarters at the guardhouse. He thus spends his time supervising the guard duty instead of playing cards at the club, and he is always where he can be found.

In order to keep the men from being confined in the guardhouse for trivial offenses and thus increase the strength for daily drill let the summary court give the offender "*so many hours of labor under charge of the guard*" instead of imprisonment. Let the man so sentenced do his drill in the morning and do four hours hard labor each afternoon, nominally in charge of the guard, but actually like a man on fatigue, preferably doing task work.

The habitual absentee from reveille or taps who wants to see his girl and has plenty of money from home with which to pay fines is cured best by this treatment. It brings no more disgrace than a cadet's extra at West Point, but it deters from the commission and repetition of the offense. By avoiding

imprisonment it preserves the soldier from contact with jail birds.

Each post should have, in addition to fire alarm drill, an escaped prisoner alarm drill.

It is possible on the alarm of the escape of a prisoner, to rush out a portion of the command and so picket all the roads surrounding a certain area that the fugitive will be unable to escape from it and can be searched for at leisure.

While it is undesirable to have in the guardhouse short term prisoners from your own command, it is very desirable to have forty or fifty long term prisoners or convicts to use in doing the necessary fatigue work of the post, loading and unloading cars, sawing wood, delivering supplies, improving roads and grounds, and doing shop work for the quartermaster, all of which work has to be done but is irksome labor to the soldier in ranks.

To accomplish this the guardhouse should be a small military prison.

Part of the prisoners used as trustees need not be guarded when at work, the remainder to be in charge of a prison guard, detailed from month to month, made up of old reliable soldiers who are excused from all other duties. To reduce the number of sentries over prisoners, a bull pen should be constructed where all prisoners sawing wood, painting, doing repair work, etc., can be confined. Thus two sentries can take care of twenty or more prisoners.

The guardhouse should contain a mess-room and kitchen.

The ordinary guard duty of the post, the protection of grounds and buildings, can then be performed by a few mounted sentinels, the fewer the better, remembering, however, that guard duty is good preliminary instruction for service of security in war.

DISTRIBUTION OF DUTIES.

In general it may be said that line duties are the most important, and that an excess of staff officers injures a command. With a regimental post a quartermaster needs but one assistant, and that assistant might be able at the same time to attend to the post exchange. To relieve an officer of all-other

duties to run a general merchandise store like the post exchange was not contemplated by our legislators.

While a commanding officer should keep a sharp lookout for details, a sense of discretion and responsibility should be felt by all subordinates. As far as possible they should be allowed to work a thing out in their own way. The duties of squadron commanders should be fixed by order. A squadron commander should be an administrative as well as a tactical officer. He should have control of the police of his squadron of the grooming, stables, and care of equipment. He should have a certain supervision over reports and returns. He should supervise the theoretical training of the non-commissioned officers, etc. In war he is often an independent commander. In peace his responsibility should be clearly fixed by regulations. His time should be fully occupied by his duties.

The duties of squadron commanders are so important that when a major is permanently absent the senior captain in the squadron should be placed on special duty as acting major of the squadron. In this way he will be relieved from troop duty, have more time for his new functions, and be an unprejudiced commander. There is no good reason why a captain should not be placed on special duty as acting major when he can be placed on special duty as police officer, post exchange officer, etc.

THE CARE OF PROPERTY.

The commander of a post has it in his power, by looking after property, to greatly decrease the expenses of the military establishment. He should frequently examine into the care that is taken of grain and hay, with a view to stopping the pilfering and preventing the thefts which are likely to occur at all large posts.

In the matter of inspection and condemnation of horses and mules it should be remembered that the great expense of these animals lies in their forage—this costing from \$10 to \$12 a month.

If a horse or mule is not fit for service he should be condemned and sold at once. If carefully prepared for the sale so that he presents a sleek appearance he will fetch a large price.

To preserve wooden buildings paint should be used liberally both inside and outside.

In connection with competitive inspections troop commanders will be glad to keep the inside of their barrack rooms freshly painted and the floors waxed if the proper materials are furnished them. Expenditure of plenty of paint is seldom a waste.

It is necessary for the Commanding Officer to combat the tendency to present for condemnation articles which though worn are fit for use or can be repaired. There are great numbers of articles in service which could be renovated by using parts of one article to repair another. To do this requires a special arrangement and a repair shop and a certain expenditure of funds to effect such repairs as can not be accomplished with the usual tools, materials, and employees. The establishment of a repair shop at posts and a record of economies accomplished in this manner will do much to lessen the cost of our military establishment.

The Post Commander should spend a minimum of his time in his office and a maximum of his time in the open watching the work of his command. To accomplish this is often not easy under the present system, but it is believed it could be facilitated by appointing the next senior officer "Assistant Post Commander" with power to perform certain functions, sign certain papers, etc.

For accomplishing the best results in training it is believed the regimental post has the advantage. If, however, troops are concentrated by brigades or divisions, things should be so arranged that the section occupied by each regiment should constitute a sub-post, the regimental commander having control, subject to the supervision of the brigade commander, over his own guard, fatigue, his own supply departments, his own guardhouse and his own transportation. Not only will this make each regiment more efficient, but it will also give the regimental commander and his staff experience which would be indispensable in case of war. To take from subordinate commanders responsibility in time of peace makes them helpless in time of emergency.

A TRIP TO PORT ARTHUR.*

BY CAPTAIN FRANCES LE J. PARKER, TWELFTH CAVALRY.

NO army officer who visits the Orient for duty or pleasure should fail to see Port Arthur. Its battlefields will be found to present, not only the best known example of modern fortress warfare, but, in addition endless interesting phases of hasty field fortifications and of the infantry and field artillery combats of which these hurriedly constructed lines were the scene. Port Arthur will be found deeply interesting to any officer who wishes to study his profession in the best of all schools—that founded on the actual experience of war as shown by concrete cases. The average line officer, no less than the engineer and coast artilleryman, will find that a trip to the famous fortress will well repay the time and expense involved. In this connection, it should be borne in mind that Port Arthur when war was begun, and even when the siege was actively entered upon months later, was far from a finished fortress; and that many of the lines connecting the main defensive works, as well as some of the latter that were the scenes of the fiercest struggles of the siege, were in reality not permanent fortifications but, in their essence, hasty field intrenchments.

The writer when desiring to visit Port Arthur in 1912, found considerable difficulty in getting definite information as to the details of available routes, etc. In the hope that they may save some fellow-officer time and trouble, the following notes as to railroad and steamer routes are included here.

To the officer approaching the Orient via Siberia, Port Arthur is apt to be almost directly in his path. The Chinese Eastern Ry. (under Russian management) turns south from the Moscow-Vladivostok line at Harbin and connects at Changchun

*The notes for this article were made by the writer during a trip to Port Arthur and vicinity in September, 1912. The schedules, etc., quoted were those in force at that time.

with the South Manchuria Ry., whose main line extends southward through Mukden to the main southern terminus at Dairen (Dalny). An extension of this road leaves the main line at a little way station called Tafangshen and goes to Port Arthur (Japanese name "Ryojun"). At Dairen the railroad company's fast steamers connect with the trains to and from Harbin to Chefoo, Weihaiwei, Shanghai, Nagasaki, Moji, Chemulpo, etc. Many of the boats are small and, on a few, special arrangements have to be made for European food. There are, however, some very good boats in this service, such as: the Hamburg-American Line's steamers connecting Dairen with Tientsin, Chefoo, make the fast Trans-Siberian service connecting Shanghai with Europe.

At Mukden the South Manchuria Ry. connects with the Chinese Government Railways leading southwestward to Tientsin, whence rail connections may be had with Peking and the Yangtse Valley (Hankow, Nanking and Shanghai). From Mukden also a branch of the South Manchuria Ry. turns south-eastward to Antung on the Yalu River (the boundry between Manchuria and Korea) where it connects with the Chosen (Korean) Ry., leading through Seoul to Fusan. Through trains run from Changchun to Dairen, Mukden to Peking (via Tientsin) and Mukden to Fusan. The last named, connecting at Fusan with steamers for Shimonoseki and Kobe, constitutes a link in one of the fast Trans-Siberian services between Japan and Europe (the others being via Dairen and Vladivostok, respectively).

Whether going to China, Japan or Manila, therefore, the traveler across Siberia to the Orient will pass conveniently near to Port Arthur. It should be stated that (unless changed since 1912) there are no through trains from Mukden to Port Arthur, the latter being reached by local trains from Dairen, running at convenient intervals during the day and evening. As Tafangshen, the station where these local trains leave the main line and turn south to Port Arthur is merely a way-station, it will be found, in practice, always better to make the trip from Mukden to Port Arthur via Dairen. The station at the latter place is within a few minutes walk or ricksha ride

from the Yamato Hotel, where good rooms and meals can be had and any wait between trains be comfortably spent.

The traveler from Manila and other points south of Port Arthur will usually approach that place by sea, though, as already indicated above, the trip may be made by rail (via Mukden) from Korean points and the direction of Tientsin. The port of Port Arthur was opened by the Japanese to foreign commerce in 1910; but practically all steamer passenger traffic for Port Arthur is handled through Dairen, the main commercial port of the Liaotung Peninsula and thence by rail. As a matter of practice, therefore, whether approaching Port Arthur by land or sea the route will ordinarily be via Dairen and thence by train to Port Arthur.

Steamer lines connect Dairen with practically every port on the China coast, Korea and Japan—for example: Newchwang, Chinwantao, Tienstin, Tsingtau and Shanghai; the steamers of the South Manchuria Railway Company on the direct Shanghai-Dairen service, and the boats of the Osaka Shoshen Kaisha's Dairen-Moji-Kobe service.

The principal connections of the South Manchuria Railway are, as already indicated, with the Chinese Government Railways at Mukden, with the Chinese Eastern Railways at Changchun, and with the Chosen (Korean) Railway at Antung on the Yalu River. The Chinese Government Railways include the Peking-Tienstin-Mukden route. Army officers can secure special rates on this line. If time permits, application should be made to the U. S. Army Headquarters at Tienstin for a warrant to present when asking for rates, but identification to the conductor on the train will frequently suffice. The Chinese Eastern Railway connects with the Siberian Railway at Harbin; both are under Russian management. The Chosen Railway runs from Antung via Seoul to Fusan, where it connects by steamer (ten hours trip) with Shimonoseki and the Japanese railroad and steamer services of that port. It has branches to several small ports on the south and west coast of Korea: among the number being Chemulpo. The South Manchuria and Chosen railways are under Japanese management. So far as known, they grant no rates to foreign army officers as a

class. It is understood, however, that rates to certain British officers have been granted upon application.

The Chinese Government Railway, the South Manchuria Railway and the Chosen Railway, each publishes a very complete pamphlet with schedules, fares on regular and special trains, the principal rail and steamer connections, railroad maps and similar information. It will be found that the Japanese have changed the names by which many of the places on the lines have heretofore been known to Europeans and Americans. The cases of Dalny (Dairen) and Port Arthur (Ryojun) have already been mentioned. Other important instances are:

Name formerly known by:	Present Japanese Name:
Seoul	Keijo (Railroad stations are Seidaimon and Nandaimon).
Chemulpo	Jinsen.
Mukden	Fengtien.

Army officers desiring to reach Port Arthur from Manila can do so by taking a transport to Nagasaki, proceeding thence by rail or boat to Shimonoseki, crossing from the latter place by boat to Fusan (ten hours trip) and going by rail via Seoul and Antung to Mukden and Dairen. This is a somewhat round-about way in distance and the rail trip is rather expensive. A first-class ticket, exclusive of meals, sleeping berth, and extra fees for express train, costs fifty-four yen fifty-five sen (y54.55) from Fusan to Dairen. Second-class railway travel is usually quite comfortable enough in the day time on the Korean Railway but this is not the case, as a rule, on the South Manchurian Railway.

The value of the Japanese yen, like that of the Chinese dollar, is about the same as the Philippine peso. The variations in value are made the excuse for exorbitant exchange charges.

Instead of going to Fusan, and thence by rail, connections can frequently be made at Nagasaki or Moji with a steamer for Dairen. If made this way, the trip will be much less expensive. The better boats of the Osaka Shoshen Kaisha leave Moji every Tuesday and Friday, arriving at Dairen on Thursday and Sun-

day, respectively. The first-class fare on these steamers is thirty-six (36) yen. The smaller boats stop by Chemulpo en route to Dairen. The free baggage allowance for first-class passengers on the South Manchuria and Korean railways is about one hundred and thirty-three (133) pounds; the second-class allowance, eighty (80) pounds.

There is a fast weekly service by boat (South Manchuria Railway Line Steamers) direct from Shanghai to Dairen and vice versa; and steamer connections from Tsingtau, Chefoo and Tientsin may be had either direct to Dairen or via intermediate ports.

From Tientsin, Dairen may be reached by rail, via Mukden in about two days or by steamer in from twenty-four to forty-eight hours. The regular first-class railway fare, exclusive of extra charges for express trains, sleeping berth, and meals, is about forty (40) pesos from Tientsin to Dairen. This charge, however, is subject to a reduction of about ten (10) to fifteen (15) pesos due to special rates allowed army officers on the Chinese Government Railway. The steamer fares from Tientsin to Dairen vary from about fifteen (15) pesos on the small Japanese boats to thirty-five (35) pesos on the very good steamers of the Hamburg-American Line.

While American troops remain in China officers will probably continue to have opportunities to go from Manila to Tientsin or vice versa by army transport.

In connection with the railway trip from Fusan or Chemulpo to Mukden, a stop of a day or two at Seoul will be found interesting; and by taking two trains on successive days between Seoul and Mukden, spending a night at New Wiju on the Yalu River, the entire trip between Seoul and Mukden may be comfortably made in daylight. New Wiju where the railroad, crosses the Yalu, is opposite Antung, and some miles below where the principal fighting took place at the crossing of the Yalu in 1904. There is a good hotel at the railroad station at New Wiju.

In traveling from Tienstin to Mukden or vice versa an interesting stop between trains can be made at Shanhaikwan, where the railroad passes over the great wall of China. A comfortable hotel will be found there.

To study the Mukden battlefield would require, due to its extent and special local conditions, advance arrangements to be made for guides, mounts, etc.; and it is questionable whether such arrangements could be satisfactorily made without official Japanese assistance. (Mukden, while nominally in China, is practically controlled by the Japanese). As a place of general interest, Mukden is well worth a day's stop. Application should be made *in advance* to the United States Consul for permission to visit the Palace there. Liao Yang is passed between Mukden and Port Arthur. Some of the works there are visible from the trains; but, for a real study of the field, conditions will be found somewhat similar to those referred to above as obtaining at Mukden.

At Seoul, Mukden, Dairen and Port Arthur very good hotels will be found. Rooms and meals are usually charged for separately. The aggregate charge ordinarily amounts to from six (6) to ten (10) pesos a day. Frequent statements to contrary notwithstanding, it is not believed that much help will be had from guides at Port Arthur, whether furnished from the hotels or in the form of Japanese officers. Very little English seems to be spoken at Port Arthur and the type of information extended to visitors is apt to be in connection with the ordinary features of the siege, such as would interest a tourist, rather than in connection with the more technical features which an army officer would want to investigate. The drivers of the hotel carriages usually know the principal forts by name.

In connection with books on Port Arthur. "The Influence of the Siege of Port Arthur upon the Construction of Modern Fortresses" by von Schwartz (translation published by the War Department) is highly recommended both for previous study and to carry on the ground. It will be found to contain, in addition to a number of interesting discussions of the special points of the siege, a statement of the original plan of the fortress, of the modifications that were contemplated prior to the outbreak of the war, of the actual condition of the fortress when war began, of the work done between the declaration of war and the beginning of the siege, and of the effect of the bombardment, etc., upon the principal works. Its detailed listing of the works on the line can be easily followed, including the

various minor salients and other features, so that these can be accurately identified on the ground—a thing a great many of the works on Port Arthur do not permit. Another interesting work is "The Truth About Port Arthur." (There is a different book called "The Truth About the War.")

In addition to the above, and to the well-known works on the siege, official reports, etc., there may be mentioned: the pamphlet, "Descriptive and Historical Sketch of Port Arthur," distributed by the Yamato Hotel at Port Arthur; also a booklet, "Port Arthur, Its Past, Present, and Future," by General Sakuma of the Japanese Army (book obtainable at books store in Old Town at Port Arthur.)

Officers may find themselves in China without books to which they desire access will usually find a good supply of Port Arthur literature at Kelly & Walsh's book stores in Shanghai and Tientsin.

The details of visiting the lines of work depend, of course, upon the nature of the examination contemplated. The position of the available roads suited to the use of vehicles, as well as the actual location of the works, at present divide the latter, for the purpose of visits to them, into two general divisions, namely: the works on the east side of the break in the hills made by the valley of the Lunhe River* (through whose valley the railroad enters Port Arthur); and the works on the west side of that valley. In September, 1912, there were open to the public, in each of these general divisions, all parts of the lines that had played an important part in the actual operations of either the Russians or the Japanese during the siege. In the eastern of these two sections, the part so opened extended from and including Battery A (Pai-Yin-Shan, North), in the north-eastern part of the former Russian lines, westward, via: Redoubt No. 2 (Tung-Chi-Kwan-Shan, southeast); Battery B (Tung-Chi-Kwan-Shan, east); Kuropatkin Lunette (Battery Q); Fort No. II (Tung-Chi-Kwan-Shan, north, or north Fort); Eagle Nest, also called Wantai and Bodai; Caponier No. 2 (Battery P); Fortification No. 1 (east Panlung-Shan); Fortifica-

*For this and following references to lines see maps in War Department publication "Influence of Siege of Port Arthur, etc" or in any standard work on the siege.

tion No. 2 (west Pankung-Shan); Caponier No. 3 (Battery G); Fort No. III (Er-Lung-Shan); Redoubt No. 3 (Sung-Shu-Shan); and the Mound Battery, to the railroad.

There were additional fortifications, emplacements, etc., in rear of the works named above and in the intervals between them; while, in front of the main line, there were advanced positions on Hsiao-Kushan, Ta-Kushan, at the Aqueduct Redoubt, and at the Temple Lunettes (Idol Forts, Shuishiying Redoubts). West of the railroad the Russian line held during most of the siege consisted (from east to west), first, of a group of works the most important of which was Fort No. IV (Itzushan), while more to the rear were Battery C and Battery D (Hsiao-Antzushan), and Redoubt No. 4 (Ta-Antzushan). West of Itzushan came trenches, etc., closing the interval to Flat Hill (Akasakayama); then, as the line turned southward, came 203 Meter Hill and some minor works connecting the latter with Fort No. V (Tai-Yang-Kou, north) and its neighbor just to the south, Battery E (Tai-Yang-Kou, south). At the beginning of the siege the Russian advanced position in the western section extended considerably further to the front than the line just indicated and included rather hasty works on 174-Meter Hill and Namakoyama; also similar works on some of the points of the ridge still further to the north.

All of the works, approaches, etc., in the eastern and western sections designated above, including both the Russian defensive works and the corresponding Japanese lines opposite, were open to visits by the general public in September, 1912. The vicinity of Battery A, a group of forts near Itzushan and the Tai-Yan-Kou Forts had been only recently so opened. Access to many of the defenses, etc., outside of the above-described sections, including the coast defense batteries, was forbidden in 1912; but, as the sections that were opened included the sites of all of the more important operations of the siege, there was little reason to attempt to extend investigation beyond their limits, even were such extension permitted.

As already indicated, the interest involved in examining the ground at Port Arthur will be proportionate to the familiarity previously acquired with the main points of interest of the siege. For officers with considerable time to devote to the

subject in advance, and with access to the necessary books, it will add greatly to the interest and benefit of the trip if a condensed memorandum be prepared, and carried about when visiting the lines, showing for some of the principal works; dates and main incidents of the principal attacks on each with reasons for success or failure of the latter; the date of the final capture of the work; and the effect of such capture upon the neighboring works of the line. Specially important points for study of this character are thought to be: Fort No. II; East and West Pan-Lung-Shan; Fort No. III (Er-Lung-Shun); Redoubt No. 3 (Sung-Shu-Shan); Akasakayama; and 203 Meter Hill. In the absence of a more complete account of the siege, the necessary data for a very useful memoranda of the above type may be had from reference to, or extracts from, the War Department publication previously referred to and the pamphlet mentioned above as obtainable at the Yamato Hotel. Note especially in this latter publication: the table of "Dates of Occupation of The Forts." (page 17); the "Chronological Table" (pages 35 to 41); and the Appendix (pages 42 to 43), showing the Japanese, Russian, and Chinese names for many of the works. A similar convenient listing of the names will be found on one of the pages just preceding the subject-matter of the War Department publication already referred to. Individual officers, will of course, wish to devote themselves specially to different phases of the operations of the siege, such as; the general question as to the proper selection of the main line of defense and the general location and character of the principal works; the question of advanced positions and the extent to which they should have been fortified and held; the character of the interior line, or lines, of defense; details of the construction of the works and what the experience of the siege showed to be the advantages and defects thereof; the various assaults and the reasons for success or failure in each case; the existence of dead spaces about the works and the result to the defense; the details of the siege approaches and parallels; the question of covered communications; the use made of searchlights, field telephones, telegraphs, etc.; the obstacles employed and with what success. All of the above points, and others of a similar character, are briefly and clearly treated in

the War Department publication already referred to; and, while the entanglements and obstacles have been removed, and the details of the forts in many cases obliterated by bombardment, etc., still most of the features of the siege operations can be followed today on the ground without the least difficulty.

To reach from the hotel or railroad station points in the eastern section of the lines, there is a main road passing through Old Town and striking the main line of the Russian works just west of Battery A. This road then turns generally westward, continues along the line and in rear of the works as far as Fort Redoubt No. 3 (Sung-Shu-Shan) and then turns southward and follows the railroad back to the station, thus completing a circuit. The Aqueduct Redoubts and the Temple Lunettes may be reached by a road branching off from the one just described at a point in the valley west of Sung-Shu-Shan, and the foot of Itzushan may be reached by another rough road branching off to the westward. A second main road runs from the railroad station via the Hotel to 203-Meter Hill. From this also a branch turns off (northward) to the Itzushan Fort. There is a direct road from the New Town to Battery E (south Tai-Yang-Kou Fort) and vicinity; with this exception, points in the western section of the lines are ordinarily reached by side trips from the road to 203-Meter Hill. A vehicle can go from Sung-Shu-Shan to 203-Meter Hill only by making the long circuit via the railroad station.

Carriages for two people are to be had for fifty (50) sen an hour or five (5) yen per day. Rickshaws can also be had, but are not suitable for the longer trips. Most of the actual examination of the ground must be done on foot; and, as the journey is over broken ground covered by sharp rocks, good walking shoes are indispensable.

The weather in Port Arthur in late September or October is usually ideal for tramping over the ground.

Where time is short a good deal may be saved by taking luncheon from the hotel thus saving a return trip at noon. On the other hand, where there is no great hurry, it is thought that more pleasure and benefit can be had by using each morning for a long tramp over some part of the lines, returning to the hotel for a lunch and short rest at noon and spending the afternoon

in detailed examination of some special feature of the line which does not involve further hard walking—for example, inspecting in detail one or more of the big forts or the siege approaches immediately in front thereof.

It takes about three-fourths of an hour to drive from the hotel to the vicinity of Battery A; about one-half an hour to drive along the rear of the line from Battery A to Er-Lung-Shan and about the same time to drive from Er-Lung-Shan to the hotel. Roughly speaking, it will take from one and one-half to two hours to drive without stopping from the hotel around the rear of the forts of the east section and return to the hotel.

It takes from twenty to thirty minutes to drive from the hotel to the foot of 203-Meter Hill, about ten or fifteen minutes to drive from the hotel to South Tai-Yang-Kou Fort, and about the same time to drive from the hotel to the railroad station.

For use in Port Arthur, and also for general use in Manchuria as far north as Changehun and in Korea, Japanese money will be found the most useful.

Assuming that a *single day only* is available for Port Arthur it might be spent as follows:

The morning (8:30 A. M. to 1:00 or 1:30 P. M.), to be employed by driving, first, to the main Russian line near battery A, proceeding thence westward over the road in rear of the line, with a few moment's stop to walk over to the crest at each principal point, until the place is reached where the trail to the Eagle's Nest leaves the road. Here dismiss the carriage temporarily, with orders to go on by the road and wait your arrival at Fort No. III, (Er-Lung-Shan). Climb the Eagle's Nest for a good general view; then walk down to Fort No. II and continue along the general line of works to Er-Lung-Shan. After studying the last-named fort, drive over to Sung-Shu-Shan and, after completing your examination of that work and its vicinity, return to the hotel for lunch. In the afternoon make a trip to 203-Meter Hill and its immediate vicinity. Should there be any remaining daylight on your return, a drive up on Monument Hill is suggested.

For a two day's stay, it is suggested that the whole of the first day be spent on the eastern section, luncheon being taken

out in the carriage. The morning of the second day might well be spent at 203-Meter Hill and its vicinity, including Akasakayama, Namakoyana, and 174-Meter Hill. The afternoon of the second day might be spent in a trip to the Itzushan group and Tai-Yang-Kou group, or to some special forts of the eastern section; or be employed in a trip to Monument Hill and Old Town, including the Museum.

Where a stay of three days is contemplated, it is suggested that the first two days be utilized much as described for a two days' stay. This will insure a glimpse of the most interesting parts of the lines even should bad weather, or other unforeseen contingency, prevent satisfactory work on the last day. When a third day is actually available, it can be well utilized in visiting some of the advanced works, examining the Japanese lines on the opposite ridges or specializing on features such as the details of the permanent works, location and types of the temporary works in the intervals, or any other special features.

Once a visit passes from a mere sightseeing trip to a study of the lines, no difficulty will be experienced in finding endless points whose investigation will be interesting. The real trouble will be to pursue any one point to the end without being drawn off by curiosity as to the numberless trenches, etc., that are everywhere to be found—although the enterprising farmer is already making progress in obliterating some of the works on the more arable ground.

Most officers who may have more than two or three days to spend at Port Arthur will probably prefer, after they have acquired some familiarity with the ground, to work out their own scheme for going over the lines. For the benefit of any who may find them of use, some notes are appended below as to trips that the writer found very interesting. Field glasses should be carried and the best obtainable map (mounted on cloth). A Chinese boy to carry lunch, etc., may be found convenient.

1st. Drive out via Old Town to where the road strikes the main Russian line just west of Battery A (S.-E. Tung-Chi-Kuan-Shan). This point is near the one marked "Silver Hill Fort" on some of the maps. Have the carriage wait and walk over to the concrete work (Battery A), just to the east, from which a good view of all the east end of the land front

is to be had. From this point, work along the line to the west, locating each work, including those just in rear of the line. The part of the line between, and including, Fort No. II (North Fort) and Fort No. III (Erlungshan) and from the latter on to and including, Redoubt No. 3 ((Sungshushan, was the scene of much of the hardest fighting of the siege and will well repay very detailed study. Two of the four temporary works (E. and W. Panlungshan) on the main line between Forts No. II and III were captured in the first great assault in August, 1904, and successfully held to the end of the siege by the Japanese, who however, were not able to get the parapet (Chinese wall) just in rear of the works. Caponier No. 3, just to the east of Fort No. III, was taken in the October assault. An examination into why these points fell, and into how the Japanese were able to hold them, will prove well worth study. It will be noted that although Forts No. II and III and Redoubt No. 3 (really a fort) were the objects of numerous bloody assaults, each was finally taken, after many months of successful resistance, only as the result of typical siege operations, terminating in each case by securing gradual possession of the glacis and ditch and finally blowing up the front of the fort—this in spite of the uncompleted state of the forts, the general lack of preparedness of the Russians, and the very unskillful placing and use of the artillery of the defense. A day can be easily put in along this section (in which case lunch should be taken instead of returning to the hotel) or portions of the line may be taken on successive afternoons in connection with morning trips to other points. The carriage may be sent back to return at a certain hour to a specified point or may follow along the road just in rear of the works.

2d. Drive to South Tai-Yang-Kou Fort and direct the carriage to meet you at 203-Meter Hill or Itzushan Fort (via the road approaching the latter fort from the south) according to your plan for the day (see below).

From South Tai-Yang-Kou Fort a good view is to be had of the southwestern part of the line of defense thus helping to get a good conception of the general scheme of defense. Walk on over to North Tai-Yang-Kou Fort (which you will see a little to the north), stop here a few minutes to look about, and

then walk over towards the south end of 203-Meter Hill, following the communications leading to the smaller hill situated a little southeast of 203-Meter Hill; from here keep to the south (left) of 203-Meter Hill and cross a deep ravine to the most southerly of two or three little knolls west of the ravine; notice the approaches by which the Japanese reached these knolls and, turning toward 203-Meter Hill, walk over toward southwest corner of latter, noting the approaches; climb 203-Meter Hill from this direction, noticing the successive trenches as you ascend. On reaching the crest near the small monument at the southern summit of the hill, get your bearings and notice the Japanese trenches (dug after the capture of the position) on the east side of the hill; then continue along the crest to the north summit, where the larger monument stands. After identifying the surrounding hills (Akasakayama, Namakoyama, 174-Meter Hill, etc.), descend to the trail in the saddle just to the north of 203-Meter Hill and walk over to 174-Meter Hill. Notice particularly how 203-Meter Hill looks from this side, the original exposed road connecting it and 174-Meter Hill, and the latter covered communications via ravines and trenches. Having examined the trenches on 174-Meter Hill, and noticed the importance of the hill as a point in the line, turn eastward along its slopes and descend to the north end of Namakoyama. Climb this hill, noting the favorable point of attack at the northwest corner, and, having gained the crest, continue along it toward 203-Meter Hill until a trail is struck leading down to the ravine between Namakoyama and Akasakayama. Descend to the ravine and climb Akasakayama, noticing the various trenches on the sides of the hill, especially near the southwestern corner. The crest and eastern slopes of Akasakayama furnish most interesting samples of trenches, shelter for supports, covered communications, etc. From Akasakayama continue eastward along the works that cover the ridges leading toward the north front of Itzushan (plainly visible), including Long Ridge (Division Hill) and come out finally in the valley under Itzushan (on the west side of the fort). To reach the fort the steep ascent in front of it may be climbed or an easier, but longer route around to the west and south of the fort may be taken. The carriage can approach from the south (203-Meter Hill road)

to near Itzushan Fort. Examine Itzushan Fort and continue the examination, if desired, to the neighboring works on the hills nearby.

The above will be found a pretty good day's tramp, for the terrain is steep and very rough. It can be covered by hard walking between 8 A. M. and 1 or 2 P. M., but it is thought that much better results can be had by taking it in a whole day or two half days on separate days. Either can be readily done as the vicinity of Akasakayama (where the carriage could wait) is the natural place to make the division.

3d. Drive via Old Town and Battery A to as near the foot of Takushan as the carriage can approach (in 1912, a village a little southeast of the hill). Leave the carriage here with orders to go at once to North Fort and wait for you there (North Fort can be pointed out to the driver from knoll near village referred to). Climb Takushan, noting main Russian lines behind you to the south (including visible coast forts). On reaching the crest a splendid view of the terrain is to be had and an excellent opportunity to study the question of "advanced positions." When ready to descend, take a trail (steep) down the northwest face, noting as you go down the Russian trenches on the lower slopes and the Japanese approaches to them. Having reached the foot start off across country towards Eagle Nest (plainly visible) and continue on thus as far as the North Fort, noting the Japanese communications in the river valley and, later, the approaches and parallels to the North Fort. This will be a good morning's tramp. From the hotel to the foot of Takushan by carriage will take about $1\frac{1}{4}$ to $1\frac{1}{2}$ hours; a half hour more is ample for the climb, and the walk from the foot of Takushan to the North Fort will take from one to two hours according to the time spent following the trenches, etc., near the North Fort.

The afternoon of this or a subsequent day may profitably be spent on the siege works in front of, and along, the line North Fort—Erlungshan—Sungshushan. It is an easy walk from Erlungshan to Aqueduct Redoubt, at the north edge of an isolated patch of low pine forest.

4th. Drive out to the Temple Lunettes (there is a road just to the southwest of them and the Temple itself will readily be recognized.) Dismiss the carriage and direct it to meet you

at the foot of 203-Meter Hill at a fixed hour not less than three hours later. Having seen the Temple Lunettes, follow up a ridge leading in a northwesterly direction (north of Itzushan and 174-Meter Hill). Locate early 203-Meter Hill (easily found with your glass) and, guiding generally on it, pursue the examination of the advanced Russian trenches and later Japanese siege works as far to the north and west as you please, finally crossing over and joining your carriage at 203-Meter Hill. Some idea of the lines here may be gotten in three or four hours, or much more time can be put in at it, as desired. Don't get too far from 203-Meter Hill unless you want a stiff walk; the country is rough.

5th. To visit the Japanese gun emplacements, etc., on the ridges north of the eastern half of the main Russian line, a good plan is to take the 6:20 A. M. train to Lan-Tou station (arriving about 6:40). From here the crests of the Japanese works will be plainly visible on the neighboring hills. Make such a detour through them to the east, south, west and north as you find interesting, returning to Lan-Tou in time to catch the train to Port Arthur about 10 A. M., or a later train if preferred. It is thought that three hours here will suffice for an ordinary examination.

If the first train to Port Arthur is taken, arriving there at 10:30 A. M., the interval before noon may be conveniently utilized in a trip to the museum, Monument Hill, etc.

The above trips may be doubtless improved upon after considerable familiarity with local conditions is obtained. They were made by the writer substantially as indicated above, except that in No. 4 the carriage waited near the Temple Lunettes, involving a return to the starting point, and in No. 5 the trip from Lan-Tou to the Aqueduct Redoubt was made on foot. In each of these cases the suggested change is thought to be an improvement.

It should be borne in mind that in many cases the same position was held successively by the Russians and Japanese, thus accounting for two sets of trenches.

In connection with a trip to Port Arthur a visit may easily be made to the battlefield at Nanshan Hill, which will be found most interesting. The trenches, gun emplacements, etc., are

well preserved and may be easily followed. To reach Nanshan, a train can be had leaving Dairen at 7:20 A. M. and reaching the station (Chinchou—about $\frac{3}{4}$ miles from the battlefield) at 8:24 A. M. Under the schedules in force in September, 1912, no returning passenger train was available until 5:31 P. M., but a freight train, with cabooses, passed at noon, arriving at Dairen at 1:30 P. M. This gave ample time to walk over the battlefield, the topography being very simple. If it should be desired to make a further study of the battle, as by examining the Japanese artillery positions, routes of approach and deployments, etc., it would be necessary to take a whole day and advisable, if possible, to arrange in advance for a pony. In this case luncheon should be taken from Port Arthur; Chinchou being merely a way station.

THE TENTATIVE CAVALRY DRILL REGULATIONS.

By COLONEL JOHN C. GRESHAM, TENTH CAVALRY.

IN the tentative drill just tested near Winchester, Va., there is much that is good and so simple is the mechanism and few and easy the evolutions, that they can be mastered in a short time. With us this is important, for in case of war with a powerful enemy we should be compelled to train thousands of mounted men with the least delay possible. As the drill can be readily adapted to our present organization, I should be glad if many of its movements were adopted. The objectionable features of some of its evolutions will be noticed below.

Defects of graver character are found not in the mere evolutions but in the foundation of the system itself. Its basic ideas are leading, signaling and shock action which are made to overshadow all other considerations. While none could wish to dispute that, in themselves and in proper limits, leading, signaling and shock action are excellent, there are other things of equal or greater value that must be given due prominence or serious evils are sure to creep in.

A brief discussion may help to make this more clear.

LEADING.

Leading in the new drill means that all are held by leading strings, which in the platoon are in the hands of the lieutenant, in the squadron in those of the captain, and in the regiment in those of the colonel. Should one of these leave his post to supervise the working of his unit, he must hand the strings to a designated person till his return. But as this person can do nothing of himself, the leader is constrained to hasten back where alone signals can be seen. For this reason, he never leaves his post and forgoes all opportunity for properly instructing his men.

The strength of the binding cords depend on the closeness of attention given the leader by the led and throughout the regiment the eyes of each commissioned officer must, therefore, be constantly fixed on his immediate leader and must by an unremitting gaze catch all his signals. Think of this in the dust and confusion of combat.

In our present regulations, the instructor, wishing to teach the principles of leading, takes post in front of the center and commands, *Follow in Trace*; but, the lesson ended, he simply announces the guide and is free in mind and movement. Leading having received its share of his attention is dismissed and he proceeds to other matters no less important.

But in the new regulations this procedure is impossible. Here leading is all in all and its cords can never be cast away or broken asunder.

Should the leader venture away from his post, he is still in bonds and must hasten back to resume his role of leadership—or rather of leading; for between the two is a vast difference. The one is an act of flat routine, the other of strong command; the one bound, the other free; the one guides a unit at drill, the other fires hearts and unites them in heroic endeavor.

It would be hard to have too much leadership, but is easy to have too much leading.

In the schools of the platoon and squadron, which in this drill is the basis of efficiency, proper instruction is impossible because no commissioned and few non-commissioned officers can exercise supervision and, evolutions naturally easy and readily mastered are too often ragged and unsatisfactory. Of this there is much complaint and leaders declare with truth they can not be held responsible.

A few days ago a mistake occurred well illustrating the evil inherent in this obsession of leading, and when we reflect such errors are far more likely in the press and confusion of combat than in a tactical problem, the danger is more apparent. There appeared suddenly two represented enemies advancing on the regiment, one from the northeast, the other from the northwest. To meet the latter and smaller force one squadron was directed to fight on foot, while to meet the former, the other

three squadrons were ordered to charge. Of one of these, two platoons, misunderstanding the signal, also dismounted to fight on foot instead of going to charge. Not till he rallied his unit after the exercise did the leader discover the mistake and was much surprised to learn that only half his squadron had followed him.

Again, is there not a probability that constant gazing for signals from a leader and unremitting looking unto the hand of a master may gradually grow and finally, in course of time, become part of nature, so that their free spirit of enterprise, independence and initiative being impaired or destroyed, American soldiers may be Europeanized and turned into blocks like those of the rank and file of foreign armies? Shall our birthright, admired and coveted by all nations, be sold for a mess of potage?

SIGNALING.

Signaling must always be used unless dust, fog, darkness or other causes make it impossible. The purpose is to avoid noise and confusion which all concede is most desirable and must be achieved by every feasible means: As in platoon drill, owing to the smallness of the unit, signals are easily seen, they should be used—not invariably but only frequently—whenever visible. If used invariably, it must follow that, as the leader is practically chained to his post, he must lose all facility for learning to handle his platoon at times when, owing to invisibility, signals can no longer be used. Even when clearly visible, therefore, much time should be devoted to instruction without signals so that the platoon might be efficient however dark, dusty or foggy it might be. In the drills at Winchester I have never seen a leader leave his post nor heard one give a command. This is a grave error to correct, which the leader must be free in movement, must frequently practice prescribed commands, must often announce the guide and the men—especially the non-commissioned officers—properly using their eyes and confident a light touch toward the guide is all sufficient, must be trained to march as of old.

Moreover if signals be used invariably, the leader can acquire no facility in giving the commands and must either forget or even fail to memorize them. As a corollary, the men also

must remain ignorant of them. Since perforce, commands must be given if signals can not, such conditions are dangerous and must be avoided lest the platoon be unmanageable at times when signals may be invisible.

All these difficulties obtain to a much larger degree in the squadron and regiment, since the former is four and the latter twelve to twenty-four times the size of the platoon. In the regiment signaling can hardly be used at all either in column or line owing to the distance to remote units and it becomes necessary to employ the whistle to engage a sharper attention of unit leaders and prepare them for coming signals, which even then are often unseen. Imagine the difficulties on unfamiliar terrain and in the dust and confusion of battle.

In order that the squadron commanders as well as the colonel himself may be free and untrammelled, signals by the latter should be forbidden and his wishes communicated through intelligent messengers on picked horses. In the regiment simultaneity of execution can seldom be attained and it would be wise to acknowledge this condition and make it the controlling principle in the training. To this end all attempt to treat the regiment as if it were a platoon or squadron should be abandoned and squadron leaders be taught to execute the commands of the colonel the instant his messages are delivered. In this way alone can mistakes and confusion be avoided, speedy, orderly, accurate evolutions assured, and both in ployments and deployments, distant units be spared the fast disordered racing so disabling to men and horses. In this connection it should be remarked that the number of men and horses injured in the drills near Winchester has been uncommon.

"The word of command," says von Bernhardi, "should be limited to those units it can actually control—namely the squadron." With us this limit would be reached in the troop of 125 to 150 men. The Germans declare there is no guarantee that commands will be transmitted by signals. They seem to be right.

The same authority, von Bernhardi, says also that, "the use of bugle calls must be restricted to the utmost and permitted only in circumstances where impossibility of misunderstanding can arise." Squadron as well as regimental commanders, there-

fore, must be provided with a suitable staff for transmission of commands.

In the new drill signaling is the tool of leading and like it is much overdone.

SHOCK ACTION.

Shock action with its tool double rank is the third basic principle underlying the new system, which prescribes that "the normal formation is in line in double rank" and "the charge in line is the normal attack of cavalry." But single rank may be used "to mask a movement in rear;" "to attack a weak or disorderd enemy;" "to attack infantry or artillery under special circumstances;" "to diminish vulnerability under fire;" but "should never be used against compact cavalry."

It will be noticed that numerous important uses are prescribed for single rank and only one for double rank. Of the uses mentioned for the former, the last would seem of supreme importance in active operations, since cavalry is peculiarly susceptible to injury from fire. Why then should double instead of single rank be the normal formation?

The reason is that the new book makes shock action in double rank the leading, distinctive, characteristic of cavalry, compared with which all other rôles it may have to play are of minor importance. This idea would seem identical with that in vogue before the Civil War, but which in the strong light of its shifting tests was seen to be erroneous. So firm was the hold of the double rank on the men of that day, that our fathers, unable to shake it off, used it with few exceptions throughout that great struggle and refused to abandon it for several years later.

With shock action, however, the case was different and it was soon discovered, that while a well delivered charge had mysterious terrors and might be followed by consequences of tremendous import, it nevertheless found such rare opportunity as to lose for most part not indeed the high respect but the relative value theretofore conceded it. It was seen that cavalry trained and content to wait for such opportunities was reduced

to an almost negligible quantity and for over two years there was both rhyme and reason in the song:

"If you want a good time, jine the cavalry."

Not only have the lesson of the great war been accepted in the United States, but for many years they have been winning the approval of all but extremists in Europe.

Von Bernhardi declares: "I believe that only in exceptional cases will a purely cavalry combat take place. It will by no means always be a matter of choice whether we fight mounted or dismounted. Our opponent will compel us to use dismounted action by himself dismounting and seizing the rifle." "Cavalry will generally act dismounted, but small bodies may effect surprise by shock action." Thus predicts Lord Roberts, who speaking of our cavalry in the Civil War also declares that "its achievements were far more brilliant than those of the Germans of 1870."

While all believe the charge must be practiced daily and taught diligently so it may be effective if occasion offers, many feel that its relative value does not entitle it to the supreme but to a subordinate place and that the new system is illogical in making shock action the controlling factor in determining nor only the training but also the very organization of the cavalry of today. The double rank having been rejected after the test of the Civil War, it is hoped that single rank may still remain the normal formation and that successive ranks with repeated blows may continue to be used for shock action.

If we set ourselves to thinking about a charge in double rank and try to picture the effects of accidents of ground; green mounts; green volunteers; running on heels of front rank horses; casualties from fire; smashing of front rank at contact; resulting smashing of rear rank; chaos in both; are we not disposed to shrink away and turn with hope to the order and cohesion of single ranks coming on in swift succession but far enough apart to escape at least all avoidable disasters.

Some weeks ago in a mere platoon drill at an extended gallop, a horse in the front rank went down and as the result seven horses and riders were knocked out of ranks. This was

at ordinary drill of the smallest unit in time of peace on smooth, familiar *terra: n.*

As stated near the beginning of this paper, there are several things in the mechanism of the new drill that seem objectionable. Some of these, such as squads, half squads, files, instead of fours, twos and troopers; restriction of movements by fours and their replacements by movements by platoon; enforced distinctions between the right and the left and between the front and the rear ranks in platoons; the impossibility of wheeling by squads mounted; all these would seem to impair the handy flexible maneuvering of cavalry.

Again paragraph 38 of the new book has the following: "In order to utilize fully the individual audacity, physical force, and skill of the more efficient men as example to the others, it is important that the boldest troopers mounting the best horses be not restrained." In the drills at Winchester, this idea does not seem to have worked well. It is, of course, contrary to the principles we have been taught as to mass. cohesion, speed of slowest horse, etc., and is also opposed to the teaching of von Bernhardt, who says that in the charge, "the utmost speed consistent with closely locked files" must be used.

I cannot help believing that our present organization is best suited to all the uses of cavalry including shock action itself and even if the latter, instead of rare, should find innumerable opportunities in the future, that still no change would be required.

It is very desirable that our troops should have more men—125 in all—but otherwise we can safely rest content.

Napoleon declared: "If I could put as many men in the cavalry as I desired, I would never be deterred from carrying regiments of 1200 men each forming four squadrons of 300 men each."

In achievements by shock action he doubtless had and still keeps the start of the world and will continue to bear the palm alone.

Though double rank may not be best for charging, it still has owing to its compactness great advantages in handling and maneuvering troops and should be retained as an important part of cavalry drill.

It seems, however, that the old regulations of some forty years ago are better than the new, in which formation of single rank from double and vice versa is crude and rather disordered.

In the old drill the commands were: 1. *Center forward*, 2. *Fours left and right*, 3. *MARCH*, and the resulting double column of fours was not only handy in itself but could be readily formed in double rank without regard to right or left, front or rear rank, or counting fours and deployment again was equally easy.

PARTICIPATION IN INTERNATIONAL MILITARY HORSE SHOWS.

By CAPTAIN GUY V. HENRY, THIRTEENTH CAVALRY.

ON page 337 of the September issue of the CAVALRY JOURNAL there is a short article giving an unofficial British opinion of officers participating in these events, who are not up to a proper standard in this class of horsemanship.

The following may be of interest by showing the French official opinion on the same subject.

BULLETIN.

Official Bulletin No. 4, 1913, of the Minister of War. Circular concerning the Participation of Officers in International Horse Shows:*

"International Horse Shows are becoming more important each year, and the equestrian contests which take place in these are exercising a real effect on the reputations of the cavalries represented.

It is apparent that our participation in these international contests should be very carefully organized so as to assure to us the best chances of success.

Therefore, the following observations and requirements will be communicated to all bodies of the mounted service: Organization in view of an international horse show comprises:

Training of officers liable to be designated to take part.

Designation of officers and horses.

Methodical preparation of the latter.

This year, as usual, French officers have emphasised in the international contests, their brilliant qualities of dash and energy and have had great success.

However certain of them have not been absolutely correct in their position or above criticism from the point of view of

*Translated by First Lieutenant Adna R. Chaffee, Jr., Thirteenth Cavalry.

the management of the horse. That is why it is necessary to request all officers to hold closely to the conservative, classic equitation taught at Saint-Cyr and Saumur, the guiding principles of which carefully maintained and applied, allow the riders to give their horses sufficient training, without which no management is possible, and in consequence, to meet and overcome all difficulties.

These principles are precisely those which are contained in the Regulations and more fully set forth in the Manual of Equitation and Horse Training.

In so far as the designation of the officers who desire to take part in the international contests and the designation of their horses is concerned, the rules in force still govern. (Instruction dated February 20, 1912.)

Higher commanders, when indorsing such requests, will note thereon as explicitly as possible their opinion of the ultimate chance of success of the officers and their horses.

It will be understood first of all, that no officer will be permitted to take part in an international horse show without having had success in horse shows at home. Likewise the horses designated must have had creditable performances.

Officers who are not known to be adroit, vigorous and absolutely correct riders and skillful trainers, will be thrown out.

In spite of their previous successes, those horses will be cast aside in the same manner which, through fatigue or blemish may have become less capable jumpers than in the past.

Finally, the horses destined to be shown in the contests of an international horse show must undergo a methodical preparation in view of these tests. Each horse show, in fact, presents its own peculiarities.

Officers who intend to take part in anyone of these horse shows should communicate directly with one of their comrades who has formerly competed there so as to inform themselves as to the rules of the show, the configuration of the track, the influence of speed, the nature of the obstacles, the qualities, etc., which a horse should possess in order to succeed there.

In so far as special obstacles are concerned, it is undeniable that a horse who has become familiar with them will clear them

better than a horse who does not know them and who is surprised by their novelty.

Therefore, funds will be allotted for the construction of such obstacles, to those regiments which have officers and horses capable of being designated to compete in the international horse shows. On the 15th of January of each year, regimental commanders in, complying with these conditions, will request funds from the War Department under authority of this circular. The following information will be given:

Names of officers judged to be suitable.

Success which they have previously had.

Names of horses which they would be able to ride.

Performances of these horses in detail.

Drawings of obstacles which it will be necessary to construct for the preparation of the horses.

Finally, all officers should be fully impressed with the fact that those among them who are designated to compete in international contests are, by the same fact, charged to defend the honor of our methods of equitation, that their successes or their defeats have an indisputable influence on the reputation of our cavalry, and that they should put forth every effort to maintain and heighthen the prestige which the latter enjoys in foreign countries.

BREEDING AND RAISING HORSES FOR THE UNITED STATES ARMY.

BY M. F. DE BARNEVILLE, FRONT ROYAL REMOUNT DEPOT, VA.

ALMOST every first class nation has been confronted in the past ten years with the arduous and intricate problem of finding an adequate supply of horses to remount its cavalry not only in time of war, but even in time of peace. Mechanical traction has almost everywhere reduced the demand for horses, thereby reducing also the production, as the farmers can no longer see their way clear to raise an unmarketable product and have turned to cattle raising as a more profitable industry. In every country maintaining an army, the government is the largest buyer of horses, and as army horses are about the only one still in demand, the various governments have found it necessary to take steps, in order to meet the economic change of conditions, to encourage the farmers and breeders in producing a sufficient number of horses of the type desired.

The United States Army, with its fifteen regiments of cavalry needs but an average of 2000 new horses every year to replace those that have died or become unserviceable; yet, with the millions of horses in this country it has been found almost impossible to provide annually 2000 animals of a suitable type for cavalry use; of draft stock there is a plentiful supply, but what is needed is the saddle-bred and half-bred type, now fast disappearing.

To remedy this scarcity of horseflesh, the United States Government has gone into the horse-breeding business in co-operation with the farmers, furnishing them free of charge the services of well-bred stallions for their mares, providing that the colts will be sold when three years old to the army. In addition to this, the War Department has established Remount Depots where the young colts purchased throughout the coun-

try are gathered and partly trained until they become old enough to be issued to the army. This enables the War Department to buy colts much cheaper than mature horses would cost, and the overhead expenses incident to their upkeep at the depots until they become of age is considerably less than the difference in price between colts and mature horses. Besides, these young animals are under close and constant observation and receive better care and veterinary treatment than they would get had they remained on the farms of their former owners.

To become acquainted with the conditions surrounding the life of a young colt after being purchased by the War Department, let us make an inspection of the Front Royal Remount Depot, one of the three maintained by the army as a receiving and training station for its future cavalry horses.

Situated in Warren County, Virginia, a few miles from the picturesque Shenandoah Valley, the Front Royal Remount reservation extends over five thousand acres of rolling land in the Blue Ridge mountains, eight hundred acres of which are in timber and the balance in rich pastures of the blue grass variety. Through the center of the reservation a good macadamized road winds its way across Chester Gap, connecting the town of Front Royal with Rappahanock County; for several miles on either side of this road the land belongs to the government and is enclosed by a six foot wire fence extending over thirty-two miles around the reservation. From the sides of the mountains numerous springs come bubbling down into Harmony Hollow where they swell the narrow stream of water known as Happy Creek, a tributary of the Shenandoah River.

Selected in 1910 by the War Department upon the recommendation of Major General J. B. Aleshire, Chief of the Quartermaster Corps, this land was purchased during the fall and winter of 1911 from about thirty-five owners at a cost of \$200,000.00 appropriated for this purpose by Congress. The nature of the soil which is mostly limestone helps the growth of young horses, being greatly beneficial to the development of bone; in addition to this, continuous climbing of the rocky slopes over which the animals roam at liberty helps to strengthen feet and muscles and hardens the body.

The colts at Front Royal are purchased in what is known as the Front Royal Remount Zone, which includes all the Eastern states from Maine to Florida, and as far west as the Mississippi. Until now, Virginia and Kentucky alone have supplied this depot, but in course of time the other states, especially Tennessee, West Virginia, Pennsylvania, New York and the New England states will be canvassed for good horse-flesh. Officers of the Quartermaster Corps detailed at the Depot make frequent buying trips through the zone, wherever suitable animals have been reported. Two trips to Kentucky, one in the spring and one in the fall of each year bring in each three or four carloads of young stock, mostly half-bred and saddle-bred. Virginia is thoroughly canvassed all year around for good material and its half-bred hunter type meets every requisite of the ideal cavalry horse.

At the present time there are over six hundred animals on pasture at the Front Royal Depot; all of these have been purchased in the open market, directly from the breeder or owner instead of by contract as in the past; in this way a market is open to the small breeders who can only put up a few colts for sale annually. By doing away with the purchase by contract system and eliminating the middleman, the government can buy better horses at a greatly reduced price, saving at least \$25.00 on each animal.

Upon arrival at the Depot, the colts are weighed, measured for height and, when necessary, are inoculated with an immunizing serum against shipping fever. They are also branded on the hoof with a serial number, and as this identification mark might become obliterated in time a corresponding number is tattooed on the inside of the upper lip with a special set of needles dipped in indelible ink; this method which originated in the English army is almost painless and has been found extremely practical in identifying horses whose hoof numbers had worn out.

Any colts showing symptoms of sickness are taken to the veterinary hospital, a most up-to-date structure built of hollow tile and cement floors standing in the center of the reservation; it has a complete equipment, including a revolving operating table, and an experienced personnel of attendants to take care

of the sick animals; two wards in separate buildings can accommodate about thirty patients, besides several box-stalls in the main hospital where the most serious cases are treated. Next to the hospital is a dip where horses suffering from skin diseases and parasites are immersed in water containing a disinfecting solution.

All colts coming to the depot are turned on pasture where they graze during the summer and fall; in winter and spring they are fed grain, bran, corn and hay, in sheds constructed at various points on the reservation. Being out in the open all year around, the young horses become hardened to changes of temperature and atmospheric conditions; all those showing signs of emaciation are given extra rations. Horse herders ride over the pastures every day, inspecting the stock, taking the sick and injured to the hospital; twice a week they make a count of the horses, reporting same to the office.

From time to time, green colts are brought down to the town stable where they are given an elementary training, being broken to the saddle and made bridle-wise; when one lot has gone through this schooling it is taken back to the pasture and another lot brought down.

Clerks in the Quartermaster's office, in Front Royal, keep statistical records of the breeding and physical condition of all young horses; and at various intervals the colts are weighed and their height and girth measurements are taken; it is thus possible to determine the relative growth of the thoroughbreds, half-breds, standard-breds and saddle-breds and the amount of feed necessary to keep them in condition.

The cost of keeping colts at the Front Royal Remount Depot has been reduced to a minimum in view of the fact that a large part of the forage and grain consumed is raised on the reservation; this year the corn crop covers thirty-five acres and there is also plenty of oats, timothy, hay and alfalfa wherever suitable soil has been found for the raising of these crops. Kentucky blue grass is sown yearly in places where the native crop has become exhausted.

In such favorable surroundings the young colt spends the first and sometimes the second year of his army life; he will then be issued to some cavalry regiment or sold to an officer.

Although Remount Depots are of recent origin in this country, the first one at Fort Reno, Okla., being established only in 1908, and the one at Fort Keogh, Mont., one year later, good results have already been obtained and the effects of the new system have been recognized and appreciated by every true horseman in the army. But there are still greater possibilities in the new remount problem, for it is not only important to provide a sufficient number of horses for the army, it is also necessary to standardize the type so as to get a uniform product; and to do this the farmers must be educated to breed their mares to government stallions, these stallions having been especially selected for their suitability as sires of cavalry horses; and this education of the farmer has recently been undertaken by the Department of Agriculture cooperating in this way with the army in the solution of a problem in which every true American should be interested.

ENDURANCE TEST.*

BY FIRST LIEUTENANT RALPH M. PARKER, U. S. CAVALRY.

THE endurance ride which took place September 16 and 17, 1913, under the auspices of the Morgan Horse Club, proved a marked success from the standpoint of the Army, inasmuch as it showed what horses of certain breeds could be called upon to do in emergencies, and without injury. It was a disappointment to every one who was interested, however, that so many entries were withdrawn at the last moment, for what reasons I am unable to give. It is probable that owners of good horses were afraid to risk injuring the animals, or else could not find experienced riders for them. However, of the sixteen entries supposed to start there were but nine who arrived at Northfield, Vermont, for the test.

The ride was to commence at Northfield at the stables at Norwich University, and pass through Waterbury, Stowe, Morrisville, St. Johnsbury, Thetford to White River Junction.

The conditions were:

ENTRIES.

This endurance ride will be free for all, and open to all horses of any breed. No entrance fee will be charged. All entries should be sent to C. C. Stillman, Secretary, The Morgan Horse Club, 165 Broadway, New York City, on or before September 1st, 1913.

ROUTE.

Northfield to Waterbury, Waterbury to Stowe, Stowe to Morrisville, Morrisville to Hardwick, Hardwick to St. Johnsbury, St. Johnsbury to White River Junction.

*Held under the auspices of the Morgan Horse Club.

ENDURANCE TEST,

417

POINTS.

Condition on arrival at finish: Excellent	50
Condition on arrival at finish: Good	25
An average of six miles per hour	50
An average of five miles per hour	35
An average of four miles per hour	25
For each five pounds carried over 160	2

CONDITIONS.

Total distance traveled must not be faster than six miles per hour, including all halts, nor slower than four miles per hour, including all halts.

The ride to terminate in front of the judge's stand State Fair Grounds any time between 11 A. M. and 4 P. M., September 17th, 1913.

Each contestant to leave Northfield at any hour he may elect, provided he arrives at the destination within the time limit set, viz: Earliest hour for leaving Northfield is 8:30 P. M., Monday, September 15th, 1913, and is determined by dividing the total distance by four and subtracting this result from 11 A. M. of the date set for the termination of the ride. The latest hour of leaving is 2:20 P. M., Tuesday, September 16th, which will be determined in the same way, only using six for a divisor and subtracting result from 4 P. M. of the date set for the termination of the ride.

Each horse to carry not less than 160 pounds. Any kind of equipment.

Arrangement will be made for feeding and stabling horses at Waterbury, Stowe, Morrisville, Hardwick, Summit, St. Johnsbury, Wells River, Bradford, Thetford, and the State Fair Grounds.

As soon as each horse arrives at the Fair Grounds, the judges will inspect it, noting its condition and crediting it with the necessary points. The following day at 10 A. M. these horses will be again inspected, and if this last inspection warrants it, the points given for *Condition* the previous day will be changed. All necessary information about stabling arrangements etc., will be furnished later to the actual contestants.

PRIZES.

1st prize.....	\$100.00
2d prize.....	50.00
3d prize.....	25.00

In addition to these premiums, there will be given to each one of the first ten contestants who finishes the Endurance Ride a small cup suitably engraved.

The ride was for the purpose of demonstrating the superiority of the Morgan horse over all other breeds, (particularly the larger ones) for hard work under a rider and on short forage.

The starters were: Halcyon, owned by Spencer Borden of Fall River, Mass., a chestnut mare, 7 years old, a three-quarters Arab, 15¼ hands high, weight 840 lbs. She was ridden by Captain H. H. Reid, Norwich University. She had been in training for the ride only about three weeks when she was run into by an automobile and had her leg badly cut in three places from the hock to the pastern joint, which caused the tendons at the back of the leg to swell and to remain swollen until the time for the ride to commence. She had been treated for this trouble up to the minute of the ride, and it was feared that her condition would prove fatal to her success in such a test. Owing to her excellent breeding and good nerve, the little mare made the test excellently.

Ethan, a Morgan gelding, the property of Norwich University, 15½ hands high, 7 years old, weight 933 lbs., rather gaunt looking, heavy through the shoulders, and light behind, was ridden by Captain R. C. Kimball, Norwich University; had been ridden all summer and was in excellent condition for the test.

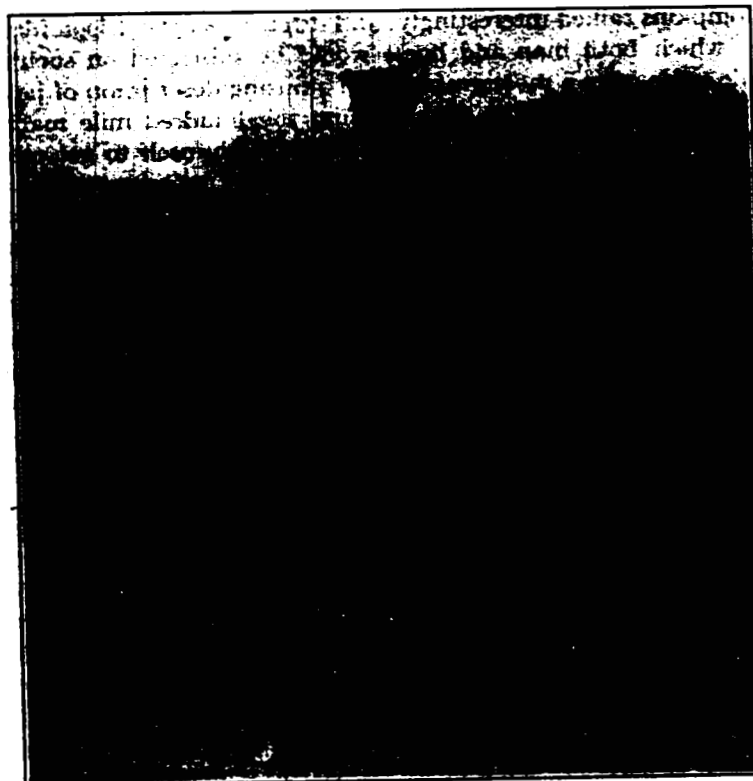
Yaquis, owned by Spencer Borden of Fall River, Mass., is a pure bred Arabian white stallion, 13 years old, weight 925 lbs., ridden by Lt. Ralph M. Parker, U. S. Army.

Rodan, owned by Spencer Borden of Fall River Mass., pure bred Arab stallion, chestnut, 15¼ hands high, six years old, weight 885 lbs., ridden by Malcolm Grinnell, Mr. Borden's trainer.

Nannie, owned by Norwich University, a Morgan mare 15 hands high, age nine years, weight 1,025 lbs., ridden by Cadet Rossmeisal, Norwich University.

Nixie, owned by Norwich University, a Morgan bred gelding, about 15¼ hands high, weight 890 lbs., age eight years, ridden by Cadet Lieutenant O'Donnell.

Babe, property of Mr. Edward S. Ballard, a former cadet of Norwich University, is a Morgan bred pacing mare, about 15 hands high, weight about 950 lbs., ridden by Mr. Ballard.



HALCYON.

Winner of first prize in Endurance Test—154 miles over hilly country, carrying 180 lbs.; time 30 hours and 42 minutes. Captain Reid, Norwich University up. Three quarters Arabian. Owned by Spencer Borden.

Lyndon, owned by Mr. E. A. Darling of Lyndonville, Vt., six years old, about 14¾ hands high, weight 850 lbs., ridden by Mr. Weatherbee.

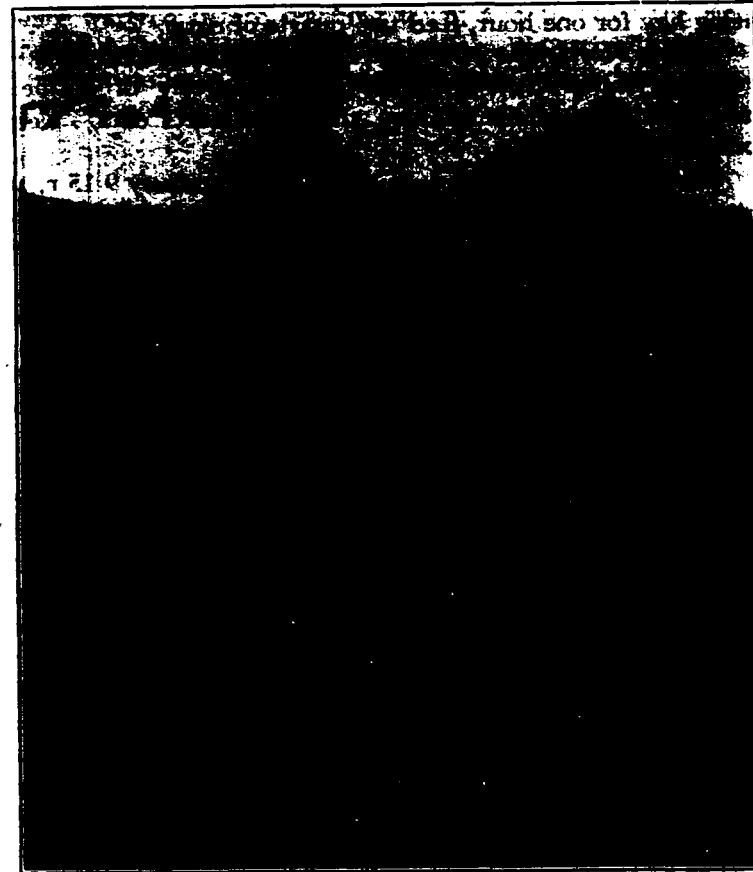
Indian Girl, owned by Dr. Brown of St. Johnsbury, white Texas mare, weight about 850 lbs, ridden by Dr. Brown.

On the afternoon previous to the commencement of the ride all of the contestants were assembled, and an informal talk was given by Captain Tompkins, U. S. Army, on the subject of "Long Distance Rides" at which everyone was invited to ask all the questions possible, as to conditions, rules, etc. Captain Tompkins talked interestingly, and dwelt upon the discomforts to which both man and horse would be subjected on such a ride. He gave a most graphic and amusing description of how men feel in the saddle after passing the hundred mile mark. He cautioned every one against permitting himself to get cold during the night, and allowing his muscles to get cramped while resting. Having been on several rides of this kind, Captain Tompkins was well equipped with knowledge which I knew would prove most valuable to any contestant who would listen to him. With the exception of Mr. Weatherbee and myself, long distance riding was something new to all the contestants, and I knew that they would take considerable native and grit on the part of the going men who were going into this test to "sit a seat" and ride properly in their saddles in order to give their horses every possible advantage due them for the undertaking. The question of gait was gone into, and all were told how much a horse could stand at certain gaits, and on the level road, incline, etc., just when and how to dismount and mount, when to stop for watering, feeding, resting, etc.

These matters were of the utmost importance, and I knew if adhered to would affect the result of the ride most favorably, and so it proved for those who did so. All the contestants, with the exception of Mr. Ballard rode Park saddles, Mr. Ballard using a western saddle. The rules to abide by were gone over carefully, and all were given to understand that between regular halts no contestant should receive any assistance whatever in conducting himself and horse over the route. Dismounting and leading was permitted as in the manner of a forced march of a military command, the leading always to be done by the contestant, who would proceed, only, by walking himself, or riding his own mount. When these points and some others had been gone over, all agreed to abide by the following schedule, as nearly as practicable:

HOW THE ENDURANCE RIDE SHOULD BE CONDUCTED.

Leave Norwich University stable at 6 A. M., September 16th, arrive at Waterbury 9:30 A. M.,—distance twenty-four miles. Unsaddle, allow horses to drink freely of oatmeal water, feed hay, keep back covered.



ETHAN.

Second in Endurance Test; time 30 hours and 44 minutes, carrying 175 lbs. Captain Kimball, Norwich University up. Pure bred Morgan.

Leave Waterbury 10 A. M., arrive Stowe 11:30 A. M.—distance ten miles. Allow horses to drink freely of oatmeal water.

Leave Stowe 11:35 A. M., arrive Morrisville 1 P. M.—ten miles. Have horses legs and feet well washed and bandaged; thoroughly dried and rubbed with a mild liniment; at the same time see that the back is thoroughly dry by rubbing. While this is going on the horse should be encouraged to eat hay—first having been given a few swallows of oatmeal water. After eating hay for one hour, feed two quarts of oats.

Leave Morrisville 2:30 P. M. arrive at Hardwick 5 P. M.—seventeen miles. Allow horses to drink freely of oatmeal water; feed hay fifteen minutes, then two quarts oats. Keep horses well covered.

Leave Hardwick 5:45 P. M. arrive St. Johnsbury 9:15 P. M.—twenty-two miles. Repeat at St. Johnsbury what was done at Morrisville, except feed no oats, but let horses eat all the hay possible.

Leave St. Johnsbury 7:30 A. M. arrive Thetford 6:30 A. M., September 17th—city day.

Repeat at Thetford what was done at Morrisville. Leave Thetford 8:30 A. M., arrive Fair Grounds 11:00 A. M., via White River Junction—seventeen miles.

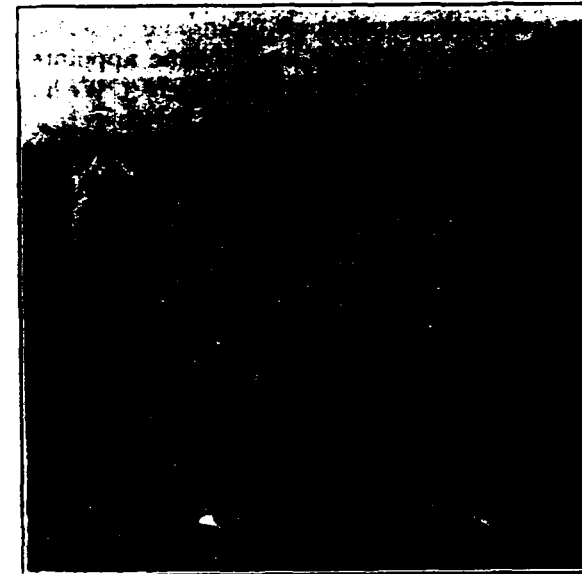
Total Distance 154 miles.*

The following morning upon going to the stable for our mounts it was found that the riders of Indian Girl and Lyndon had left at 2:47 A. M. At 5:55 A. M. Private Rosmeisl on Nannie and Mr. Ballard on Babe started. At 6:08 A. M. Captain R. C. Kimball on Nannie accompanied by Lieutenant John C. O'Donnell on Babe started. I had intended to start with Captain Reid and Mr. Ginnell, keeping the three Arabs of Mr. Borden's together throughout the whole trip. It was my purpose to start last so that by gaining on the leading contestant I might follow him closely all the way, and ride on to the Fair Grounds at the same time, thereby beating him with the three Arabians by the number of minutes difference between his time of starting and mine. But owing to certain business that I was called upon to transact at the last minute I was forced to wait. I had the riders of the other two Arabs start ahead at 6:13, promising to overtake them in the first twenty-three miles. I had started at 6:19 A. M., when I was stopped again

*Distance was measured just before the race.

in order to attend to some further matter that required my attention. This caused me to lose ten minutes time.

Our plan was, it will be noticed by the schedule above, to stop at Waterbury one and one-half hours, arriving there at 7:30. I arranged my gait so as to catch up with my team one mile out of Waterbury, in order to make sure of the horses being watered before reaching town, and to have the riders dismount and lead in for the last mile. We arrived at Waterbury ten minutes ahead of our schedule, which gave me the



YAQUIS.

First in Endurance Test—placed third on account of weight carried—154 miles over hilly country, carrying 160 lbs. time 30 hours and 37 minutes. Pure bred Arabian. Pardon the position of rider who was fixing his right stirrup strap when snapped. Lieut. R. M. Parker up.

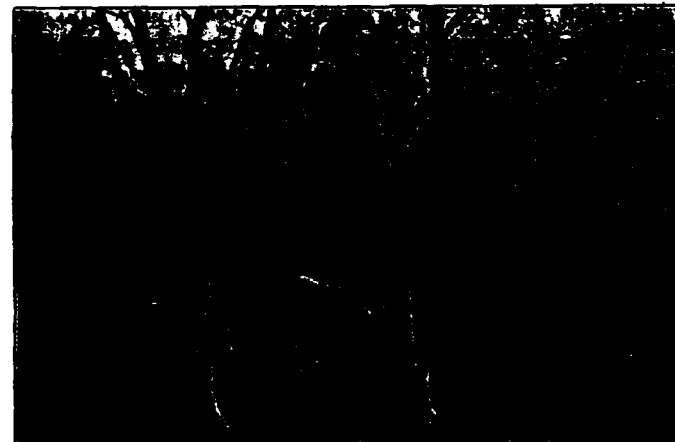
opportunity of either gaining that much on those ahead of me, or taking it out in additional rest for the horses. I decided on the latter. I found that the first two had left at 8:30 A. M., which gave me a start on them of more than one and one-half hours. The other contestants took less rest than my team did, pushing ahead to catch the two who had started first. We stuck to

our schedule and started from Waterbury at 10:00 A. M., and when about six miles out, overtook Mr. Ballard on his pacing mare. He joined my party and the four of us rode in couples a few hundred yards apart on account of the dust, for the next four miles, into Stowe. Here the horses were given oatmeal water to drink, which they seemed to like very much. No longer stop was made than just sufficient to water them. Quite a crowd of people had assembled to see the horses pass through, everyone, of course, thinking that the Arabians had been left behind due to their position in the race. The comments from the farmers were most amusing.

We arrived at Morrisville at the time appointed in the schedule and found all of the contestants there. We had caught up with ~~over~~ the first of them, and our horses were as fresh as could be. At this stop the horses were stabled, and were sponged, dried and blanketed, and their legs were rubbed with a mild liniment. They were fed hay as soon as they arrived, and half an hour later were given two quarts of oats. They had been watered just before entering the town, and had been led in for about three-fourths of a mile which gave them time to become normal. The roads over which we had passed up to this point were alternately soft dust and hard gravel, few places being favorable for marching. There were several short hills, but nothing to tax the horses much if taken at a walk. The attention given our horses at the stables of Lunt & Bedell was most excellent. When we had been there about a half hour, Lyndon and his partner, Indian Girl, moved out, and were quickly followed by all other contestants except the Arabians. I stayed there until our horses had had a full hour and a half of rest, and then started out, in accordance with our schedule. The others were evidently trying to beat the schedule, which I knew would prove of little use.

A few miles out of Morrisville I overtook Cadet Rossmesal and Mr. Ballard, and they stuck to my party all the way into Hardwick, a distance of seventeen miles. As before, we watered before reaching the town, and led up to the stable. I found a large crowd swarming about the stable, and the air was so close and foul in the stable that I had our horses taken into the street. There was no one to handle the crowd, and they pushed into

the stable to such an extent as to cut out all the fresh air. I then found a large carriage room and placed the horses in that, but even there the crowd came in around us, and annoyed the horses and ourselves considerably, interfering to some extent with the horses' rest and feeding. We arrived here at 5 P. M., and found all the contestants resting. We first fed hay, and later two quarts of oats. The horses were bright and feeling quite normal upon leaving Hardwick. As little time had been given the horses for the digestion of their grain, my team walked and led the horses for fifteen or twenty minutes. Upon Captain Reid's mounting, the little mare stepped on an uneven



RODAN.

Fourth in Endurance Test; time 30 hours and 42 minutes. Pure bred Arabian stallion. Mr. Grinnell up. Owned by Spencer Borden.

stone and twisted her injured leg badly. This gave me quite a scare so we dismounted and examined it. After leading her around for a minute or two we succeeded in walking her out of the lameness. The little warmth that we had begun to feel at about 2 o'clock in the afternoon had disappeared by this time, and we were in for cooler riding from this time on.

The others all left rather hurriedly upon my arrival at Hardwick, but long before we had reached the half-way point to the next stop, St. Johnsbury, twenty-four miles distant,

we had overtaken the two who had given us so much company on the last stretch. This was the most difficult part of the trip. We found many long, steep hills to pass over, most of which made it necessary for us to dismount and lead, both up and down.

On reaching Danville inquiry was made as to how long before us, the various other contestants had passed through. We were informed that Lyndon and Indian Girl were in the livery stable there, at that time. This made us feel a whole lot better, for those who had started out first we were up with now, and we had consequently gained about three and a half hours on them.

We then pushed on towards St. Johnsbury and arrived there at about 9:45 p. m., one half-hour later than we had planned, but owing to the tremendous exertion in covering the hills, it was necessary to lose some time here, and save our horses for the race which I knew would take place during the last seventy-three miles of the trip. We brought our horses into St. Johnsbury in fine condition. At this place the same treatment was given the horses as was given at Morrisville, except as to the feeding of the grain. They were placed in comfortable stalls, sponged and rubbed, and were allowed plenty of hay and kept quiet for one hour and twenty-five minutes. I made the mistake of not feeding oats at this point, as I had done at Morrisville. The horses remained here long enough to have had their grain without danger of colic. The riders got a lunch and at 10:10 p. m. were ready to proceed. All the entries, except the two who stopped at Danville, were there when we arrived, and left anywhere from fifteen minutes to half an hour ahead of us. The other two whom we had left at Danville came through at about 10:00 p. m. They had their equipment weighed, as we were all required to do at this point, and then proceeded without further rest. We were the last to leave, as before, but I had the intention of catching the head of the procession, and staying with it before I had gone fifty miles. We had seventy-three miles to catch them in, and I knew that push as they might, those in the lead could not keep us from gaining on them. We gradually crept up on each couple that was ahead of us, reaching the first in a

very short time. It was not long, probably an hour, before we caught sight of Captain Kimball and Lieutenant O'Donnell who, up to this time, had tried to lengthen their lead on us. The first two we overtook stayed with us; the next two when they saw us so near, struck up a fast gait and pushed out of sight again. So bent was I on staying with this pair, whom I at this time considered our most dangerous opponents, that I proceeded by dismounting and leading at a trot up and down the slopes, mounting and continuing to trot when we reached the level stretches. As the road was hilly in many places for thirty or forty miles this task became a bit arduous, but I knew that by keeping at it we were bound to overtake those in front of us. In order to keep up the pace it was necessary for us to keep trotting; but to remain mounted, going up and down these hills, would have made the horses both tired behind and sore in front, which condition would have put us out of the race. We covered many, many miles in this strenuous manner. None of our horses were showing the slightest sign of leg weariness, and were all looking along the road with their ears forward as though they were as interested in the undertaking as the riders.

At a point about fifteen miles from St. Johnsbury we overtook Lyndon and his partner, and passed them by easily. From this time on I saw nothing more of this couple. About two miles further on the mare, Halcyon, cast a shoe, so we all dismounted and walked to the next town, a distance of about two miles, where we left her and her rider to attend to the shoeing.

We had engaged Mr. Scott Welch, of Northfield, with his automobile, to go along as messenger, and to act as a sort of referee. This gentleman preceded us to the town of Wells River and at 3:00 a. m., had a blacksmith waiting for us on our arrival. Captain Reid succeeded in having the shoeing done by the light of the automobile lamps, and had been instructed by me to follow us at the best pace he could make. The mare was apparently as fresh as could be, still moving along with a light and springy stride, swinging her head about from side to side as if she had been out only for a short time. I knew from her condition and from the record of her mother

that if her right hind leg did not weaken, she could catch us before we arrived at the end of the journey. We could not go any faster than we were going already on account of the hills that had to be climbed and descended without danger of doing harm to the animals. I was willing to take a risk on Halcyon, for at this time it was only a question of her right hind leg. Her general condition warranted attempting much faster speed.

We left Wells River at 3:00 A. M., having covered 102 miles in twenty hours and forty-five minutes. An hour later of this fast work up and down hills and on the level, we overtook Captain Kimball and Lieutenant O'Donnell, who made no further effort to keep ahead of us. They joined us then, and the six of us kept up good marching time straight on, and at 6:15 A. M., just twenty-four hours after leaving, we arrived at Fairlee, having covered 125 miles in one day, and with the horses and men feeling a bit hungry, but otherwise all right. Up to this time all the contestants had been talking and joking about the various muscles that had been brought to their notice by the long, continued exercise, but when breakfast time drew near, and no breakfast with it, conversation lagged, and every one felt as though he would be glad to reach the next stop that we had arranged for. The last twelve miles were covered in two hours and twelve minutes, and we got to Thetford at 8:27 A. M., six of us, Captain Reid on Halcyon, having stopped at Fairlee for breakfast for himself and mount. He cut his rest short and joined us at Thetford in time to move out and finish the march with the rest of us. The little mare he was riding carrying the heaviest load of them all, had made up forty-five minutes which had been lost in shoeing, and when she joined us I knew that she should have first place. It might seem like an exaggeration to many, but when she came up to Thetford she was walking with a clean, long stride like that of a deer, and was looking around, noticing everything just as she always does upon leaving the stable for the first time.

While waiting at Thetford we were all watching each other to see that no one started out ahead. From this time on I knew that it would be a race of twenty-nine miles, which, on top of 137 miles of fast marching would amount to cruelty. So it was agreed that we would all go in together, and have our

places awarded by the judge upon condition and weight, the difference in time so far among the seven of us being so little that points gained on time would amount to nothing worthy of consideration. Had we pushed on in and made a race of it, the chances are that all of the horses in the first bunch would have lost so much on condition that the Lyndon horse, who was being nursed along the route, stood a chance of winning sufficient points on condition to give him first place. The horses were very little tired upon starting out from this point, and after traveling slowly for some distance, soon began to show the effects of their breakfast by getting stronger, and stepping out with a better stride, even to pulling on the bits. The riders as well as horses were in good humor now after having had a good breakfast and an hour and a half of rest.

Up to this time we had still heard nothing of Lyndon and Indian Girl.

We pushed on into White River Junction, making the remaining seventeen miles in two hours and forty-four minutes. We were marched past the Morgan Horse Club arena at 12:54 P. M. all the horses with their heads up and feeling fine. It was a special sight to see the Arabians coming in with their ears pointed forward and their tails held high, looking as proud as they do when turned out to pasture on a cold day.

Starting last, I took Yaquis through in thirty hours and thirty-seven minutes, the other two Arabs coming in thirty hours and forty-two minutes, Ethan and Nixie in thirty hours and forty-six minutes, Nannie and Babe, thirty-one hours and two minutes. Lyndon came in about 3:02 P. M. having made the trip in thirty-six and one-quarter hours. We reported to the judge of the race, General A. L. Mills, U. S. A. who passed upon us, and found the condition of the first seven to be practically perfect, and awarded positions for prizes as follows:

1st.—Halcyon; time thirty hours and forty-two minutes; allowed eight points for carrying twenty pounds overweight.

2d.—Ethan; time thirty hours forty-six minutes; allowed six points for fifteen pounds overweight.

3d.—Yaquis; time thirty hours thirty-seven minutes; no points allowed for overweight.

4th.—Rodan; time thirty hours forty-two minutes; no points allowed for overweight.

The condition of these first four horses was excellent, there being practically no difference between them.

The other horses, Nixie, Nannie and Babe came in in good condition and took a very few minutes longer to make the trip. They were awarded places in the order mentioned.

Lyndon was the last to come in, having made the trip in about thirty-six and one-fourth hours. Indian Girl did not come in at all.

Everything appeared to be satisfactory, all the horses that came in having passed satisfactory examinations before General Mills. The question now was, how would they show up in the morning? I do not think there was one of us who expected to see the horses in as good condition then as they were in on their arrival. However, on going to the stable next morning, much to my surprise and relief, the horses were brought out of their stalls appearing if anything better than they did the day before. No exercising had been done to supple them up, nor any particular treatment given them to keep their muscles pliable. The reason for their excellent condition is that all these horses were unusually good, sound animals and able to do more than ordinary horses without showing signs of breakdown.

As a result of the second day's inspection the horses were found to be in condition warranting their keeping of the places awarded them at the first inspection. I was with these horses, more or less, all through the trip and I know what their conditions were all the time, and had I been judging the result I would have placed them just as they were placed by General Mills. Yaquis would have made first place easily had I put sufficient weight upon him, for he could have carried a far heavier load than he did. I judged, however, that the horses carrying the extra weight would lose so much on account of their condition at the end of the march that the others would have an advantage over them with their lighter loads. In this I misjudged the horses, for they all came through as though they had not been carrying anything like their full capacity would permit. I realized this when I had gone about 115 miles. When I caught up with Captain Kimball I expected to see Ethan showing more signs of distress than he did, in fact he showed none at all, and

was going perfectly strong and free throughout the ride; nor did Halcyon, Yaquis or Rodan show the slightest sign of fatigue at any time, and Rodan, whose condition was not quite as perfect as Yaquis, came in for fourth place.

These horses could have been forced through in a shorter time, but it was not to the interest of the Morgan Horse Club to have any horse injured in this test. Considerable protest had been made by certain influential parties against the carrying out of the race in the first place, and it was partly this and partly my own feeling for the animals that made me use my influence to have the horses brought in in perfect condition. Had any of the horses been damaged due to cruel riding it would have meant that no further test of the kind would ever be permitted. The ride showed all the Morgans equal to the work they undertook. It must be remembered, however, that these horses, with the exception of Lyndon, had been ridden all summer and were fairly well hardened for the race. But the Arabians who came in for three of the first four places, and really came in ahead of all the others so far as time and condition counted, had scarcely received any particular preparation for the ride.

This test showed two excellent types of horses of great endurance. They made 125 miles in the first twenty-four hours, and without stopping continued the march finishing twenty-nine miles more in excellent marching time, arriving at their destination in condition that would have warranted their doing fifty or seventy-five miles more, had there been need of such a march, and this without danger of harming them. The Arabians which took part in the ride are all excellent types, having fine withers, easy, steady gaits, and are all able to keep up marching for Heaven knows how long, on the scantiest kind of rations. They had but six pounds of grain and a little hay during the entire ride.

Regarding the preparation that these Arabians had, it might be of interest to know the conditions under which they entered the contest. The mare Halcyon had been systematically exercised for only about three weeks before the test and was we thought, in fairly good condition except that I considered her a trifle thin. She had been doing practically nothing all summer. Yaquis had been ridden scarcely eight miles a day for a

week before the Endurance Test. Ten days previous to the ride I rode him to Windsor, Vermont, a distance of about seventy miles, going to Windsor September 5th and back to Northfield on the 7th. I did this to ascertain if there was any unsoundness before placing him in the test. This being all the training that this horse had, he was very fat and apparently very soft. The exercise that he had had during the summer amounted to only about two or three miles a day at a walk and ridden by a young girl. Rodan's preparation consisted in being ridden from Colonel Borden's place at Fall River, Mass., to Northfield, Vt., a distance of 267 miles, most of which was over hard roads. This march he made in five days, making nearly 70 miles on the last day. He was not selected to go into this race until about September 3d, when it was too late to commence training. He arrived at Northfield on September 7th and had regular light exercise every day until the race came off. From this it will be seen that the Arabian horse can be called upon to perform great feats of endurance at any time and almost regardless of his condition.

The day following the final judging of the Endurance Ride, Yaquis, Ethan and Halcyon entered the Charger Class at the White River Junction Fair, which consisted of the usual performances for such classes, including jumping. Yaquis, ridden by myself, took the blue ribbon; Ethan, ridden by Cadet Peabody, took the white ribbon; and Halcyon, ridden by Captain Reid, took the yellow. Second place was won by Lady Marco, owned by Captain Frank Tompkins, Tenth U. S. Cavalry, and ridden by Major H. L. Putnam, Norwich University.

As soon as this class was judged, all the entries in it started on a fifty-one mile march back to Northfield, Vermont. The ride was easily made by both men and horses in nine and one-half hours. One and one-half hours having been taken for rest and feeding; average marching time, therefore, was six and three-fourth miles per hour. These horses have not shown the slightest signs of discomfort due to the march, and have been on duty ever since.

From what I have seen of Colonel Spencer Borden's Arabian horses, including those at his stud at Interlachen, I

think that their suitability for cavalry use is unquestionable. From the standpoint of economy, these horses will keep in condition in campaign when forage is scarce, on probably half of what it would take to keep the larger animals. This of course means great economy in field transportation. From the standpoint of efficiency, these animals will take a two hundred pound man over the Officer's Obstacle Test Ride with the greatest ease, and I believe will do it at the end of a sixty mile march under the same man. All of Colonel Borden's horses which we are using at Norwich University are good jumpers and are in every way most suitable for cavalry purposes. Their dispositions are perfect. History shows their breed to have been raised in the families of their owners for thousands of years. They would win their way into the heart of the roughest soldier and receive treatment at his hands that the ordinary horse would never get. It is a well known fact that in every troop there are many horses which are pets and whose lives have been much prolonged due to the kind of treatment they have received at the hands of the troopers.

Taking it all in all, therefore, I regard the Arab horses that we are fortunate enough to have in this country, a most admirable source for the improvement of our army horses.

Next year it is hoped that an endurance ride will take place and that it will be a ride of several hundred miles, with many entries from the cavalry. It is quite probable that there are many owners of good horses in the army who would like to enter such a race against the Arabians. It is probable that a team of Norwich University cadets mounted on Arabians and Morgans, will be there prepared to make the claim good that small horses, Arabians in particular, are all that history has shown them to be.

THE PEACE TRAINING OF CAVALRY.*

BY CAPTAIN W. H. MCCORNACK, TENTH CAVALRY.

IN TIME OF PEACE PREPARE FOR WAR.

THE truth of the saying "*In time of peace prepare for war*" has never been doubted. It is the application which often presents the difficulty, because men will not believe there is danger where they cannot see it, and they cannot see it where they will not look. Once convinced that there is danger, man has never failed to fight to the last extremity, to conquer or die in the attempt. In recent years, many municipal governments have become so steeped in corruption from many years of heedlessness that the stench could no longer be endured, and the people have arisen in their might and finally abolished the evil from their midst. So also history gives us many examples of nations arming in mass to repel the invader. The difficulty has not been to induce a people to fight when the foe appears, but to foresee the danger, and recognizing it, take steps to ward it off before it actually threatens.

Our natural pride in our profession is sufficient to keep us awake to the political situation; what other nations are doing and what our needs are, so that we can ask Congress to provide us with the latest refinement of weapons. Our greatest trouble in that line is, that we want so much that we cannot agree as to what is most needed, and what should be first supplied.

Let us not forget that it is equally our duty to train ourselves, with what is given us, to the best of our ability; to be prepared to meet any emergency that may arise to the best advantage with the tools provided. Until we have reached that state of training we have not fulfilled our entire duty.

*Thesis, Staff Class, Army Service Schools, 1912-13.

The more nearly each individual member of our army can forget his personal interests and devote his attention to his own individual task, the better is his duty performed; also, the better we are prepared to perform our own individual tasks, with the tools furnished us, the less liability will there be of disagreement when we are asked "What are the needs of the Country as regards the Army, or any part of it?"

It will not be the purpose of this paper to go into the details of instruction, propose schedules, or allotment of time to the various things it is necessary for us to practice, in the training of our cavalry during time of peace, but rather to discuss in general terms what we should aim to accomplish.

It has been claimed that there has been less change in the armament, equipment and tactical use of cavalry, than in that of any other arm. If that is the case we must look to it that we are not left far behind in the race; for, as General von Schmidt says: "It is only by a vigorous endeavor to bring about real and lively progress in our arm, that we can hope to keep pace with the other arms, into which, from a technical point of view, owing to modern inventions, and also intellectually, so fresh a life has been infused. This progress is as necessary as it is achievable, if we only adopt correct principles and constantly act upon them; not empirically groping about at random, but following a fixed and logical system in all branches of our service."*

Unfortunately, in formulating any system of training, there is bound to be some of the groping in the dark to which von Schmidt refers. This may manifest itself in the form of hobbies which are taken up and worked at for years, until a war comes along and demonstrates their uselessness; but it more often appears as a reluctance to depart from tradition, when the conditions are so changed as to render such a departure imperative. Therefore, it may be asserted, without fear of controversy, that only by studying the use of cavalry in war can we arrive at any idea of what should constitute its training

*"Instruction for Cavalry" by Major General Carl von Schmidt. British official translation, page 1. General von Schmidt was considered, perhaps, the leading Cavalry man of his time. This book was written shortly after the close of the Franco-Prussian war. Its author died in 1875.

in times of peace. In no other way will we be assured of any definite goal for the direction of our energies; for it must be evident that any training, to be of value, must be based on a thorough understanding of the purpose for which the training is undertaken and of the results to be aimed at.

In addition to considering what our own experience has been, it will be necessary to critically investigate what our neighbors are doing, and try to decide, from their conclusions, as to the aims of their training. Then, when we read our own history, we may be able to incorporate many features of value to us without being carried away with the idea that, since European armies are larger and in many respects more highly trained than ours, therefore, everything they do is better than anything we do, and everything that is good for them is equally good for us. In other words we want to put ourselves in the frame of mind to accept anything from other services that will be instructive to us, but not to accept anything until its usefulness for our purposes becomes evident.

The functions of cavalry in war may all be included under two general heads:

First.—Its employment as independent cavalry, or on missions so far separated by time or place from the infantry, as to be entirely independent tactically. As its tactical success or failure effects the general result only in so far as it effects the accomplishment or failure of its mission, such use has come to be quite commonly styled the *strategic* use of cavalry.

Second.—Its employment as divisional or corps cavalry in which use it is purely auxiliary to the infantry, and its mission is to promote the tactical interest of the infantry to which it is attached.

Although probably the tactical methods employed to accomplish certain ends will be the same in both cases, yet it is quite as probable that a given situation will call for entirely different solutions depending upon whether the cavalry is being employed independently or as divisional cavalry.

Since we are indebted to the Germans for many of our most valuable contributions to military literature, we would naturally seek the views of some of their recognized authorities, and in reading these authorities one is struck by the same

general thought that pervades all German military literature, that, among Germans, the idea of war is inseparable from the offensive.

Von Schmidt says, in speaking of the use of independent cavalry divisions in war:

"In the execution of similar missions, the principles just laid down must be especially attended to, which are briefly these:

"(1) Explore the country in front as far as possible by small patrols, which disappear from before the enemy and anon hang on to him again.

"(2) Keep the larger units, regiments and brigades, together on several roads not too far apart, so as to be able to concentrate as rapidly as possible.

"(3) Maintain a reserve by keeping back a brigade.

"(4) Keep up constant connection between the advanced guards and their following columns of route, as well as lateral communications, so that the division may rapidly concentrate in case of need.

"The conduct of a cavalry division on detached employment, and similarly of individual brigades, when entrusted with independent missions, should be in accordance with these principals or the spirit of them.

"It is in the nature of the case that only guiding principles can be laid down; in this sort of employment absolute rules are out of place. So much the more desirable, therefore, is it to have acquired a certain routine method of performing these important duties, such as will insure certainty in the result. The *Service Marches* (marches as if in the actual presence of the enemy) executed by regiments during time of peace, and the field maneuvers of two large bodies of cavalry, against each other, afford the best opportunity for practicing this."*

Although the above was written nearly forty years ago, little fault can be found with it, in fact it comes very near to being the accepted principle today for the use of independent cavalry.

Von Schmidt, also says:

*"Instructions for Cavalry."—British official translation, page 177.

"The cavalry soldier should be able to fight on foot in small or large groups, to avail himself of the advantage offered by the ground, surmount the obstacles it presents, husband its ammunition, employ rapid fire at suitable times only, observing the strictest fire discipline, gain ground by rushes, firing right up to the enemy, maintain his position with tenacity, by making welltimed use of his supports, or gain a position by making bold attacks, well backed up by the support, and then holding it obstinately, and with every precaution taken.

"If the instruction hitherto given for dismounted service have been considered as too meager, possibly the contrary reproach might be cast upon my directions; some might say that too much is required, too many formal rules are given which could only be acted on in the drill ground. Indeed some might go so far as to maintain that all regulations for cavalry combat on foot are superfluous, as we have only to dismount before the enemy to attain what we want. Nothing of the sort; by acting thus we should be led into greivous errors, for it would be opposed to the first principles of military instruction and to the experiences of the last campaign.

"I am convinced that a complete and sufficient instruction can be given to cavalry soldiers in dismounted service without the slightest prejudice to their training as horsemen, which of course is the most important thing, and without the slightest injury to the other branches of duty, gymnastics, leaping, use of their arms, theoretic instruction, etc., which are so requisite, if we only bear in mind the matters which are absolutely necessary for real service.

"These may be summed up as follows:

"1. Thorough instruction in the use of the carbine, position, aiming, etc.

"2. The most rapid formation for dismounted combat, distribution by zugs and groups, ability to mount and form as quickly as possible, so as to use the *arme blanche*.

"3. Skillfulness in taking advantage of the ground in the attack and defense of localities, defiles, villages, borders of woods, etc., and in broken ground.

"4. Judicious leading of the zugs and groups by officers and non-commissioned officers in dispersed order, and maintenance of a good fire discipline."*

There are many instances in the war of 1870, of the use of the German cavalry dismounted, and to go even further back, we find in the regulations of the Hussar regiments 1743, Art. VII:

"The attack on foot must be practiced by Hussars, so that if they are attacked when cantoned in villages in winter, they may be able to provide for their own defense, and also may be able to force a post occupied by an enemy in a churchyard or other good position."

While providing for dismounted action, however, and, while some advanced thinkers like von Schmidt, openly advocated that their training should include such exercises, yet it was not until long after von Schmidt's time that anyone in Germany seriously thought that the dismounted action of cavalry was anything but a very exceptional use of that arm. All remained loyal to their traditions, and consequently all training was conducted upon the basis that shock action comprised the main use of cavalry, and everything else was supplementary.

All writers agree, even the German writers themselves, admit the sad deficiencies of the German cavalry in the war of 1870, and especially during the early stages of that war; it was tied too closely to the infantry and lacked that independent aggressive spirit which the modern German writers say is so essential for success, and the German cavalry owes what success it achieved in 1870, not to any particular merit of its own, but to the fact that the French cavalry committed all the errors of the Germans to an even greater degree.

Probably the main cause of the deficiencies of the German cavalry in the early stages of the war, was its lack of organization prior to mobilization, for it had, in most cases, no organization higher than the regiment. It was consequently, relatively longer in mobilizing, and when mobilized, the reserve horses and their reservist riders, required relatively much longer time to be whipped into shape than the foot soldiers; also, on

*"Instructions for Cavalry". British Translation page 192.

account of the lack of higher organization, general officers were not in touch with their brigades and divisions. The General Staff account gives very little regarding the independent cavalry during the early stages of the war, in fact little was accomplished by it, and what information was gained must be credited to the work of the divisional cavalry. But divisional cavalry cannot take the place of strategic cavalry; so at Spicheren we see the blind efforts of one German division attempting to attack in front and envelop both flanks of a position defended by three French divisions. Also, after the battles of both Spicheren and Wörth the Germans were absolutely in the dark as to the movements of the French; in fact the Prussian cavalry did not begin to make itself felt until after the crossing of the Moselle. Up to that time, it was opposed only by small bodies of divisional cavalry, whereas later, when opposed by the larger bodies of French cavalry, it began to accomplish some results. Its lack of achievement early in the war must be attributed chiefly to its lack of higher organization. The Germans themselves are alive to their former deficiencies and are seeking to amend their errors. They advocate the formation of large bodies of independent cavalry with its own artillery and technical troops which shall be far in advance of the infantry, where its first duty will be to conquer the opposing cavalry; then it will be able to keep in complete touch with the hostile infantry and send in reports of all its movements.

General von Kliest says that the strategic role of cavalry may be summed up in one word "*Exploration*." Fully realizing that the most reliable and most needed information is that which will be furnished by the independent cavalry, if it is able to properly accomplish its mission, von Kliest says:

"For what the cavalry reports, it has seen; whereas, the information coming from all other sources, agents, spies, prisoners, a study of the newspapers and of private correspondence are only hearsay reports."*

*"The Officers Patrol"—von Kliest, page 9. Taken from "The present tendency of German Cavalry" by Captain Niessel, French General Staff. M. I. D. Translation No. 1628-two, A. S. S. Library No. 10618. The Quotation from General von Kliest having been translated first into French and from the French into English may have lost something in the double translation.

In the German Field Service Regulations we find:

"Nothing but close information service, by seeking out and observing the enemy, gives certain conclusions, and especially the putting together of the reports from the greatest possible number of different points."

As a further indication of the German views of this use of cavalry the same regulations, in the article relating to the principles governing the special maneuvers of cavalry in time of peace, (Art. 568), provides: "The maneuvers of several cavalry divisions are to be devised with reference to drills in the service of security and information, performed on a large scale, under the conditions in which this work would fall to the cavalry divisions in front of armies."

The Germans differentiate very closely between the service of "*Security*" and that of "*Information*," for the most part they eliminate the former from the duties of the independent cavalry and throw it back on to the divisional or corps cavalry; General von Bernhardi, says:

"Anyone who attempted to entrust both the provision of intelligence and the protection of the troops to one and the same body of men would, in the vast majority of cases, fail to secure either purpose as long as the enemies mounted forces still held the field.

"To secure information—i. e., intelligence—requires concentration of force. The reconnoitering cavalry must beat their opponents out of the field in order to obtain opportunities for discovering what is going on behind the enemy's protective screen. To accomplish this, the cavalry must endeavor to work around the adversary's flanks, and may in consequence have to leave the front of its own army entirely uncovered. The protection of this army, on the other hand, requires a wide extension of front and consequent subdivision of force, the exact opposite of the concentration the provision of intelligence imperative'y calls for."*

There are opponents to this view who claim that the cavalry duel is obsolete and that the service of security should always be kept in mind from the beginning; that the screen should

*"Cavalry in Future Wars" by Lieutenant General von Bernhardi. Translation by C. S. Goldman, page 28.

be kept complete and the exploration accomplished by means of small patrols, which avoid hostile patrols and penetrate to a point where they can observe. That in case the duel cannot be avoided, there is still the possibility to concentrate and fight. These views are more in accord with those of von Schmidt, to which we referred above. It must be remembered, however, that after a patrol has penetrated the hostile screen and gained the desired information, it must get this information back to the army or its errand is useless, and it is difficult to see how, if results are to be obtained, the cavalry duel can be avoided; also, it is clearly evident that he who has his cavalry concentrated when that duel takes place will stand much the better chances of success.

General von Bernhardt says:

"I hold it to be a grave error of judgment to believe that any systematic application of this line of action will give sufficient results.

"Advantages in war must be fought for; they cannot be filched. It stands to reason that the enemy's cavalry can only be prevented from seeing by actually driving them off the ground and depriving them of the power of breaking through our own screen.

"That a numerically and materially inferior cavalry does well to avoid action goes without saying, but fundamentally, the duty of the cavalry must be to seek to bring about collision with that of the enemy, so that from the very beginning it secures command of the ground between the two armies, and that the actual and moral superiority in the whole zone of operations between the two armies is obtained from the outset for our own cavalry."*

General von Kliest says: "Cavalry is only the eye, not the shield. The shield is only the infantry which carries it. Cavalry procures security through its information obtained."†

If we accept this theory of the strategic use of cavalry, we must accept it in toto, and therefore be willing to reduce the cav-

*"Cavalry in Future Wars"—von Bernhardt. Goldman's translation page 29.

†"The Officers Patrol"—von Kliest, page 10.

alry assigned to divisions to the minimum, thereby releasing the bulk of the cavalry to be concentrated into large masses; how large has not yet been determined, some authorities still claim that a division of six regiments, with two or three batteries of horse artillery is the largest unit capable of being handled under all circumstances; but the contrary view is more generally accepted now.

According to General von Kliest:

"A corps of two divisions is quite easy to manage, experience furnishes the proof of it. On the other hand a corps thus organized is equal to any contingency."*

General von Bernhardt would go even further; he says:

"As to the allotment of the independent cavalry divisions, it follows from all that has been said above, that to divide them in equal proportions among the several armies, according to their numerical strength, can only be considered as an obstacle to the full utilization of their potential fighting capacity. It would be better to arrange this distribution at the beginning of each war, in accordance with the conditions which the situation imposes. Where it appears expedient, we should not hesitate to form divisions of different strength, and to group several of these to constitute cavalry corps, even to unite several of such corps for employment in a particular strategical direction, i. e., in a particular portion of the theater of operation whilst leaving only individual brigades, or even regiments to those fractions of the army which for the moment can best dispense with cavalry support."†

General Pelet-Narbonne, in his "*Cavalry on Service*" refers to this subject several times and favors this use in large masses. General von Alten, in his "*Studies in Applied Tactics*," in one case assembles two divisions into a corps on one wing and leaves only a brigade on the other. In fact we may take it that General von Bernhardt's views on this point are the accepted views in Germany today, since every year at the imperial maneuvers at least two of the cavalry divisions are formed into a corps for a day or two at least.

*"The Officers Patrol"—von Kliest, page 14.

†"Cavalry in Future Wars"—von Bernhardt. Goldman's translation p. 42.

(Of course we must bear in mind that a division as above referred to means thirty-six hundred sabers, or the equivalent of three of our regiments at war strength.)

Strategic uses of cavalry, other than for exploration, are, according to Bernhardt, engaging in raids for the purpose of cutting the hostile communications or levying requisitions; used as a pursuing force to follow up a victory, or as a rear-guard to cover a retreat, and on the battlefield itself. Referring to raids, he says: "Their execution, however, will always encounter many difficulties, particularly when a hostile population has to be dealt with; but to consider them on this account as impracticable, seems to me all the more impossible, because, to my mind, they embody an absolutely indispensable element of future operations."*

Of its use on the battlefield itself, he says:

"But the hostile masses against whom we have to act, in such a case are so large that isolated squadrons, or even regiments and brigades, at least in the grand crisis of modern war; would not weigh heavily enough in the balance. They would obtain partial successes, perhaps, but to obtain results such that an army, or at all events an important portion of it should be crippled by pursuit, or itself restrained from pursuing, much larger forces are necessary. How many combat units must we put in play when it is a question of fighting? This cannot be determined theoretically. In any event one cannot see in any given tactical unit, the maximum of force to be put in play."†

Although the Germans have always scorned to study our Civil War, as being a conflict of armed mobs from which no military lessons are to be learned, a student of that war cannot but be struck by the similarity of these views with the actual handling of the cavalry during the latter part of that war. It may be that these conclusions were arrived at by contemplating what the German cavalry did not do in 1870. Of course it is also possible that, while refusing to acknowledge the source of their infor-

*"Cavalry in Future Wars"—von Bernhardt. Goldman's translation page 34.

†"Cavalry in Future Wars"—von Bernhardt. Goldman's translation page 36.

mation, the Prussians have stealthily studied our Civil War and have been influenced in their views thereby. I think it is more probable however, that they continue to scorn seeking lessons from a war of armed mobs, but that deep study and German thoroughness in searching out defects in their military system has brought them to the same conclusion in this regard, as was arrived at by our leaders in 1864 by four years of bitter, grueling war experience. I am the more convinced of this from the fact that in the curriculum of the Service Schools considerable attention is devoted to the study of the German machine and few of the workable elements of that machine had been conceived by our army in 1862; but in 1864 we find many details of the workings of Grant's army which had been evolved by practical experience, corresponding very closely to similar details in the German military system today, details which they have worked out almost entirely by study.

The tactical uses of cavalry naturally furnish grounds for more discussion than any other, because it involves the adjustment of so many details giving rise to differences of opinion, often over very trivial points.

Since the time of Frederick the Great, however, all questions of cavalry tactics related to the mounted combat; the kind of armament, offensive and defensive; formations for combat, single, double or triple rank; the number of lines, disposition of the reserves, gaits, etc., but throughout all the horse was the main weapon and mounted combat only was considered.

Later, with the introduction of the more modern arms, the necessity was recognized of arming some of the cavalry with firearms, the proportion of the cavalry so armed gradually increased until today practically all cavalry is armed with a long range firearm, and the importance of fire action is so well recognized that cavalry tactics of the present day automatically divide the employment of cavalry into mounted and dismounted action. Some even believe that in the future the number and importance of dismounted fights will be greater than of the mounted ones.

As to the opinion in Germany, to quote General von Bernhardt again:

"Anyone who has had to conduct staff rides and similar operations of large bodies of independent cavalry, and has endeavored to carry these out in the spirit of actual warfare, can hardly have failed to notice the tendency which displays itself with all leaders to take to dismounted action, and will have realized that one has far more frequently to check rather than encourage this tendency; but he will also come to the conclusion, perhaps, that this desire is well founded on existing conditions, and that even a determined cavalry will have to make use of their firearms almost every day; indeed without adequate employment of their carbines they are no longer able to carry out the most important of their incumbent duties.

"Hence, if the use of the rifle is thus shown by instances taken from the most divergent directions to be absolutely necessary, the conclusion follows that even in the battle itself, that point on which all military action is focussed, it can hardly fail to find both its opportunities and its full justification.

"But the results obtained by the cavalry in the field practices are by no means so much behind those of the infantry that any superiority of the latter on the battlefield need be expected.

"I think that our cavalry can safely claim that they can engage the best existing Continental infantry with reasonable prospects of success, and against inferior foot soldiers may always preserve its sense of superiority. Granted this much, then the scope of our activity is enormously increased. We can now approach tasks which hitherto had to be regarded as impossible, for now we are in a position in harmony with the whole spirit of the arm, to lay principal stress upon the offensive, even when fighting on foot. We can carry through serious engagements, with chances of success which no longer depend on the favor of special circumstances.

"Although hitherto the general conception has been that cavalry should only make use of the carbine for defense, nowadays its employment in attack must be recognized as the utmost importance."*

Right here, it would appear, is the solution of the rapidly changing attitude in Germany today regarding the tactics of cavalry. Shock action has been their ideal, the only tradition

*"Cavalry in Future Wars" page 55.

they refused to depart from; advocates of dismounted action were found among them years ago, but the struggle for recognition was hard because the use of fire action was urged only as a defensive measure, and until recently the use of dismounted cavalry, except defensively, was not considered. Of course the cavalry of our Civil War not being considered. But now, when they discover that they can dismount cavalry and still use it offensively, the extremely bitter pill which revolted the Teutonic throat has been sugar-coated with such good effect, that Bernhardt says, as quoted above, it bids fair to become so popular that its use will have to be restrained rather than encouraged.

A glance at the armament of the principal European countries is very illuminating as illustrating their ideas on fire action for cavalry.

The German cavalry is all armed with the rifle except the Chasseurs.

The British cavalry all have rifles; they have discarded the lance except for ceremonies.

Austrian cavalry all have the carbine.

Bulgarian cavalry are all armed with the Manlicher carbine.

The Spanish cavalry all carry rifles except three platoons out of four of the lancers which still carry the lance.

French cavalry all carry the carbine, the first echelon of dragoons carry lances in addition.

Greece, Servia, Turkey, Switzerland and Sweden all carry a long range firearm.

Russia arms her cavalry not only with the rifle but the dragoons are all armed with a bayonet in addition.

The Italian cavalry all carry a rifle and bayonet.

The amount of ammunition carried by the cavalry of the different nations is as follows:

Germany, forty-five rounds, Austria fifty rounds, France forty-eight rounds, Russia fifty-eight rounds, Italy sixty rounds.

Of all European nations, France and Germany are perhaps the most backward in acknowledging the full value of dismounted action; Germany because it is contrary to her traditions and France because she regulates everything on what is done in

Germany. She watches everything that Germany does, and even as in 1870 the French had plenty of maps of German territory but none of the country west of the *Moselle*, so now the reading I have done would indicate that they are more concerned as to the opinions in Germany than they are of the opinions in France on military subjects. It would seem therefore, that we may accept von Bernhardt's statement as being very nearly the accepted view. Also General Pelet-Narbonne says: "I share entirely this opinion (uttered by von Bernhardt, that cavalry must seriously study dismounted combat) and I regard it as especially enjoined, that it be drawn up on the offensive, for the complete execution of the fire combat. General von Schmidt showed us in the last war how much work dismounted cavalry, even with the inferior firearm of that day, can find to do, provided it be led with energy."*

The views above quoted are among the mildest that are now appearing in print from European pens; many writers however are much more radical in their views; General De Negrier, in commenting on the Russo-Japanese War, says:

"The most important reports from the officers attached to the Russian and Japanese headquarters during the operations of the war are before us; and the practical unanimity of their data is exceptional. Thus our tactical studies of and deductions from these events may rest upon undisputed premises, and so escape the objections made to the apparent lessons of the South African War, it being said by some that we could learn nothing from that conflict. We have witnessed a great war, one without parallel in numbers engaged and perfection of arms employed.

"At the outset we must recognize the fact that the tactical developments indicated by the events of the South African War are not merely repeated, they are italicised.

"How many bright hopes did the friends of Russia base upon her cavalry? Why did the event bring with it such disappointment? Was there not sufficient cavalry? On the contrary, superior in number, in its mount, its technical instruction and the *esprit de corps* of its old regiments, it had a fair field before it."

*"Cavalry on Service"—Pelet-Narbonne.

"According to the doctrines accepted by all European cavalries, except the English, the Russian cavalry, dominating the terrain by its general superiority of numbers and mount, free to act as it pleased; armed with carbines and accompanied by horse artillery, had every opportunity to maintain constant contact, check the march of the hostile columns; harass convoys, cut lines of communications, and play an important part in the battle itself. The failure to meet these conditions is a matter of profound astonishment. There are two reasons for this failure, either of them a fatal defect; poor instruction in fire action and an artillery powerless against villages or field works. Notwithstanding this failure, the Russian cavalry is far ahead of that of any other Continental army. It has long since grasped the idea that, being essentially the offensive arm, an attack by firearms should be its normal mode of action, since the opportunity for mounted attack presents itself so infrequently, as to be an entirely negligible quantity. Thus all Russian cavalymen are really dragoons; but, unfortunately for them, they have not carried this idea to its logical conclusion, although the organization of the Russian cavalry is such as to enable it to do anything which may be expected of the infantry. What decisive action might it not have taken had it but been inspired by the example of Sheridan at Cedar Creek in 1864?"

"The Russian cavalry, although very much superior in numbers, has had but the rarest opportunities to use the lance or the saber; since the beginning of the war, however, scarcely a day has passed without their being called upon to fight dismounted. Every squadron has had this experience several times.

"On the other side the Japanese cavalry, with rare exceptions, has always been in reach of infantry support; thus the Russian reconnaissances, being opposed by fire action, were obliged either to withdraw with their task unaccomplished, or to dismount and attempt to secure information by an offensive action on foot."

The lessons for the French cavalry to obtain from the war are in part summed up by De Negrier as follows: (Our uniform board would do well to consider his views.)

"A complete reorganization of the cavalry is imperative, the difficulties in the way of such a reorganization must be admitted. That which we call the cavalry *esprit* is quite at variance with dismounted action, which, however, is the only feasible method of action.

"The time has come for a complete change in our methods, and the cavalry, fighting on foot, should be prepared to sweep away the enemy, a result they knew very well how to achieve with their dashing gallops of other days.

"As a first step the subdivisions of the arm into cuirassiers, hussars, chasseurs, etc., should be abolished, and all should be merely cavalry. There should be no difference between regiments and the uniform should be the same for all.

"The American campaign hat, of felt, with a wide brim gives equal shelter from rain and sun, and does not interfere with prone fire. A short coat, loose trousers, shoes and leggings, permit foot movement over broken country. In place of the cloak they should carry a Mexican poncho which covers the man, is easily carried on the front of the saddle when not in use and as easily gotten at when wanted. As an arm, supply the infantry rifle, the bayonet being carried beside the saber on the right of the saddle. It is unnecessary to mention in this connection that all English cavalry are armed with the rifle it being understood that cavalry in action must act dismounted.

"As far as relates to the tactical use of cavalry, we should henceforth regard it as the means only by which a commander may converge the necessary men, cannon, and machine guns, upon a definite locality, either to deliver a blow or to parry one. Thanks to their mobility, cavalry masses should in future battles play a preponderant part. They will form the reserves which the general will hold in hand until the time comes for a tactical surprise. Taking into account the enormous fronts upon which modern battles are fought, no other arm is able to move rapidly enough to produce such an effect. Its fire bursting forth suddenly from an unexpected quarter, would change a retreat into a route; then, mounted, saber in hand, it may gather more laurels than heretofore. Its rôle, far from being restricted, is more important than ever.

"Reverting to the general rules indicated for the use of cavalry, it is agreed that the service of information can only, with good result, be entrusted to especially trained men. It requires qualities of energy, coolness, endurance and alertness, which can only be found among a few chosen from among the best. It is therefore advisable for each regiment to maintain a scouting detachment, and of these, the best will be designated to be attached, upon mobilization, to corps and army headquarters. These men must be made non-commissioned officers, reenlisted and mounted on the strongest and fastest horses to be found among the squadrons. There should be supplied each year, for this purpose, a sufficient number of thoroughbreds. The easier duty of gaining contact might be safely entrusted to ordinary patrols."*

These views are extreme, and when we consider that the author is a Frenchman we might even say ultra extreme but they have a bearing in this discussion as tending to show the trend of modern thought.

Most of the French writers agree with De Negrier as to the use of cavalry that was developed in the Boer War and the War in Manchuria, many of them, however, brush it aside with the remark that both these wars were abnormal, and refuse to recognize any deductions drawn from them as to the use of cavalry and prefer to draw their deductions at second hand from the Germans; the German cavalry, say they, is what we are going to fight, so only by study of German methods will we learn lessons of value to us.

As regards that method of reasoning Lord Roberts says, in referring to the achievements of the British cavalry in South Africa:

"It has been said that this war was abnormal, but are not all wars abnormal? As however, it was the first war in which magazine rifles were made use of, and as the weapons used in future wars are certain to be even more effective, on account of the lower trajectory and automatic mechanism about to be introduced, shall we not be very unwise if we do not profit

*Article on the Russo Japanese war, by General De Negrier of the French Army, published in the "Revue De Deux Mondes" January, 15th, 1906. M. I. D. Translation No. 1630-four, A. S. S. Library No. 11050.

by the lessons we were taught at such a heavy cost during that war?"*

Again Lord Roberts expresses the English view of the employment of cavalry, gained from experience in the Boer War:

"Why did our cavalry fail? Because they did not know, because they had never been required to know, how to use the principal and most powerful weapon with which they were armed.

"Because they did not understand, because they had never been asked to understand that their rôle should consist in attacking the enemy exactly like the infantry and to shoot their way up to him.

"In this matter of shooting their way up to the enemy cavalry possesses great advantages, owing to their great mobility. General French's movement at Klip Drift was essentially a rapid advance of fighting men carried out at extended intervals. It was a rapid advance of warriors who possessed the ability, by means of horses and rifles, (not swords or lances) to place their enemy *hors de combat*. It was an ideal cavalry operation, but it was not a cavalry charge as this term is generally understood, the *Arme Blanche* had nothing to say to it.

"I trust that thirty years will not again be allowed to elapse before we take to heart and act upon the lain lesson to be learned from the Boer and Russo-Japanese Wars, and in a lesser degree from every war that has taken place since the introduction of breech loading arms. The lesson is, that knee to knee close order charging is practically a thing of the past. There may be, there probably will be, mounted attacks, preferably in open order, against cavalry caught unawares or against broken infantry. But after reading Mr. Childer's book, backed by my own personal experience, I am driven to the conclusion that the only possible logical deduction from the history of late wars, is, that all attacks can now be carried out far more effectually with the rifle than with the sword.

"The two essentials of cavalry in the present day are, mobility, and the power to use the rifle to effect; unless cavalry is mobile it is practically useless. It is by saving their horses

*Introduction to Erskine Childer's book "War and the Arm Blanche" by Field-Marshal Earl Roberts, British Army.

in every possible way, and by skill in the use of the rifle, that cavalry soldiers can hope to carry out properly the many important functions required of them in advance of, at a greater distance from, and in conjunction with the main army. Further as the rifle is the weapon which will enable the cavalry to be of the most real value in cooperating with the other arms on the actual field of battle, cavalry soldiers must not only be good shots, but must be taught how to fight as infantry.

"Owing to the enormous increase in recent years in the numbers which now constitute a modern army, the strategical area in which cavalry will have to operate must inevitably be of considerable extent. Owing also to the increased size of armies on the actual battlefield and to the extended formations necessitated by the long-reaching effect of modern weapons, the strain upon the cavalry horses is infinitely greater than in former days, and unless men are taught to take every possible care of their horses, cavalry will be unable to cooperate with the other arms when their services are most urgently needed—perhaps at a critical point of the fight—or to follow up and harass a retreating enemy.

"It is impossible to overestimate the value of cavalry—trained as I should wish to see them trained—under the existing conditions of war."

These quoted opinions are not by any means universally accepted, but they show the trend of thought in Europe and indicate that the tendency of training is towards the use of cavalry as it was used by Sheridan and Stuart in our Civil War.

It is the writing of the most advanced thinkers that we see in print more often than any others, but we can also see either the result of these views, or a concurrence in them to a lesser degree in the Drill Regulations, Field Service Regulations, and system of training in general, and more particularly in the field maneuvers of the different countries.

Little reference has been made to divisional or corps cavalry because there is no task that can be assigned to it that it may not be called upon to accomplish under more difficult circumstances while serving as part of a cavalry division. Serving as part of the independent cavalry it will have to ride further

and longer, and undertake reconnaissances at a greater distance from its support; it is liable, also, to meet larger bodies of rapidly moving cavalry than when acting as part of the division, so the training suitable for independent cavalry will also be found suitable for the divisional cavalry. But the converse is not at all so, for one might as well say that twelve well trained infantry companies, collected from the four corners of the earth, constitute a well trained regiment as to say that several regiments of cavalry whose training has been limited to the work it will perform as an auxiliary arm in an infantry division collected together form a cavalry division.

Only a short time ago the War Department published a bulletin which had as its object the standardizing of the training of cavalry. While in the main, this bulletin seems to express the best thought of the day on the employment of cavalry, in fact agrees very well with the views given in the German, French and English Regulations, yet the point of view is so different, that it does not mean the same thing to us that it means to them.

Paragraph I reads as follows:

"Mounted action is the main rôle of cavalry arm and its organization, should be with a view to rendering it effective in such action.

"Dismounted action is, however, a very important rôle of cavalry, and neither an organization nor the method of instruction which fails to provide for the effective use of cavalry dismounted, will enable it to perform fully its functions in war."*

A very similar paragraph in the German Regulations means to the German, reading between the lines: "Shock action has always been a paramount tradition with us so we will let it continue so, at least on paper, but in 1870 the Prussian cavalry fell far short of what it should have been. Why? One highly important reason is that the Prussian cavalry in 1870 was not properly armed or trained for dismounted action. that kind of tactics is becoming more and more important every day and more attention must be given to dismounted tactics."

To the French that paragraph would mean: "Fire action is coming to the front. Sheridan and Stuart used it but we

*Bulletin No. 18, War Department, October 3rd, 1912.

would not accept them as a good source, without further endorsement. The British used it in the Boer War and endorse it. Its utility was proved again in the Russo-Japanese War, and finally the Germans are advocating it so we adopt it also."

To us it means: "No matter what our cavalry accomplished in the Civil War, no matter what the tactics we inherited from that war teach, the Germans have long held as a valuable tradition that shock tactics is the main thing so we will adopt it."

This bulletin contains scarcely a hint of the real *raison d'être* of cavalry today, i. e., its strategic use.

It took four years of bitter war to learn that to use cavalry as an outpost for the army was to waste a valuable auxiliary, and that massed and used independently, it could accomplish things before undreamed of.

In the years since the war our cavalry was used in the Indian Campaigns by men who learned their tactics in the Civil War. We have lost all those veterans and are rapidly losing those who learned after the war from the veterans themselves, hence the importance of deciding what our system of training for the future shall be, before the few lessons still left us from that war shall have escaped us.

There is a crying need for system in our training; much of our work is good but much of it is spasmodic, we lack thoroughness in the intermediate things. In all European countries more attention is paid to the individual instruction of the man and horse than is the case with us; of course they are not handicapped to the same extent that we are by details from the ranks cutting down the percentage present for daily instruction. Then also nearly all other services receive all their recruits for the year at the same time, making the system for recruit instruction simpler; our General Staff is now attempting to adjust our system more satisfactorily in that respect.

The most glaring defect today, it seems to me, is our drill regulations. It consists of 514 pages, including index, of which only twenty pages are devoted to the employment of cavalry. This book presents a very formidable appearance to a non-commissioned officer or to a Second Lieutenant who has to be examined in it during the Garrison School Course, but it has

only twenty pages devoted to what cavalry will actually have to do in time of war; the remainder of the book is filled with close-order drills, trumpet calls, ceremonies, individual training and equitation; much of the latter being obsolete and some of it even absolutely opposed to the latest ideas on the subject as taught at the Mounted Service Schools.

These Drill Regulations have been carefully revised every few years, the position of "carry arms" omitted and "left shoulder arms" substituted; in the latest edition, the word "carbine" was replaced by the word "rifle" and a few more equally important changes made, otherwise it contains much of the excellence of other days. In many respects it is still an excellent work, its defects lie in its length and lack of simplicity.

If one attempts to attain perfection in all the movements prescribed therein, all the time available is consumed without attempting to evolve anything practical from that greatly condensed twenty pages on the employment of cavalry, the older officers have no ambition left to devote to something that really counts, and the younger officers never get beyond the musical saber manual as their ideal of perfection in cavalry exploits.

Our present drill regulations are too great a tax on the memory, much of our close order drill is a mere matter of discipline, and could be wiped out without any bad results. Only such movements should be retained as would be used in maneuvering. A more frequent use of ceremonies could be taken advantage of if considered necessary for discipline.

The following command is a fair example of how our Drill Regulations is cluttered up with a lot of useless material which befogs the mind and is unnecessary, "Pass in Review, Column of Platoons, First Troop, First Squadron, Forward, Guide Right, Column Right, MARCH." Very impressive for the uninitiated but if a colonel should get two of the words mixed, he would probably be so mortified that he would immediately apply for a detail as inspector general. In one regiment in which I have served, a very versatile Chief Trumpeter composed trumpet calls for all those long commands and regimental drill resembled a Band Concert.

As a model for a drill book, "*Cavalry Training*," British Army 1907, seems to be excellently well proportioned; it seems to cover everything contained in our drill regulations and is less formidable in appearance; it has 210 pages which are divided as follows:

Principles of training.....	20 pages.
Training of the individual on foot.....	20 pages.
Equitation, embracing training the recruit, training the young horse, and active and passive riding.....	20 pages.
Employment of cavalry in the field, embracing general principles; the strategical and tactical action of cavalry; the independent or strategical cavalry, protective cavalry, divisional cavalry, its cooperation with other arms on the battlefield and miscellaneous duties.....	65 pages.

The remaining thirty-five pages are devoted to ceremonials, instruction in the use of the sword and lance, castrametation, etc.

A comparison of the old Infantry Drill Regulations with the new would give a very good idea of the difference between what we have and what we should have for the cavalry. Since we have no fixed system of training there is little check on anyone from the individual captains through all the grades to the War Department itself, the higher up you go the less check there is, and individual hobbies are bound to creep in, of course the higher up they originate the more wide spread is their effect.

No one will deny that many, possibly all of these so-called "hobbies" concern matters of importance each in its proper place and become objectionable only when they are given undue importance, thereby minimizing the importance of some thing or things equally or possibly more important.

A well organized system of training would furnish the check which would reduce to a minimum the friction caused by the personnel in all grades from the Chief of Staff down to the captains.

Many of the defects in our training have been pointed out from time to time and fully discussed, I shall only mention a few of those which to my mind are in most need of immediate correction.

One is our method of conducting target practice. According to our method of devoting about three months of the year to target practice, undoubtedly excellent results have been obtained, according to the target reports, but anyone who has experimented with firing in the winter, knows that those results are very deceptive. To be sure it may be necessary to have a season of systematic instruction for recruits. But after that it would be much better to have some firing at regular periods during the year and not use up three months of the best season of the year to obtain results which are altogether out of proportion to what we could obtain under the best of conditions.

Our present system of target practice, however much allowance we may make for the changed conditions, lead us to hope for results in war which cannot possibly be realized. It would be as reasonable to devote a certain period of the year to mounted instruction and then turn the horses out to grass for the remainder of the year.

Note the difference in the French method. With them, firing is conducted once a week beginning with the second month of recruit instruction and kept up during the entire year. Each man fires six rounds each time making about 300 rounds per year.

So many excellent articles have been written recently on the subject of horse training that I should hesitate to even mention it in the few lines that can be devoted to it in this paper, but its importance is so great that it cannot be omitted. The Germans train their remounts about two years before they are put in the ranks but General von Bernhardt thinks this time can be reduced. He says: "Owing to the better bred and generally improved class of remounts nowadays obtainable, the period of training can be considerably curtailed, while on the other hand, a higher standard of training may be demanded of the horse."*

"The principle that *only thoroughly trained horses may be placed in the ranks*, must, to my thinking, be carried out quite unconditionally. It forms the necessary foundation upon which alone we can build with success.

*"Cavalry in Peace and War" by von Bernhardt, 1910. Translated by Major Bridges, 4th (Irish) Dragon Guards, page 257.

"The essence of the training is to continually improve upon the individual training of the horse. Efficiency in the squad must be the result of good individual training. Even after the conclusion of this course this must be remembered, and continual care taken to check any inclination to tricks, excitability, or stubbornness that may show itself, exercises in independent riding and leaving the ranks should therefore be frequently repeated; it is thus that the existence of any faults of breaking can best be detected, for it is only a thoroughly trained horse that will submit himself completely to the riders will."*

The usual practice with us in the past has been, as soon as a remount becomes sufficiently tractable to be ridden without danger of its attempting to unseat its rider, to put it in ranks and take it out to drill with the troop.

If the horse is not too warm blooded, he may, under this treatment, turn out to be an average mount, but many times he develops into either a plug or an outlaw.

I once heard an Irish sergeant say: "A lot of this recruit drill is tommy rot, the way to teach a recruit to ride is to put him on a horse and let him catch on." That Irishman was an excellent drill sergeant; he could whip recruits into shape quicker than any other man I ever knew, that is those of them who did not desert.

Our manner of training horses has often been too much like the way the Irish sergeant trained recruits, but the horses cannot desert, and the only wonder is that more of them have not been condemned while young, and that we have not worse mounts than we have today.

In many regiments systematic training is now being given our remounts under a well qualified officer, but there is no universal rule in that regard and a system is more needed now than heretofore since we began to get younger horses through our remount depots.

Under the French system, suppling and instruction of young horses is carried on in the regiments by non-commissioned officers and selected privates under an officer; it lasts two years before a remount is put in ranks.

*"Cavalry in Peace and War"—von Bernhardt.

The French system of cavalry training is so thorough and in many respects so good that a few other points from them are submitted for comparison with our lack of system.*

The French devote an hour per day to instruction in vaulting and gymnastics during recruit instruction, and three hours per week during the remainder of the year.

Fencing is carried on every day, dismounted and mounted. The instruction of scouts and guides takes place once a week and lasts two hours. In each troop there are twenty-four scouts, six to each platoon, and all wear a five pointed strap of red cloth sewed on the sleeve. The men so distinguished show great pride in it as attributing to them a greater degree of intelligence, although they enjoy no material benefits from it. There is great rivalry among them to obtain the distinction.

For the instruction of officers, among other things, *Map Maneuvers* are held twice a month in winter, the remainder of the year tactical rides or walks are held at which non-commissioned officers are present as spectators.

In August and September are held the maneuvers which last thirty-six days and include three periods, as follows: Cavalry evolutions; combat firing; and, maneuvers with the infantry.

As to the training of our officers, I believe we are on the right road. Our Service Schools are inculcating the desire for study which will have its results. It is to be hoped that the time soon will come when the majority of our captains and all officers above that grade are graduates of the School of the Line, and a great many of them also of the Mounted Service School.

Not enough attention however is spent by us on the instruction of scouts and guides. General De Negrier, in a recent article says of its importance:

"Reconnaissance can be made only by very small groups of troopers, especially prepared and trained. They will have to be mounted on horses of exceptional endurance, and will have to

*Taken from "Notes on the training of the French Cavalry" made by Captain Teodoro De Iradier, Spanish Cavalry during nine months service with the 10th French Chasseurs, "Rivista Di Cavalerie" July and September 1910. M. I. D. Translation No. 2325-two. Index No. A. S. S. Library, 12556.

be accustomed to orienting themselves by day and night. As training, they will be drilled at the maneuvers in crossing the line of outposts without being seen. They will penetrate the zone of the march of the enemy and will observe his movements.

"Such were the scouts of Stuart and Sheridan in the War of Secession in the United States. This service was performed by picked volunteers, who were all young, well trained, indefatigable horsemen who had given proof of intelligence and bravery. They were few in number, and when they went out were accompanied by one or two troopers only, who were chosen, like themselves, for their intrepidity and *sang froid*. In the maneuvers we are accustomed to have this service performed by officers patrols, and it is not rare to see a regiment of cavalry detach three or even four officers for this purpose. It is easy to foresee what would be the consequence of such a system at the end of two or three months campaigning.

"The officers patrol should be employed only to obtain information of a special character, which the Chief may need at a certain moment and in a minimum of time. Immediately upon obtaining the information, the officer himself comes to communicate it to the chief who sent him.

"A scout's service, on the contrary, should be constant. It is therefore necessary for each regiment to have a certain number of scouts so they can relieve one another.

"This service demands peculiar faculties. They may be found by minute selection, whether or not the subject chosen possesses them all, can be found out by war alone, but as this selection should first be made in time of peace, with what care the picked subjects must be trained and prepared.

"What precedes, leads to the creation, in each regiment of cavalry, of eight non-commissioned officer scouts. Their training will be confided to a captain as instructor. To each of these scouts will be assigned two blooded horses of proved endurance, a corporal or a trooper who is a student scout will be attached to each of them. It would take too long to indicate here the details of their preparation, suffice it to point out the spirit of it.

"A characteristic feature of their training would be the reconnoitering of the maneuvers executed by neighboring garrisons by day or night."*

The best and most advanced training we can get, however, is in field exercises and maneuvers, but until the preliminary training has progressed to a certain degree of proficiency, such exercises serve no valuable purpose. Whether or not we have progressed to a point where maneuvers are beneficial, may be a question, but assuming that we have reached that point, how much do we of the cavalry get from our maneuvers?

A few years ago I was present at a maneuver camp where there were in attendance more mounted troops than infantry. In one problem in particular, the infantry on one side had marched about twenty miles by noon and had not fired a shot, most of it had not even deployed, when the recall was sounded. There were some very drastic comments made at the discussion that evening, by a captain who commanded a battalion of that infantry. He said that not only had the infantry gained no good from that problem, but that it was the cause of so much discontent and grumbling as to have been a positive detriment. His remarks seemed then to be rather peevish for, from a cavalry point of view, the problem had been a very interesting one. However, it was solved the moment the infantry arrived and I can now see that his remarks were not only pertinent, but justifiable. His view was the sensible one to take, for it is not only impossible to obtain satisfactory results, but it is worse than useless to work out abnormal situations.

It seldom happens that our maneuver camps are composed of the proper proportion of the different arms, the governing factor being, rather, to get together all the troops that can be conveniently collected no matter to what arm they belong, and the result is that unusual situations are worked out and erroneous lessons learned. In the case noted there was, of course, an exceptionally disproportionate distribution of troops, and therefore, a good one to illustrate the point. In the ordinary case, the situation is drawn up to be as nearly a suitable one from an infantry point of view as possible and that is as it should be for infantry maneuvers, but the superfluity of mounted

*M. I. D. Translation No. 2072-two, A. S. S. Library No. 12372.

troops in not ordinarily so great as to entirely spoil the game for the infantry, as it did in the case noted. The great danger is that erroneous lessons may be learned, although they may not be recognized as such and the cavalry, instead of learning its work as strategic cavalry, is learning things as auxiliary cavalry which it will have to unlearn when the time comes to perform those duties in war.

In order to learn in time of peace the real rôle of cavalry, that is its employment as *strategic cavalry*, we should have our own maneuvers where as large bodies of cavalry as possible, with the proper proportion of the auxiliary arms, can be collected for maneuvers and independent of the infantry.

Of course the proper proportion of cavalry should still be detailed for duty at the infantry maneuvers, and occasionally it might be instructive for a cavalry division, or as nearly a division as can be assembled, to be engaged in a maneuver campaign against an infantry division. Even one-sided problems with an imaginary or an outlined enemy are instructive. Better still, however, is to have two opposing bodies of cavalry, each with its proper proportion of artillery, which will give some idea of how cavalry will be used in war. It is not believed that a proper conception of the strategic use of cavalry can be obtained in any other way.

Congress has said that a captain cannot learn how to command a company, troop or battery, unless he spends one-third of his time actually in command of one; he cannot learn even by watching an organization drill from the window of the Adjutant's office. Is it any easier to learn how to command a brigade or a division than a company or troop? Unless we can assemble such units, how can we expect to be able to find anyone able to command them when the need arises? If you place a bright intelligent recruit on a well-bred, intelligent, but untrained horse and send him out to make a road sketch you will not look for very brilliant results, yet the best cavalry division we could mobilize today would be about as well equipped to perform a strategic mission as is that recruit to make a road sketch.

No mention has been made herein, or suggestion offered, looking toward any legislative action. In fact I can think of

but two things requiring legislative action which would greatly improve the training of our cavalry, these are:

First.—To keep the personnel at war strength.

Second.—To permanently organize our cavalry into complete brigades or divisions, which ever may be determined to be the better administration unit, each with its administrative staff and system of supply completely organized, and with a proper proportion of auxiliary troops permanently assigned.

Changes in these two particulars, while they present possibilities for a very great improvement, still are not vital, relatively. When we consider our military establishment as a whole, much can be accomplished if we systematize, and until we do all we can without the assistance of Congress, we have no warrant to ask for legislation.

The majority of the European nations have their cavalry divisions completely organized. Germany is the only exception which has, so far, only organized one, the cavalry division of the guards. The organization into divisions is strongly advised in Germany. Von Bernhardt alone is opposed to it. He, however, wishes the staffs organized and trained, and the corps staffs as well. He also wishes the trains and impedimenta stored and ready, so, as they are assembled every year for maneuvers, what he advocates amounts practically to a complete organization while at the same time permitting a certain flexibility in the composition of the higher units, depending upon the strategic situation which presents itself when the necessity for mobilization arises.

It must be noticed however that Germany keeps her cavalry at war strength and the enlisted personnel serves with the colors for three years. When the service with the colors was reduced about ten years ago for infantry from three to two years, Germany kept to the three year term of service with the colors for all mounted troops.

The French troops all serve two years with the colors, but General Maitrot, Colonel Aubier and others strongly advocate a three years term for the cavalry. General De Negrier strongly laments that only two years are allowed for making a cavalry soldier.

In this respect then, although Germany has a great advantage over us, her troops being at war strength, we are not as badly handicapped as are the French who have only two years service. Yet, if we are to credit the reports of our officers abroad, the French cavalry rides better than do ours. This is undoubtedly partly due to their better class of mounts, but I think we must be honest and attribute the excellence essentially to the better and more systematic methods of instruction and training.

The conclusions reached in this paper are:

That we are badly in need of more system in our cavalry training, and the first step is to determine how it is to be used and coördinate all our energies along those lines.

Next we must revise the Drill Regulations, making of it a book that will give some inkling of the use of cavalry other than as an adjunct to county fairs.

This accomplished, we can adjust our training along more useful lines, especially standardizing the individual training of the recruit, the remount, scouts and guides, and officers.

Systematizing the holding of field exercises and maneuvers for cavalry independently of the infantry exercises.

Provisionally organizing units as large as any we contemplate assembling in time of war for the purpose of giving our general officers practice in handling, and the troops the experience in working out the problems that will confront strategic cavalry.

When we shall have accomplished all we can along these lines, we can then go to Congress with clean skirts and ask for what legislation we need for our further improvement. Unless I am very much mistaken, when that time comes, we will find that our needs are very limited so far as concerns our present strength.

+ Reprints and Translations. +

THE CAVALRY HORSE AND ITS BREEDING.

BY CAPTAIN A. H. WADDELL.

(From *THE FIELD* of September 6, 1913.)

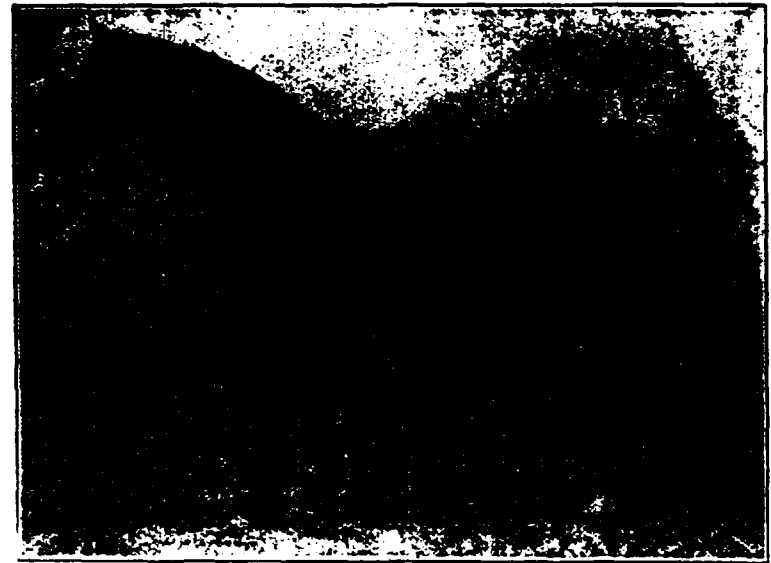
In view of what we see in regard to stallions chosen as suitable to get army horses and being decorated with the blue ribbon for such purposes at the horse shows, it is clearly evident that the judges who pick such horses as hackneys, trotters and Morgans for such sires, know absolutely nothing about the cavalry horse, his uses or requirements. Have any of these men ever had anything to do with army matters? Have they ever seen a squadron, let alone a brigade of modern cavalry in their lives? Have they ever seen a "gallop-past" at the speed at which it is insisted upon by the great cavalry generals of the day? They can have no possible idea that to be efficient today, cavalry must be as fast as thoroughbred blood can make it and as mobile as this speed can avail.

The thoroughbred is the fastest animal that breaths today, and besides that can stand greater hardships on poorer food and greater privations under the most adverse climatic influences than any breed of horse whatsoever. All the great fighting nations of the world know this, and each would only be too glad to have all their cavalry mounted on clean thoroughbreds faster than any other power, if they could. This, however, is impossible, and being so, they are all endeavoring to breed the fastest they can; and will anybody tell me that nations like England, France, Germany and Japan are racking their brains

to find out which is the best—hackney, trotter or Morgan stallion—to accomplish this end? Neither the hackney, the trotter nor the Morgan can gallop as fast as a man can kick his hat; what use, therefore, can such animals be, as sires for the purpose in question?

It is pathetic to see such ignorance, and lamentable to hear and read the excuses for such action.

What would a real American cavalry officer of today think of hackney bred troopers in his command? What would French have been able to accomplish in South Africa with animals of



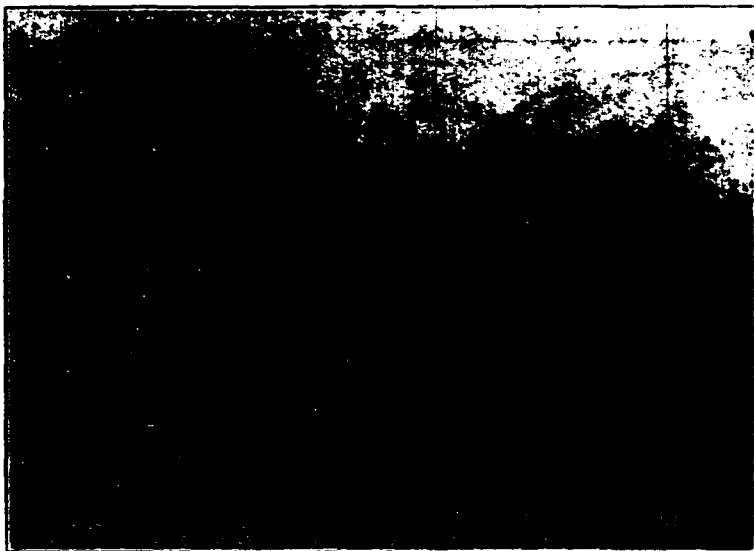
CUT No. 1.

A great Thoroughbred stallion with size, bone, body and substance—an ideal cavalry horse sire.

this breed? What would Lord Roberts have said had the British Government given him hackney, trotter or Morgan bred horses to accomplish his wonderful march from Cabul to Kandaha? Lord Roberts—plain Frederick then—cleared the road with light Indian cavalry on Arabs, Turcomans, Beluchies, and other breeds in which the Arab blood predominated, and rode an Arab himself, and British cavalry mounted on well bred Walers.

While I do not regard the Arab as the greatest cavalry horse for modern warfare today, for those days, for that country, and for those requirements he could not possibly be beaten, considering the light weight he had to carry, and no thoroughbreds available. The Arab, though absolutely slow as compared with the thoroughbred, is an express train as compared with a hackney, a trotter or a Morgan.

I have had a good deal to do with the remount department of the British Army in the days that are gone, and that in many

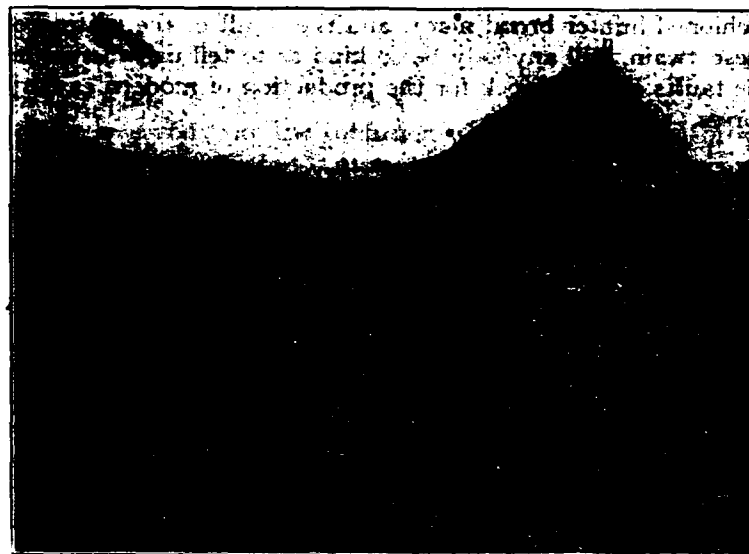


CUT No. 2.

A typical hunter Broodmare—one of the great, big roomy kind with power and substance all over her but still showing a great deal of quality and breeding—the cavalry horse dam par excellence.

parts of the British Empire, and the one thing, of all others, that produces more choice Old English blasphemy, from commanding officers and the generals of the army, in the lack of speed and action, or at "the gallop past" at a review. I have heard the old Duke of Cambridge swear till all around was blue, at cavalry going past at "the charge," too slowly to suit him; and I thought that General Sir Drury Low, who galloped

his cavalry from Ismalia to Cairo in such wonderful time and captured Arabi Pasha, after the battle of Tel-el-Kibir, would have gone crazy in his anger at the slowness of a "gallop past" of the cavalry brigade in the Long Valley at Aldershot, years ago, although the horses were the best bred ones that the government could buy and were galloping for all they were worth. That was twenty years ago, and since that time the British Government has been trying to make its cavalry faster and faster, and the French and Germans trying to outpace them.



CUT No. 3.

The result of the mating of the above—a great upstanding Gelding of splendid individuality that can gallop fast, carry weight and stay—the cavalry horse that all the great fighting nations are trying to breed.

On top of this and after it had been so thoroughly proven by these powers, that cavalry horses must be as well bred as possible, if not thoroughbred itself, we are told by Americans, the most progressive, up-to-date and go-ahead people on the face of the earth, to breed cavalry horses from hackneys, trotters and Morgans. Great Scott! it would take 100 years to breed the trotting gait out of the hackney or trotter, and then it would

not be eradicated, and having accomplished so much, neither of them would be able to gallop fast enough to get out of their own way, while the Morgan, good and useful little horse as he is, but that can neither trot nor gallop fast naturally, would, never, this side of eternity, be worth his hide as a cavalry horse.

"For the sake o' man's repute," let us see a little more common sense displayed in judging the army classes at our horse shows.

The three pictures accompanying this article, show a great big thoroughbred stallion worth calling a stud horse; an old fashioned hunter brood mare; and the result of the mating of these twain, will anybody be so kind as to tell us, wherein lie the faults of such stock for the production of modern cavalry horses.

CAVALRY REORGANIZATION, DRILL, ETC.*

INTRODUCTION TO CAVALRY TACTICS.

To the Adjutant General, U. S. Army;

I REPORT that, in obedience to orders, I have prepared regulations for the instruction, formation, and movements of the cavalry of the army and volunteers of the United States.

In undertaking this important work I was led to give much consideration to a growing military impression in favor of an important change to a *single rank* formation.

Whilst the conservatism or prejudices of European establishments have slowly yielded, in the infantry arm, to the extent of reducing its formation from six to two ranks, the one great step from two to one rank in cavalry has not yet been made; but it was tested very successfully in the war in Portugal in 1833-34 in a British legion. I found that it greatly simplified all cavalry movements; a great recommendation—but especi-

*This and the articles which follow are reprints gathered from various sources, as noted under each, and which have been furnished us as being peculiarly *apropos* at the present time when these questions are being seriously considered by the Cavalry Board and others. The spelling, although incorrect in several instances, is as in the original text.—*Editor*.

ally in view of our national policy; it would go far toward lessening the difficulties, by many considered insuperable, of the efficient instruction of volunteer cavalry in a period of actual war.

Prejudices of my own against the change were overcome.

Adopting, then, the single rank formation, my work of revision became one of construction; and I have freely chosen what I judged to be the best points in the systems of France, Russia, Prussia, Austria, and England. I have added to all. The work will be found to amplify the old range of movements, whilst its simplicity renders it less voluminous.

In the decisive action of cavalry the rear rank, *under another name*, will be screened from much of the enemy's fire; will be reserved from the confusion which even success throws into the front rank; but that rank *defeated*, it not only escapes being involved, but is close at hand to profit by the impression which may have been made on the enemy.

My confidence in a single rank system is further strengthened by its recommendation in the able work of Captain Geo. B. McClellan, and by which I have been much assisted.

Respectfully,

P. ST. GEO. COOKE,

Colonel Second Dragoons.

TWO LETTERS FROM MAJOR GENERAL FITZHUGH LEE.*

Baltimore, February 27, 1868.

Colonel:

I have the honor to acknowledge the receipt of yours of the 18th of January.

Pray accept as an excuse for delay in responding, the fact, that I was not at home when your letter arrived, but that it has followed me about from place to place and only within the past few days, been received.

My time is so limited this morning I can only reply briefly to your questions, with the idea that reaching you earlier, they

*From Denison's "Modern Cavalry."

would be more welcome than more extended response at a later period.

First you ask the best arm for cavalry?

I reply, Colt's navy-sized revolver, Sharp's breech-loading carbine, and the French saber.

"The best method of fighting cavalry at present, whether mounted or dismounted against the other arms?"

I conceive it depends entirely upon the nature of the country.

"The best saddle for cavalry?"

I think there is no comparison between what is known in this country as the "McClellan Saddle," and any other.

"Whether the rank entire system is better than the double rank?"

My experience in the old United States army as in the service of the Confederate States is decidedly in favor of the latter. You can never get ground sufficient to maneuver large bodies of cavalry by the single rank system, and in charging by platoon, company or squadron front, the advantages of the single rank can always be obtained by directing the rear rank to hold their horses back a little until the interval is attained.

I have no objection, Sir, to your using what I have so hastily and incompletely written in any way you may deem proper. I regret to have written so briefly, but if you will address me, on reception of this, to Box 301, Alexandria, Va., I promise to take time to give you my views upon the use of cavalry and the best means to make it effective in battle.

Yours most truly,

FITZHUGH LEE,

Major General Commanding Cavalry Army
N. Va., during late war.

Colonel G. DENISON.

Richland, Stafford County, Va., April 30, 1868.

Colonel:

I have the honor to acknowledge the receipt of your letter in which you request my opinion on any points connected with the cavalry service as may strike me, and in reply, the following views are submitted.

In all countries the squadron is the unit of the arm of cavalry, though in itself containing subdivisions for greater convenience in handling. Mount sixty-four, light, active young men who are good riders, upon supple, well ribbed-up, round-barrelled, short-coupled, spirited though docile horses, not as a general thing over fifteen hands high, and you have the essential conditions of good cavalry. The number, sixty-four, of course varies always in proportion to the number of men for duty. I only give it as a good average. For rapidity of motion and facility in maneuvering keep the squadrons small and give "plenty of elbow-room." In the American service such a unit is composed of two companies, and the whole subdivided equally at each formation into four platoons. A company of cavalry in the regular service is officered with a captain, one first lieutenant, one second lieutenant, which would give six officers for the squadron, a leader, a file closer, and a commander for each platoon.

I eschew heavy cavalry, the "cuirassier" *sans peur*, they can only be employed during actual conflict, and in this country, from its topographical features, opportunities seldom occur for charging with large masses of cavalry, like Murat and Bessieres at Eylau, or Seidlitz at Zorndoff for instance; so seldom indeed, that the expense does not justify keeping up such organizations whilst awaiting such opportunities. I participated in every battle fought between the two principal armies in Virginia during the late war between the North and South, and cannot recall a single instance where cavalry *en masse* was employed on the battlefield, save in a few instances against cavalry itself. Raiding, scouting, reconnoitering, etc., "heavy men mounted on heavy horses" are unfit for, and hence their disorganization and disuse. The dragoon, that admixture of "foot and horse," and like all hybrids possessing the qualities of neither to any degree, has also disappeared among us, and now light cavalry alone is recognized. It was found that it too could be made very effective on foot, when occasion required, its light armament affording facility for the rapid transition. Though cavalry ranks as the second tactical arm on the field, its duties before and after battle have become very great; when it can be used during conflict, it must be led with celerity and boldness and even, when called for, *recklessness*.

The average weight of a light dragoon in the English service some years ago (I do not know how it is now) was 10 stone 3 pounds, or 143 pounds, and his height from five feet four and one-half inches to five feet eight inches. The average weight of his equipment was 103 pounds, which would make the horse carry 246 pounds, *too much weight*. The equipments in the United States service are much lighter, which would allow the man to be heavier, but the total weight I should prefer to come below 200 pounds.

As a general thing *young* men make the best cavalry (though I do not forget that Cromwell was forty-four years old when he first drew a sword, nor deny his great cavalry genius); they possess more enthusiasm, cheerfulness, dash, greater fondness for riding, are more careless of life, always eager for enterprise, and will ride more recklessly when occasion demands. To such traits intelligence must be added, for the trooper is so often detached and must think for himself. His duties as vidette, courier, orderly, member of patrol and reconnoitering party, all demand the exercise of it. Cavalry, too, cannot be improvised to the extent infantry can, but requires a long training of man and horse before made effective.

Good horsemanship is the basis of a good organization. I do not think your schools in Europe pay sufficient attention to riding; at West Point, the military school of this country, requisite particularity I know is not exercised. No officer should be admitted to the cavalry arm of the service who does not become a good horseman, and evince a partiality for all pertaining to the animal. Without the first quality, a desire to lead his troops when moving at a rapid rate, and where obstacles intervene, is apt not to exist; and the absence of the second interferes with a bestowal of attention to the comforts, appetites, and health of his horses. Whilst on duty at West Point (just previous to the breaking out of the late war) as instructor of cavalry, I noticed that in a class where there were two cadets who had never been on horseback in their lives (and there were frequent instances of that kind among young men from the Northern States), one would early assume a good seat, and in time become an excellent rider, whilst the other never could learn; he would go mechanically through the drill, but to

his graduating day he always looked awkward, unsafe, and uncomfortable on a horse; still, if he stood high in his other studies and got few demerits, his chances to be put into the cavalry upon graduating, were he disposed to urge them, would be better than anyone who stood below him in class rank, though higher in the theory and practice of that arm. The defects of the system are manifest. I would recommend, too, the getting rid of all troopers who cannot be taught to ride, either by discharge or transfer to other arms. It will save many sore backs to horses and much useless time and drill in trying to get such up to the proper standard. A proper instructor can tell, after seeing a squad ride for a few days, who are going to become horsemen and who never will. The system in the United States is to recruit men by voluntary enlistment (wherever they can be found) for the mounted corps, certain conditions as to age and health being fulfilled. They are then sent to Carlisle, taught to saddle and unsaddle a horse according to prescribed forms, mount and dismount, with a little insight into the elements of tactics, after which they are drafted to the different regiments as required. You can see the defects of such a system which will permeate through the whole country. Height and weight should be consulted, with the thinning out of bad horsemen after they are found to be so, and more perfect training given them. Above all perfect them in managing a horse at speed (which seems now never to be thought of), first shaking them into good seats by long preliminary trots day after day. How helpless a man feels when riding a horse at full speed for the first time, and how little like using the weapons fastened to him! Can he take care of himself in the *mêlées* that charges so often resolve themselves into?

I favor the double rank in preference to the rank entire system for many reasons, and among them the following: "More men can be maneuvered on a given piece of ground, particularly in line formations—an important object to achieve—for ground is always scarce for cavalry purposes. The efficiency of a cavalry charge lies in its shock, the rear rank augments that, fills up the gaps and in the *mêlée* that succeeds gives more sabers on hand for service. It also carries confidence to the front rank as such close backers will. Instruction

should be given them to rein back a little in the charge though, to prevent riding over their file leaders should they or their horses fall. The principal objection to charging with single rank formation is that after the charge when the usual spreading out takes place, it is scattered too much for its own strength; another, that all men and horses, however good the cavalry, are not fit to lead. The experience of nations who have tried such a system are not favorable to it, even the Cossacks have abandoned it. Our own in the past war was decidedly against it, after a fair test. Several regiments were maneuvered entirely by the "rank entire" system until practice proved its inadmissibility. I know that the Duke of Wellington, as well as such experienced cavalry officers of the same epoch as your General Bacon, Lord William Russell, and Lieutenant General Sir Henry Vivian recommended the adoption of the "rank entire" system, but I doubt whether in practice it attained the expectations they formed of it from theory.

As to the equipment of cavalry, I would arm the trooper with the Sharpe breech-loading carbine and sling, Colt's navy-size revolver, worn in holster on belt around his body, and the light French cavalry saber. The lance was amply tested in our late war, but did not answer, and was abandoned as an arm for cavalry. For a saddle I prefer above all others what is known in this country as the "McClellan pattern" being the result of the observations in that particular by General George B. McClellan whilst in Europe as one of three officers sent there by Honorable Jefferson Davis (when Secretary of War) in April, 1855. It is lighter, more durable, stands exposure to weather better, and is more comfortable to man and horse. In the pouches on either side the soldier ought to carry currycomb and brush, two spare horseshoes and necessary nails, a change of underclothing, soap, brush and comb, and towel, strapped behind the saddle he carries, rolled up in an oil cloth covering, his overcoat and blanket. The felt pad, so highly recommended by Captain Nolan, Fifteenth Hussars, in his very valuable work on cavalry, which always accompanies his saddle, I cannot recommend. I tried one myself when an officer in cavalry in the United States army previous to the war. It did not answer on long scouts in hot weather. The perspiration absorbed from the horse drying would make it too hard, and as a consequence

chafe the animal's back, besides being very hot and uncomfortable to him whilst on the march; I know nothing superior to the common saddle-blanket. Valises with the letter of troop upon them and shabraques have been discarded with us, also wallets and saddle holsters, as tending by the weight of their contents to produce that very troublesome and common disease known as "fistulous withers." For a bridle I recommend a light, but strong and well-finished headstall, the bit to buckle on to the two lower rings by straps attached to it, a halter strap to buckle to the ring under the throat, and on the march the other end to be tied to a ring in front of saddle; unbuckle the short straps, take the bit out of the horse's mouth, untie the halter strap from the saddle, and your horse is ready to be secured. The reins of course go with the bit. I prefer only one rein, as less cumbersome and more simple. The bit to be moderately powerful, with the cheeks rather long to give sufficient leverage. Everything depends upon the biting a horse first receives whether he is to have a hard or a soft mouth, and great care should be taken lest you make him restive and sensitive by an injudicious use of the stiff bit. The Cossacks use nothing but the simple snaffle, whilst the Turk and Arab use bits so powerful as to break the jaw of the horse if suddenly and violently checked. Hence I say it is not so much the bit you put in a horse's mouth, as the manner in which you teach him to obey it, for can anyone deny the horsemanship of the Cossack or Arab, and yet what different means they employ to control their steeds.

For the rest, I remark in conclusion, that to have good cavalry, you must have it well officered, for it is more dependent upon the example and bearing of its leaders than any other arm. General Foy, you know, in his history of the Peninsular War says: "Après les qualités nécessaires au commandant-en-chef, le talent de guerre le plus sublime est celui du général de cavalerie. Eussiez-vous un coup-d'oeil plus rapide et un éclat de détermination plus soudain que le coursier emporté au galop ce n'est rien si vous ne joignez la vigueur de la jeunesse, des bons yeux, une voix retentissante, l'adresse d'un athlète et l'agilité d'un centaure." And when we consider that cavalry is the most difficult and delicate of all arms to handle on the field of battle, I don't think the General's opinion is so exaggerated.

As to its strength, military authorities put it down from one-fourth to one-sixth of the infantry in the same army, though its numbers ought to vary with the nature of the country and strength of the enemy's cavalry. On the field of battle it should generally be employed on the flanks of the army, though ready to be moved to any point favorable for its action.

Cavalry has been very properly termed "the eyes, ears, feeler and feeder of an army," a sentence comprising a great deal. Upon the information gained by it the movements of the whole army are based, and the proper forced reconnaissance with an intelligent secret system, demand the utmost attention on the part of the leader. My own experience taught me to select a small body of men taken from the regiments in which they could be found, who were denominated "headquarter scouts." These men were noted for their daring, intelligence, truthfulness and knowledge of the country; they hovered in squads of two or three on the flanks, front, rear and within the lines of the enemy, and promptly and accurately reported his every movement. I would not recommend that they be put under any officer, but be ordered to report to the chief of cavalry direct, or when it was more convenient, and the information was very important, to the chief of an army corps, or the commanding general first. Subordinate officers to have nothing to do with them, as only tending to delay the transmission of their intelligence by causing it to come through them. I found that twenty-five resolute men, scattered in the way I have described, could always keep me supplied with much necessary information. They were made to see for themselves and not report what citizens might tell them they had seen; were always made to dress in the uniform of their command, and pains were taken to keep them well mounted.

And now I bring this to a close, not wishing longer to delay its transmission, lest you think my promise had not been complied with. If anything I have written should prove of service to you, Colonel, or anyone who is interested in the welfare of your branch of service, I shall be amply compensated.

Most respectfully,

FITZHUGH LEE,

Lieut. Col. GEORGE T. DENISON.

LETTER FROM MAJOR GENERAL T. L. ROSSER, C. S. A.*

Baltimore, Md., January 27, 1868.

Colonel:

Enclosed you will find a few thoughts on the subject of your inquiry of the 18th instant.

I have given you the summary of my convictions without discussing the circumstances which led to them.

Neither the Yankees nor Confederates employed cavalry in the late war, it was all *mounted rifles*. I had one brigade (Ashby's old command), and its history fully sustains the theories of Sydlitz and Nolan as regards the irresistibility of cavalry charges.

Cavalry can sometimes be employed successfully in a *coup de main*, but is not safe to undertake it without mounted rifles. During the late war, I rode into the strongly-fortified post of New Creek and captured the garrison, with cavalry, and with the loss of only two men. But when I undertook the same thing at Beverly, I saw I would not succeed on horseback, and dismounted in two hundred yards of the camp, and attacked it as infantry, and thus easily accomplished on foot that which I undoubtedly would have failed in on horseback.

Cavalry was not used on the battlefields as Ney and Murat used it under the great Napoleon, and the reason was, *that it was not cavalry!*

I am pleased to serve you and my noble friend General Early.

Very truly yours,

THOS. L. ROSSER,

Major General, C. S. A.

Colonel GEO. T. DENISON.

THE CAVALRY SOLDIER.*

No soldier should be taken into the cavalry service *directly*, but into a general camp of instruction, and there exercised in the use of the various arms until his capacity for each be determined, *intellectually* and *physically*. Then no one should be

*From Denison's "Modern Cavalry."

taken into the cavalry who is not possessed of at least ordinary intelligence, a strong constitution, and of more than ordinary muscular power, for in battle his *muscle* and weight of his horse, are to determine results. Hence he should be a good rider and possess a strong arm.

My experience has been, that the majority of men are defective as soldiers in the feet, and if this is the only difficulty they answer just as good a purpose for cavalry service with this defect as without it. Cavalry which is not *thoroughly drilled* and *ably officered* is worthless under any circumstances. These requisites are necessary in every arm, but more so in cavalry than any other; for in battle, a cavalry soldier has his frightened horse to manage and at the same time to use his weapon, at close quarters upon his adversary, whilst infantry and artillery are employed more or less at long range.

In this country, United States, where there is so much wooded and mountainous country, mounted troops should consist of *cavalry* and *mounted rifles*, in the proportion of two of cavalry to one of *mounted rifles*. The cavalry armed with *sabers* and *pistols*, and *nothing else*. The mounted rifles armed with *breech-loading carbines* and *pistols*, *without sabers*.

I regard the lance a fancy arm entirely; does very well on parade, but worthless against disciplined troops. The saber should be light with sufficient length and strength, and almost if not entirely straight.

The pistol, Colt's heavy revolver, I think the best. "*Spencer's light charge*" carbine, I think, is the best for mounted rifles. The next in order of efficiency is the *Sharpe's carbine*.

The McClellan saddle is by far the best I ever saw for cavalry. It is strong, light, and comfortable to man and horse.

Cavalry in this country cannot be regarded as a *defensive* arm of service, and should never be detached from the main army without being accompanied by *artillery* and *mounted rifles*. It is worthless except in the charge, and should never be used for any other purpose. The cavalry soldier should never be dismounted to fight if you expect him to ride over masses of infantry, but be educated to the belief *that nothing can withstand a well-executed charge of cavalry*, and should feel perfectly at home on horseback. All picketing should be done

by mounted rifles, and all escorts and guards for trains and the like should be composed of the same, and the *cavalry always kept in mass, and used in the charge alone*.

I much prefer the *single rank* formation to the double. It is more easily managed, and nothing like so many accidents occur.

INTRODUCTION TO CAVALRY TACTICS.*

Much has been said regarding the relative advantage of single and double rank formation. We have seen that the depth of formation has been gradually decreasing during the last two thousands years from ten or even sixteen ranks to the present system.

The most perfect system of formation is that which enables the commander to do the most service with a given number of men. We will suppose a cavalry brigade of four regiments to be drawn up to charge an enemy. With the single rank formation the brigade will be formed in four lines and inflict upon the enemy four successive shocks, each of which would be nearly as severe as a charge in two ranks, and the number of shocks being double, the amount of execution would certainly be much greater.

Another advantage in single rank, is the greater facility with which troops can be handled and reformed, after the confusion of a charge, and what is of more importance, disorder or confusion are less liable to be incurred. These, together with several other minor considerations, have induced cavalry officers of most experience both in Europe and America, to prefer the single to double ranks.

By forming the flank squadrons in echelon, the enemy would be ignorant as to whether the regiment charging them was in one or two ranks, and, therefore, the moral effect would be the same in both cases.

*From "Cavalry Tactics" by Major General Joseph Wheeler, C. S. A.

EQUINE HEROES OF PICKETT'S CHARGE.

(From *The Breeder & Sportsman* of October 25, 1913.)

IN all the countless columns written in the last half-century on the charge of General Pickett's division at Gettysburg, and in all the detail of that frightful slaughter, nothing has been said of those among whom the death toll was deadliest—the horses of that devoted column.

Every horse which entered that fatal charge met its death; not one withstood the withering fire of Northern cannon and rifle even long enough to reach the Union lines.

Five horses were in the charge. Although there were two or three score mounted officers in the attacking division, General Lee, foreseeing the tremendous mortality that must ensue before the Southern line could reach the Northern trenches advised all officers who could do so to lead their respective commands on foot. It was clear to him that a horse and rider, offering such a fair target in any attempt to cross the intervening field, could not live in the storm of shot and shell from the Union batteries.

His advice was taken by all except five. These were Generals Garnett and Kemper, commanding two of the three brigades composing Pickett's division; Colonels Hunton and Williams, and Captain Jones, General Garnett's aid.

General Garnett had been sick, and was advised by his surgeons just before the charge not to attempt to lead his brigade. He disregarded their protests, and was lifted into the saddle, being too weak to walk. Wrapped in a faded army overcoat—for, despite the heat of the day, he was suffering several y from chills—he rode at the head of his line on his magnificent horse, Red Eye, the finest in all General Longstreet's corps. But before he had covered half the ground to the goal of the Union guns both he and his charger fell dead, each pierced by several bullets.

EQUINE HEROES OF PICKETT'S CHARGE. 483

General Kemper, on his dark horse, had reached the famous Red House without serious mishap to either horse or man. Here, however, they were met by such a sleet of lead that the fine bay was killed almost instantly, while the General, badly wounded, was left for dead on the field.

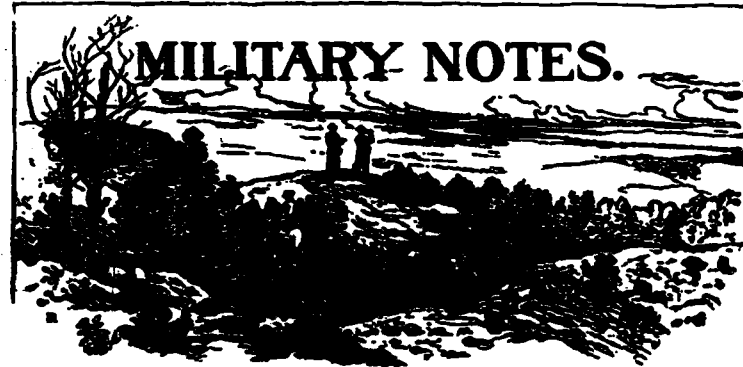
Colonel Hunton, mounted on his orderly's dun horse, was the first officer struck. Hardly had he called to his men to follow him when a minnie ball pierced the calf of his leg and smashed on nearly through the body of his horse. The game animal bore him safely beyond the firing range, and then fell dead.

Colonel Williams and his brown mare reached the Red House unscathed, but here they met the same destroying hail that had swept away Garnett and Kemper and their horses. Both horse and rider tumbled in a heap together, dead.

Captain Jones had his bay mare killed under him early in the action. He himself escaped without a scratch, the only one of the five who did so.

It was thus that these five war horses met their death, four of them finding it in the same fatal volleys that laid their riders low. The good markmanship of the Union gunners and riflemen is evidenced by the fact that all these fatalities took place in the vicinity of the Red House. This building was hardly half way to the Federal batteries.

That every horse should have been thus destroyed before half the journey was accomplished shows how vain was the hope that Stuart's or any other body of Southern cavalry could have lived an instant in the withering fire between the Red House and the Union guns.



THE FARM TO THE CAVALRY—GREETING!

ABOUT nine years ago I visited a large farm in this state and there, for the first time, saw an automatic oat-cleaner in operation. Although I had spent nearly a quarter of a century in our cavalry garrisons I had never seen such a machine. It was very simple, consisting merely of a wooden trough with a false bottom of wire-cloth, and set up at such a slope that oats poured into it at the upper end would run out at the lower end. The dirt sifted through the wire-cloth and ran down under it along the bottom of the trough, while the oats ran down on top of the wire-cloth and were very thoroughly cleaned.

I was at that time on detached service, but I made up my mind that as soon as I rejoined my troop I would make such an oat-cleaner and save my horses from eating dirt with their oats. When I rejoined my regiment I was a belated major, but I had not forgotten the oat-cleaner. I immediately began talking about it to the officers of my squadron, and it was not long before I was gratified to find one set up and in operation in one of the troop stables. This served as an object lesson to the other

troops and within a very few days they were also provided with cleaners.

Last year I returned to this big farm to find two other practical machines in operation which I have never seen in use in the army, but which might be introduced into mounted garrisons with profit to the service. The first is a feed mill run by a gasoline engine. We used to have at old Fort Clark, in the days when we fed part corn, a feed-mill attached to the post saw-mill, for crushing the corn; but the mill on this Dakota farm is for grinding oats. And every grain of oats fed to the horses is first ground in this mill.

Now the object of this mill, like that of every other piece of farm machinery, is to make money. It makes money by saving oats—by making it possible to get the same amount of work out of horses and to keep them in the same or better condition on a smaller quantity of grain than was formerly fed to them whole. There are upwards of 100 horses on this farm, and the foreman told me that five pounds of ground oats to the horse fed three times a day, enabled his animals to do the same amount of work that they formerly did on three daily feeds of seven pounds of whole oats, and at the same time kept the horses in the same condition of flesh.

This feed-mill makes a saving, therefore, of 600 pounds of oats a day for this farm, or 219,000 pounds each year; or figuring thirty-two pounds to the bushel, 6,844 bushels. If the price of oats were fifty cents a bushel, which it sometimes is, but not now, this would make a yearly saving of \$3,422.00 for the farm. According to these figures the Quartermaster's Department might well afford to furnish each squadron of cavalry a feed-mill and gasoline engine. I find that every large farm in the Red River Valley has its feed-mill, and that every owner of horses in this part of the country, who can do so, feeds ground oats; and that generally stockmen count that it saves twenty-five per cent. and keeps their animals in better condition.

But the gasoline engine does many other things on this farm, one of which is to furnish power for the other machine mentioned above. This is a grooming-machine. Of course we have known about grooming-machines for nearly a quarter of a century. Major George W. Read, then a second lieutenant, de-

scribed one in the *Military Service Journal* as far back as 1890. They have been in use in many of the big stables in the cities for many years—but has anybody ever seen one in any of the big corrals in the army?

The advantage of a grooming-machine is not only that with it two men can groom as many horses in an hour as that thirty troopers groom in the same time by hand; but the machine groomed horses will be cleaned as they seldom are cleaned with curry-comb and brush, especially when they have on their winter coats. Of course troopers must groom their mounts in garrison in order to know how to groom them in the field; but it is doubtful if they require fourteen or even seven hours of practice each week in order to learn how to groom a horse or to "keep their hands in." Moreover there are doubtless some old fogies in our cavalry who consider daily grooming, like dress-parade, a matter of discipline; and, when they have their attention invited to the amount of time a grooming-machine would save, will want to know what the Government pays a trooper for if not for grooming his mount—like the farmer who wanted to know how much an old hen's time was worth, when the incubator agent told him as a final argument that an incubator would save a lot of time. But there are men of the younger school in our cavalry who believe that every minute of the trooper's time that can be saved from useless drudgery can be profitably employed otherwise.

M. F. STEELE,
Major U. S. Army, retired.

Fargo, N. D.,
October 5, 1913.

A COMBAT EXERCISE.

The Editor:

I ENCLOSE you herewith a "combat exercise" which I have found extremely useful for teaching the phases of the mounted and dismounted combat of cavalry versus cavalry.

It is possible you may want to call attention to it in your "Professional Notes."

JAMES PARKER,
Brigadier General, U. S. A.

HEADQUARTERS FIRST CAVALRY BRIGADE,

Fort Sam Houston, Texas, October 1, 1913

General Orders No. 21.

The following combat exercise, No. 5, is published for the instruction and practice of the brigade.

THE REGIMENT OR BRIGADE.

Attack and Evasion, in a Wooded Country, free from Fences.

1. Terrain: A section of country having a width of from one mile to a mile and a half, and a length of from two miles to four miles, containing abundant cover, no fences, giving an opportunity for cavalry to move freely, (the best terrain is a park-like alternation of woods and fields). The borders of this area (to which the exercise must be restricted), should be plainly defined.

2. The force is divided into two nearly equal parts, the Reds and the Blues. The mission of the Reds is to pass from one end of this territory to the other, in spite of the opposition of the Blues. The exercise commences with the two opposing forces in contact, *i. e.*, their advanced scouts have discovered each other.

It can be assumed that the Reds are a detachment of cavalry, which after a raid or reconnaissance is endeavoring to rejoin the main body, and find themselves in a defile which the enemy is endeavoring to block. Or, the Reds, are a contact squadron whose instructions make reconnaissance more important than fighting. In general, the mission of the Reds is to traverse the enemy's territory, evading the enemy's forces rather than engaging them. The mission of the Blues is to prevent the Reds from carrying out their designs and, if possible, to destroy them.

The conditions are such that neither commander is justified in scattering his command or breaking it up into small detachments.

3. From the nature of the problem, each force being in the presence of the enemy, a formation suitable for combat is desirable, as the formation in one or more lines of platoon columns, of fours, etc. Scouts under the supervision and command of a commissioned officer should cover front, flanks, and rear. The machine gun platoon should be in a position of protection.

4. The problem gives rise to the following situations:

Situation (a).—The Reds find the Blues in position, dismounted. Leaving a small dismounted detachment to act as a detaining force (which will then mount and rejoin), the Reds, concealing their march behind cover, attempt to pass around the flank of the Blues and toward their objective.

Situation (b).—The Reds find the Blues about to dismount to fight on foot. If within 600 yards (a distance which they can cross in one minute) they charge the Blues, hoping to overthrow them before they can form up and deliver their fire. If the Reds find themselves at a distance of more than 600 yards from the Blues they had better retreat hastily to cover.

Situation (c).—The Reds find the Blues about to make a mounted attack. If within 600 yards the Reds must meet the attack by a counter charge. If at a greater distance than 600 yards, dismounted action is nevertheless (ordinarily) impracticable. For, if the Reds dismount, the Blues will probably do the same, and, holding the Reds in place by fire action, will make it impossible for them to fulfill their mission, which is,

primarily, to reach their objective. A preferable course for the Reds would then be to make a counter charge, or, by evasion try to throw the enemy into confusion and then charge.

Situation (d).—The Reds find the Blues dismounted and so disposed as to cover with their rifle fire the entire width of the defile. Under these circumstances the only recourse of the Reds (after due reconnaissance, in order to discover where the line is weak), is to charge through the Blue line, using a more or less open formation, and trusting to the speed of their horses to diminish casualties. The line pierced, the led horses of the Blues should be at the mercy of the Reds.

Situation (e).—The Reds having passed the Blues, are pursued by them. In this case the proper rôle of the Reds is to continue their march with a view to completing their mission and reaching their objective, but taking advantage of any confusion among the pursuing Blues to punish them, if it can be done without endangering the Reds' retreat.

In this case an opportunity is given to the Blues to attack the flanks of the retreating columns by swarms of foragers, firing from the horse with pistol and rifle.

5. This combat exercise illustrates the value of initiative, of quick decision, of vigorous action, by commanders of regiments, squadrons, and troops. It teaches cooperation, team work, between organizations. It is a school of instruction for scouts. It demonstrates the great advantage which can be gained by making a skillful use of the terrain. It also demonstrates the value of mobility and the advantages of mounted action over dismounted action.

The exercise is applicable, to a less degree, to smaller bodies of troops, such as squadrons, and to country which, while devoid of trees, affords cover.

6. In order to be able to practice the exercise without injuring men and horses, the horses must be so well trained as to be absolutely under control, so that they can be pulled up without collision.

At the conclusion of each attack the umpire or senior commander will halt the movement, discuss the conditions, and give time to the Blues to move on and make the necessary dispositions for renewing the exercise.

7. In case the terrain is wooded but fenced up, the free movement of both Reds and Blues is limited, and the problem of evasion is complicated by the necessity for cutting fences and making outlets. The Blues have a great advantage, and are able to make a greater use of destructive fire action.

8. In case the terrain is level, open, and without fences, as in many parts of Europe, evasion is difficult, and a fire fight more probable.

By command of BRIGADIER GENERAL PARKER,
W. S. SCOTT,
Lieut. Col., Cavalry, Adjutant.

THE PISTOL.

I HAVE just read Captain Munro's article on the pistol in the September JOURNAL and believe he has firm hold of the proper ear.

It is a pity that there should be any question as to the propriety of arming the cavalry with the pistol just at the time when a thoroughly efficient weapon has become available, and especially so for mounted firing. The automatic Colt is a long finger and really points itself; and all the firer has to do is to pull. It is an easy weapon to carry, with a proper holster, is out of the way and does not "flop" at increased gaits; and there is no question of its superior accuracy mounted over the revolver. Although I must say that my experience in this respect was acquired with the .38 automatic, the difference between my previous poor mounted work with the revolver and the results I got in informal practice with the automatic, was illuminating. Where I had previously missed the "elephant" target with distressing frequency with the revolver, I hit tomato cans at equal range often enough to demonstrate the adaptability of the "automatic." Red wood fence-posts were easy; and this for a man who had always to rely on a good score dismounted to bring his total score up where it belonged. Going back to the revolver for the sake of the dismounted

pistol contests, effectively criticised by Captain Munro, was, however, disastrous to the control of the automatic on account of the difference in the grip and consequently of the muscles used; and I find that I, at least, cannot use both weapons well. The military man, however, need not bother with the practice of other than his assigned weapon, when it is the best to be had, as in our case.

We are a pistol nation. We have all sorts of pistol traditions. Our frontier was conquered with the rifle and ruled with the pistol (with occasional lapses in favor of the sawed-off shot gun) for years.

I am sure that Captain Munro is right when he says that thorough proficiency can be developed with this weapon; and he points out with certainty the obstacles to such proficiency when he attacks the concentrated season of practice. I would like to see a troop of cavalry ride past the targets daily going to and coming from troop drill and I believe each cavalry soldier should fire ten ball cartridges a month at the figure riding at the gallop, *during decent months for firing*, and every month if weather permits, or if there is a riding hall available.

The figures used should be the standing target or the *riders* of the mounted figure constructed of malleable iron or boiler plate. Such targets would be in the end cheap and there would be no question of a hit. These targets with big staples at the back could be slipped over four inch pipe posts and our grandchildren could shoot at them.

This recommendation was made about 1906 and the Ordnance Department wanted to know what would happen to the fire at a range of five yards if high power weapons with jacketed projectiles were used against iron targets. The experiment was tried at that range, with a slicker judiciously disposed to collect stray metal; and the longest jump back on any metal was nine feet, accurately measured on the sand beach at Camp Overton, so there is nothing to that question.

The pistol is a weapon of morale. A man equipped with one feels bold and daring, as a cavalryman is required by regulations to feel, even if he blows his thumb off with one occasionally; and contrarywise, the cavalryman, on patrol, say without such a weapon, in the possible presence of a possible

rifleman who is looking for him, feeling that the said rifleman is about sure to get him while he is dismounting to use his rifle, is robbed of the major portion of his "elan."

So far as personal proficiency is concerned, I am under no illusions as to the rifle mounted. I hit something from a horse with a carbine, once, and thought I was on the verge of great discoveries. Sedulous effort and much of Uncle's ammunition failed to score another hit; so I am constrained to the belief that so far as certain individuals go there is little future in such practice.

Query: Why is the pistol not available for preparing the way for the charge against opposing cavalry? Supposing the flanks of the advancing enemy are attacked by especially trained foragers on fast horses, each man with three loaded clips for his pistol? They could at least stir up the flanks, might get in rear and might break or shake the enemy's formation before contact with our echelons. It would be a good deal like torpedo boat service; rather costly, but success here might easily be a most valuable factor in deciding the charge.

I venture the belief that the pistol is the mounted fire arm, that it can be made effective and that it ought to be so made without delay by the cavalry.

J. A. COLE,
Major (Cavalry) Q. M. Corps.

BRIGADE POSTS.

YOUR editorial in the September number of the CAVALRY JOURNAL on Brigade Posts brings to the front a very important subject, and the future training of the army will be greatly influenced by the method finally adopted in concentrating and quartering our regiments.

The reports of the Organization of the Land Forces of the United States does not recommend the Brigade Post, but it does recommend concentrating tactical units in "closely allied groups of stations" • • • "so that they may be periodically assembled for combined training."

In speaking of assembling a brigade it does not mean necessarily that the units composing a brigade must be in the same post, but these organizations must be located so that they can be assembled by easy marches for brigade training during the period of the year allotted to that work. The ideal situation may be broadly stated as follows:

The company and troop commanders must be given a free hand, under broad-minded superiors, during the period devoted to the training of their commands. When that period is over, a battalion or squadron should be at hand into which the captain's command is absorbed; and here again the battalion or squadron commander must be given a free-hand under intelligent supervision, during the period allowed him in which he must make his unit efficient. Upon completion of this period the regiment must be at hand to absorb the battalion or squadron.

Certainly all the elements of a regiment should be in the same post. The regimental commander should be given a great deal of latitude during the period assigned for the training of his regiment. This period having ended, the regiment should find itself so located with respect to the other units of the brigade to which it belongs that the brigade can be assembled by easy marches for brigade training. Under such a system each subordinate is responsible for the proper training of his unit. If any unit is deficient upon entering the period of training of the next higher unit, then its commander should be made to feel the consequences.

Brigade Posts as we sometimes understand them, and as we have had them in some instances in our service, have given us only a maximum of interference by superiors, and the subordinate, having only a minimum of responsibility, will be very liable to develop into a very narrow minded superior.

If we accept the Brigade Post as a general proposition we will eventually find the brigade commander the commanding officer of the post. As such he will become involved in the administration and supply of the post and he is liable to give little attention to the more important tactical duties of his position as brigade commander. His supervision of the training of the

smaller units is liable to ultimately consist of interfering with subordinates in matters of quartering, supply and police.

The brigade commander should be in a position to supervise the training of his brigade, but he must be restrained from meddling. During the periods of brigade and division training standing orders must require him to actually command his brigade, and he must not be permitted to simply adopt the rôle of a superior umpire, while turning the command of the brigade over to the senior colonel.

There seem to be many candidates for the position of brigadier general, but few brigadier generals wish to actually command infantry brigades. The proper supervision of the training of a brigade means a lot of work intelligently performed. If, in addition, the brigade commander will prepare himself in his tactical duties he will have ample to keep him occupied. But how often do our generals "pass the buck" when it comes to actually commanding during a tactical exercise.

The idea that anyone can command an infantry brigade is erroneous. An officer who has specialized all his life and who has no infantry training cannot at the age of fifty-five or thereabouts, be jumped into the command of a brigade and produce the good results which the government should insist upon.

In connection with the various methods to be considered in quartering troops it must be remembered that the quartel system is ideal only when adequate training ground is available locally. Without such training ground the quartel system is little better than prison life.

Adequate maneuver areas are as necessary in the training of the army as is the open sea in the training of the navy.

GEORGE VAN HORN MOSELEY,
Captain First Cavalry.

THE PISTOL.

The Editor:

THE recent articles on the pistol by Captains Hawkins and Munro in the CAVALRY JOURNAL impel me to air my meager views along similar lines. It seems that the majority of cavalry officers are opposed to dropping either the saber or pistol from our equipment, and, of course, the rifle (or carbine, later, let us hope) will remain.

These being true, I beg to suggest some ideas as to proficiency in the use of the pistol. This proficiency will be all the more needed as soon as the new automatic pistol is issued to the service.

As the pistol is essentially a cavalry weapon, the cavalry should have a course of target practice with it more extended than the present course. In order to do this, it will be necessary under present condition, to curtail the course with the rifle.

It is more essential that the cavalryman should be able to shoot accurately at long distances with the rifle than at short distances. Therefore, eliminate the present Expert Rifleman Test for the cavalry and substitute the same time, ammunition allowance and extra pay for the course in pistol firing, extending the distances for dismounted firing to 100 yards and for mounted firing to 50 yards.

Instead of paying the cavalryman \$5.00 monthly for qualification as an expert rifleman pay the same amount for qualification as an expert pistol shot. That is, qualification as a sharpshooter with the rifle to carry the usual \$3.00 additional pay monthly, and the remaining \$2.00, not as expert rifleman, but as expert pistol shot. This extra pay for the pistol to extend for one year only, or until the end of the next regular practice season, and also for the reason that a good pistol shot needs more constant practice to remain such than does a good rifle shot.

The present Expert Rifleman Test is principally a matter of luck, and the marksman's course gives sufficient instruction

in the shorter ranges for all effective purposes. Then the field firing will supplement the M. M. course.

But it is necessary that a cavalryman should be a good rifle shot at long ranges, therefore, let his known distance firings with the rifle cease after the sharpshooter's course. Thence to a more extended course with the pistol, particularly mounted.

Captain Munro truly states that not enough time is given to pistol practice, particularly mounted, but let extra pay be given as suggested above, and there will be a tremendous increase in interest and efficiency the very first year.

Then with all our cavalry good pistol shots, who would doubt the outcome of a surprise attack by a well mounted cavalry force on artillery in column or in flank, broken or shaken infantry when not intrenched, etc.

Cavalry well trained in the use of the pistol, mounted, will be distinctly more aggressive than if poorly trained. Our scouts and patrols would feel more secure, and they must have this morale in order to carry out in an intelligent and proper manner their duties as such.

To my mind the articles by Captains Hawkins and Munro are conclusive, and this is intended solely to point one way to renewed interest and proficiency with the pistol.

WILLIAM R. POPE,

First Lieutenant, Cavalry.

THE NEW SADDLE.

WHY is the center of gravity raised on the new saddle?

I dare say the center of gravity of the packed saddle has been lowered by skillful packing arrangement, but the saddle seat seems to be raised a couple of inches farther off the horses back than in the McClellan or the saddle first devised by the board. I rode that first saddle before it had anything but the leather covered bars to sit on and found it the easiest, most comfortable saddle I ever rode. I am utterly at a loss as to why that seat has been raised.

Another matter I cannot understand is the steel open stirrup. Granted that the letters of cavalry officers to the board indicated a preference for the open stirrup, I do not believe that the open stirrup advocates wanted a steel stirrup. I enjoy an open steel stirrup myself under certain conditions but I never want such a stirrup in zero weather, and I cannot believe that any man who ever rode in such weather does. The steel stirrup is valuable for the occasions suitable for our pretty new spur, but I hope that officers having the decision, when it comes to dividing the new equipment through by heat plus cold, plus rain, plus recruits, plus volunteers, will get zero so far as that steel stirrup is concerned.

J. A. COLE,

Major (Cavalry) Q. M. Corps.

V. Show Jumping.

VI. Hints for Preventing Some of the Numerous Troubles that occur with Young Horses.

VII. Types.

The author states in the beginning that he does not claim to propound any new theories, but that throughout his book his plan is for instruction, and that he is presenting only what experience has proven to him to be the best from well known books on horse training.

The work is written in a clear, interesting style and is full of good practice for anyone interested in horse training. It has three illustrations—two color and three in black and white. At the end of the book are six drawings. The author has appended some very brief notes. The chapter on the Malabar which describes the habit of a youngster.

To give some idea of the paper that commercial values take on each individual in training these horses to jump, the author

in the shorter ranges for all effective purposes. Then the field firing will supplement the M. M. course.

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WILLIAM R. POPE,

First Lieutenant, Cavalry.

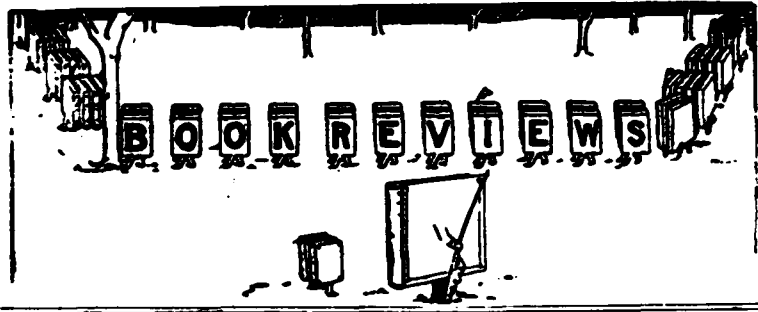
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J. A. COLE,

Major (Cavalry) Q. M. Corps.



**Training
to
Jump.***

We have received from the press of E. P. Dutton & Company a book which should appeal to those of our officers who are interested in cross-country riding and jumping.

The book is by Lieutenant Geoffrey Brooke of the 16th Lancers, British Army. Lieutenant Brooke is an instructor at the Cavalry School at Netheravon, England, and has been a constant winner at the competitions in the International Horse Show at Olympia.

The book is divided into chapters as follows:

I. Theory; Jumping Qualifications; Condition; Balance; Bits.

II. First Lessons; Free Jumping; Schooling in the Long Reins; Circular Manège.

III. Schooling Mounted; Dispensing with Wings; Presenting a Young Horse at a Fence; Sticky Fencers; Horses that Rush at their Fences; Horses that are unable to attain their Correct Balance when Jumping; Martingales.

IV. The Rider's Seat; Action of the Hands; Refusing Horses; Amount of Schooling a Youngster May be Given; Hunting.

*"Training Young Horses to Jump." By Lieutenant Geoffrey Brooke, 16th Lancers, British Army, 1913. E. P. Dutton and Company, New York. Price \$1 50.

V. Show Jumping.
VI. Hints for Preventing Some of the Numerous Troubles that occur with Young Horses.

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The author states in the beginning that he does not claim to propound any new theories, but that throughout his book his plea is for moderation, and that he is presenting only what experience has proven to him to be the best from well-known books on horse training.

The work is written in a clear, interesting style and is full of good pointers for anyone interested in horse training. It has three illustrations in color and thirty-two in black and white. At the end of the chapter on "Hunting," the author has appended some very clever verses from "The Dream of an Old Meltonian," which describes the hunt of a youngster.

To give some idea of the pains that continental riders take to reach perfection in training their horses to jump, the author gives the following extract from a report of an officer of the 16th Lancers who was on duty at the Italian School: "It is impossible to lay down any rule about the rate of progression; at Pinerolo it seems extraordinarily slow, but the result is that all horses jump exceptionally well. Start with a bar on the ground, go over this at all paces until the horse has absolute confidence, and then raise the bar a notch at a time. For the first six weeks at Pinerolo the bar was never raised more than one foot from the ground. The Italian motto is 'Patience and Progression.' The final result is that no horse ever refuses or rushes."

In following out the lines of schooling suggested by the author, the rider should have a horse that is not only a good hunter, but also a good show jumper. The author devotes one chapter to good suggestions on preventing, or dealing with, in the first instances, some of the many ailments that young horses are heir to. This chapter also bears on biting, feeding, and shoeing.

In the last chapter the author presents photographs of six exceptionally good jumpers, each representing more or less a different type of horse from the point of view of conformation. Also included in this chapter is a talk on the natural balance of a

horse, and points on conformation to assist one in picking out horses to train for jumpers.

The author in his "Final Words," speaks about the reasoning power and memory of the horse, in relation to his training, and counsels endless patience and progressive training in order to secure the best results.

The book is handsomely bound, printed on fine paper, and will prove an excellent addition to any horseman's library.

H. E. MANN,

First Lieutenant Twelfth Cavalry.

Donelson Campaign.*

This book is a compilation of documents, official and otherwise, pertaining to the Donelson Campaign of February, 1862, for the convenience of students at the Army School of the Line where this campaign is taken up for intensive study. It does not present the history of the campaign in narrative form nor does it form a complete whole in itself as it is merely designed to aid those who desire to study the official records of this campaign by giving them in compact form additional documents not found in Volume VII, of the Official Rebellion Records, which are necessary or useful for the interpretation or checking of the documents in Volume VII. It is, therefore, a volume which will be of use only to such officers as desire to make a serious study of this campaign and have a set of Rebellion Records of their own or access to a set.

*"Donelson Campaign Sources." A Supplement to Volume VII of the Official Records of the War of the Rebellion. Compiled by Captain A. L. Conger, 18th Infantry, and published by the Book Department of the Army Service Schools.—xii, 244 pp. Price eighty cents.

Under the Old Flag.*

Under the Old Flag. Recollections of military operations in the War for the Union, the Spanish War, the Boxer Rebellion, etc. By James Harrison Wilson, Brevet Major General U. S. Army; late Major General, U. S. Volunteers; Engineer and Inspector General on Grant's Staff; Commander Third Cavalry Division, Army of the Potomac; Commander Cavalry Corps, Military Division of the Mississippi, etc.

The above is the title chosen for his autobiography by one of the most successful military men this country has produced in the last half century. If one considers the General's versatility, the diversity of his services, his attainment of independent command at an age at which present day subalterns (if they are lucky) are buying their first lieutenant's shoulder straps, the vast geographical extent of his services, and the almost uniform success of his undertakings, one must conclude that his is the most distinguished name which now adorns the army list. Entering the service as a lieutenant of Topographical Engineers, he performed in succession the duties of aide-de-camp; chief topographical officer of Grant's department; inspector general of Grant's army; commander of a division of cavalry, with the rank of brigadier general, at the age of twenty-six; commander of a corps of cavalry, with the rank of major general, at the age of twenty-seven; and in supreme command of an independent expedition at the age of twenty-eight. Again taking up the sword after twenty-eight years of civil life, he saw active service as a general officer in theaters as remote from each other as Puerto Rico and China.

While the book gives the story of General Wilson's life, both public and private, it is very evident that its heroic period was that of the great Civil War; for over three-fourths of the text is devoted to this subject. The author states that his work is "neither a history nor a military treatise," and he weaves into the narrative of his personal experiences only so

*"Under the Old Flag." Recollections of Military Operations in the Civil War; The Spanish-American War; The Boxer Rebellion, etc. By James Harrison Wilson, Brevet Major General U. S. A.; late Major General U. S. V.; etc., etc., Two volumes, each with portrait; cloth; over 1,100 pages. Price \$6.00, net per set. Postpaid \$6.30.

much of the general history of the war as is necessary to bind it together and give it coherence.

The keynote of the book is its frankness. In discussing men and events, General Wilson gives his estimates and conclusions with the utmost freedom. This is especially the case in the characterizations of the great historical figures with whom he was associated. His criticisms are the results of his own conclusions, and these have not been influenced by the eminence to which the subjects have risen, or the position accorded them in history. As he had exceptional opportunities for judging many of the foremost leaders of the Union armies, his estimates are always interesting, and often illuminating. His relations with Grant, Sherman, Thomas and Sheridan were close and intimate, and if in his characterizations naught has been set down in malice, he does not believe in a charity that ignores or extenuates.

Of these great leaders, he puts Thomas in the highest rank, both as a soldier and a man, and so far as it concerns him, the book contains no word of adverse criticism. Notwithstanding his thorough loyalty to Grant, and the admiration and affection he feels for him, he states that as a general, he was neither a great organizer nor a first-class technical or theoretical soldier—that his success was won by attention to broad general principles. As a man, he does not hesitate to state that Grant drank to excess, and that this weakness jeopardized his career more than once. Nor does he suppress the fact that he was capable of dealing meanly and unjustly with men for purely personal reasons, as evidenced by his shabby treatment of Thomas in the Nashville campaign. In marked contrast to the fulsome estimate of another of Grant's staff officers, he does not set him forth as a thoroughly rounded character, morally impeccable and intellectually omniscient, but shows that he often looked to Rawlins for moral stamina and to Wilson for brains. In other words, his picture of Grant is that of a human, and not of a demigod, and as a consequence, it is far more convincing than a library of eulogies.

As for Sherman, while he liked and admired him, General Wilson considered him distinctly inferior to Grant. He makes him out opinionative and dogmatic, and possessed of no small

share of conceit. That while brilliant, his mind was "more destructive than constructive," and though an able strategist where the capture of places or the over-running of territory was concerned, yet when it came to the chief object of all military operations, namely the defeat or destruction of the main hostile army opposed to him, he was a failure!

Sheridan comes off even less fortunately than Sherman. All opinions to the contrary notwithstanding, the author does not consider him a great cavalry general. General Wilson's experiences while serving in Sheridan's cavalry corps were not wholly satisfactory to him, and Sheridan comes in for some sharp criticism. His failure to take Richmond after Yellow Tavern, is cited as a grave strategical mistake. His retreat by a circuitous route after Trevillian Station, instead of pressing on towards Charlottesville, is considered an evidence of undue caution. His movements and operations having in view "holding open the door" for Wilson's return from the raid against the Danville and Southside railroads, are characterized as flat and inexcusable failures. Finally Sheridan is charged with timidity in the first stages of his Valley campaign.

It would appear from General Wilson's account that he freely offered his advice to Grant, and others, as to the proper plan to be followed or not to be followed and that, as a rule, it was as freely accepted and followed. This is apparent at every turn.

Thus in the Vicksburg campaign: "I urged Grant to give up the campaign by land, and go in person with the main body down the river. Fortunately it turned out that his inclinations were in accord with my suggestion." As to the canal project across De Soto Peninsula, from Tuscumbia Bend: "From the first time I saw it, I condemned it as impracticable." The project was abandoned. Later we read of his prescribing the only feasible plan for the capture of Vicksburg, by turning the defenses south of the position, the fleet and the transports running the batteries. "Wilson" said Rawlins, "I believe you are right, and I shall advise Grant to carry your plan into effect at once." And Grant was not insensible to advice. After Grant had come within reach of the Vicksburg and Jackson railroad, and seemed undecided whether to turn first against

Clinton or to move against Jackson: "I * * * then advised Grant to move his whole army towards Jackson, and to take that place before turning to the west." So to Jackson, Grant moved with two of his corps. After the fall of Vicksburg: "It will be seen that a much better disposition of Grant's forces would have been to send them to Chattanooga before rather than after the battle of Chickamauga. I presented this view as soon as Sherman signified his intention of giving up the campaign east of Jackson." Unfortunately this view was not adopted, and Rosecrans' career suffered a sudden eclipse. At Chattanooga, after Sherman had suffered defeat, and things were at a standstill all along the Union line: "Rawlins, at my suggestion, urged Grant to silence Granger, and give Thomas positive orders for a general advance by the Army of the Cumberland." Whereupon all sulkiness, embarrassment and indecision ceased on Orchard Knob, and Missionary Ridge was swept clear of the enemy. In Sheridan's Valley campaign, when Sheridan after a retrograde movement, seemed loath to advance: "I met General Grant at Sheridan's headquarters and told him so far as I could see we should no longer delay our advance." Sheridan was at once ordered to "go in." Only once did Grant beat him to it. After the drawn battle of the Wilderness: "Grant, catching sight of me, threw up his hand, and cheerily called out, 'Its all right, Wilson, the army is moving towards Richmond!' knowing that I would favor advancing rather than falling back, and he made haste to reassure me."

Considering how nearly indispensable Wilson was to Grant's staff, it would appear that, so far as his own personal interests were concerned, in assigning Wilson to duty with troops, Grant committed a blunder. We are not surprised to learn that on more than one occasion both Rawlins and Dana urged Wilson to return to the staff, for, the book goes on to state: "Grant told Rawlins that he depended more upon my judgment on military matters than upon that of any one else in the army." And Grant was a man of "exceedingly sound judgment." Later, having joined the Western Army, Sherman unfolded to General Wilson his plan for the march to the Sea. "I suggested that * * * he would find it much better to pass through Augusta on the interior short line toward Grant

in Virginia." But Sherman was obdurate, and stuck to his own plan, and, in consequence, the strategic advantage of interior lines passed to the enemy.

General Wilson is in the main highly complimentary to his fellow generals in the Cavalry Corps, Army of the Potomac, Gregg, Torbert and Custer all come in for eulogiums, but there is one significant omission. Naught is said as to the character or the distinguished services of Wesley Merritt. This all the more noticeable as Merritt was Wilson's classmate. One must infer that this was due to strained personal relations, growing out of resentment, on Merritt's part, to the assignment of Wilson to the command of the Third Division. A hint of this is contained in the author's description of the episode of the retreat of the cavalry corps from Kearneyville, in the latter part of August, 1864: "One of my officers, having gone to Torbert's headquarters for such orders as he might wish to send me, while waiting, overheard Torbert and Merritt conferring, and the latter say: 'Give Wilson the rear, with orders to hold on strongly till we get out of the way. This will delay him, so that the enemy will follow him to Halltown and give him hell, while we return leisurely to our camps at Shepherdstown.' My aid promptly reported this aimable suggestion to me still in the field." So Wilson, instead of "holding on strongly," speedily and skillfully withdrew from hostile contact, leaving Torbert uncovered. Whereupon Jube Early promptly fell upon Torbert's unguarded camps, and inflicted what the author evidently considers retributive justice.

To a cavalryman, the story of General Wilson's services with the cavalry arm is naturally the most interesting portion of the narrative. As commander of the Third Cavalry Division, Army of the Potomac, he shows plainly that conditions in the cavalry corps were not wholly to his liking. He condemns unsparingly the strategical employment of the corps, and is especially bitter as to the part played, not only by Sheridan, but by the entire Army of the Potomac, in failing to secure him a safe return from the raid against the Southside and Danville railroads.

He rejoined the western army with evident satisfaction, not only because he preferred it to the Army of the Potomac, but

also because of the greater independence of action his new command conferred upon him. His first and most strenuous task was the rehabilitation of the western cavalry. To anyone acquainted with the job of getting new or run-down cavalry into shape, the fact that in two months he changed an inchoate mass of scattered and half dismounted regiments into a corps that was to prove the deciding factor in a great decisive victory, will seem the most amazing achievement of a remarkable career.

No one who has studied the battle of Nashville will question the fact that the cavalry corps was the first organization to make any marked impression on the Confederate line. And that until Wilson turned Hood's left flank, there was a stalemate along the whole front of battle. This was the crowning achievement of General Wilson's military career. At Nashville he was the instrument by which a main hostile army was destroyed, and this, we are taught, is the principal object of all military operations.

The exploits of the cavalry corps in the Selma campaign, however creditable, formed but a side issue at best. The author does not think that sufficient importance has been attached to his campaign in Alabama and Georgia by general historians, and while this is perfectly natural, it can hardly be expected that they will accept his point of view. After Nashville, the war in the west was a closed chapter. So far as that theater was concerned, the Confederacy was moribund, and every spark of hope that still glimmered in the hearts of the Southern people, was kept alive by the existence of Lee's army in Virginia. The independent operations of the cavalry corps, Military Division of the Mississippi, merely extinguished the dying embers of a conflagration, which in a few days, or weeks, at most, would have expired of themselves.

But if of minor importance as an historical event, as a military operation, the Selma campaign is entitled to none the less credit. For it was here that the new cavalry leader met the redoubtable Forrest, and succeeded not only in "getting the jump on him," but also in "gittin' thar the fustest with the mostest men." General Wilson is justly proud of the tactical results achieved at Selma, but they are not to be compared, in importance, to his strategic victory in effecting a superior con-

centration while his opponent was in a state of hopeless dispersion. As to the character of the tactical undertaking, one may doubt if it was as formidable as it appeared. Richard Taylor was no carpet knight, and if he saved himself by flight even before the battle joined, and if the entire defense depended upon a single faint hearted Confederate brigade, and of "judges, lawyers, preachers, doctors and government employees, old and young alike," driven into the fortifications by the "inexorable Forrest," whose one word for all was: "Into the works, or into the river," then the taking of Selma was not such a dooms desperate business after all. One may conjecture whether the arrival of the Englishman, Millington, in Wilson's camp, with such opportune information as to the formidable nature of the Selma defenses, without a word of the weakness of the actual defense, was not a smooth stratagem intended to induce hesitation and delay which would give Forrest time to collect the scattered resources. If this is so, the ruse was tried on the wrong man.

While General Wilson's book is "not history," there is valuable historical material to be found in it. Few had such favorable opportunities as he for judging the temper of the Union generals and troops after the second day's fighting at Antietam. He found Sumner, discouraged; Fitz John Porter, glum and lacking in aggressive temper; Meade, with little aggressive temper left; Hooker, whipped; and the whole line of battle in a shaky condition. In other words, the army and its leaders were on the verge of demoralization. One must stand amazed at Lee's clearness of vision, when he decided that conditions favored a counter attack on the morning of September 18th, and was deterred from ordering it only by the insuperable objections that his most trusted lieutenants had no further stomach for the fray.

The inside history of the relief of McClernand is told with a particularity to be found in no other source known to the undersigned.

The author explodes the fantastic story of the "mule charge" at Wauhatchie, which Horace Porter rolls over his tongue with such evident gusto.

The case made out against Sheridan, and incidentally against Grant, Meade and Humphreys, for the failure to keep open the door for his return from the raid against the Southside and Danville railroads, and which, from the assurance given him, he had every right to count on finding open, is very strong. The author supports his case by incontrovertible evidence, and in a manner to satisfy the most exacting of historical critics.

In giving a full and absorbing account of the independent operations of the cavalry corps, Military Division of the Mississippi, the author invites the attention of military students to an episode too often neglected, especially by those specializing on the work of American cavalry.

But while "neither a history or a military treatise," it would have been just as well if the author had kept his book free from historical inaccuracies. For example, he claims Wilson's Creek as a Union victory. Yet the records show that the Union forces engaged in that battle abandoned the field and the body of their general to the Confederates, and made a rapid retreat to Rolla, a retrograde movement of over one hundred miles.

Fort Pulaski's "thick granite walls" happen to be built of brick.

In reciting the military achievements of his brother Henry, in which he takes a fraternal pride, he has him wounded while leading his company of the 18th Illinois "in a successful charge against the enemy's works at Donelson." The only successful charge made against the Confederate works at Donelson which is mentioned in the records, is that which was made on the 15th of February by Lauman's brigade of Smith's division. The 18th Illinois is shown to be in Oglesby's brigade of McClelland's division, and according to McClelland's and Oglesby's reports, was not seriously engaged until it was overwhelmed on the morning of February 15th, the balance of McClelland's division by the attack of Pillow and Buckner. From these reports it must be inferred that any charge made by the 18th Illinois on that occasion must have been to the rear.

General Henry E. Stoughton was not taken prisoner in 1864, "in the Shenandoah Valley, while visiting ladies outside of camp." He was captured by Mosby on the early morning

of the 9th of March, 1863, while asleep in his bed at Fairfax Court House, within fifteen miles of Washington.

When the cavalry corps joined the Army of the Potomac on May 24th, 1864, Lee was in position, not on the South Anna, but on the North Anna.

In making out a case of discrimination against West Pointers in the selection of officers for high command in the Spanish War, the author states: "With the exception of Lee and myself, no West Pointer had corps rank, and none received the command of an independent expedition." Wesley Merritt was assigned to the command of the Eighth Corps, and headed the independent expedition to the Philippines. It will be recalled that he was the only West point man, not in the staff, who held general's rank in the regular army at that time.

These, however, are errors of small importance, and minor defects at worst. But there is another statement which requires more careful scrutiny. In criticising the "March to the Sea," the author writes:

"It is now well known that he (Sherman) met with no effective resistance. but had a picnic, living on the fat of the land, going to Brunswick first, and finally to Savannah."

This, I believe, will be a surprise to most historical students. The official itineraries, show that no part of Sherman's army went within sixty miles of Brunswick. General Wilson, in criticising Sherman for rejecting his advice to march from Atlanta by the shortest line, through Augusta, to Grant in Virginia, intimates that Sherman made a strategic blunder "which the enemy improved by collecting the remnants of Hood's defeated army from Tennessee, and, uniting it with all the other Confederate troops they could find outside of Lee's army, confronted the invaders in the Carolinas with a perfection of strategy and a boldness of determination which, like Hood's movement against Nashville, lack nothing but weight to give it a complete victory."

The wider the detour, the greater the blunder, and considering the gravity of the charge, it would be interesting to learn from what source General Wilson derives his information that Sherman, in his march to the sea, "went to Brunswick first".

In closing, I hope I may be pardoned for saying that in describing the work of his officers and men, the author is too lavish in the use of adjectives. The descriptives "splendid", "dashing," "invincible," and "gallant," (especially "gallant") are slightly overworked. Lee, who was chary of adjectives, once designated a young artillerist, dead upon the field of battle, as gallant, and no chronicler has ever forgotten the epithet. How would it have been had he so characterized every officer whose name it became necessary to mention? That praise would have lost its savor goes without saying. Humphreys closed his remarkable story of the Virginia campaign of 1864-5 with these words:

"It has not seemed to me necessary to attempt a eulogy upon the Army of the Potomac or the Army of Northern Virginia."

And he might well so terminate his labors, for the calm, temperate, judical language of every page bears testimony to the endurance, determination, and unflinching courage of the greatest armies America has ever produced.

This, however, is a question of taste, and may well be forgotten in our recognition of the great service General Wilson has done the arm in recalling what American cavalry, when fearlessly and intelligently led, can accomplish. In its organization, armament and tactics the Cavalry Corps, Military Division of the Mississippi, was essentially American. It had no foreign model or prototype, and yet, can the cavalry of any of the great military powers show a greater record of achievement? I, for one, venture to doubt it. And until the military world has produced a more salient example, the most fruitful field for study for the cavalry officer, or for the well wisher of the arm, is to be found in our military annals.

S. H. E.

**Campaign
in
Thrace.***

The author of this work is Major Philip Howell, General Staff, British Army. The book is made up of six lectures, given, more or less in the form in which printed, at the Staff College at Camberley in February and March, 1913, following a visit made by the author to the battlefields of Thrace and to the headquarters of the Bulgarian Army during the armistice between the first and second phases of the war.

The first lecture deals with the problem of the initiative in war and the general plan of campaign of the Bulgarians and their special plan for the invasion of Thrace; the second lecture with the Bulgarian mobilization and concentration; the third with the strategical deployment (18th to 20th of October); the fourth with the capture of Kirk-Kilisse; the fifth with the battles of Loule-Bourgas and Bounar-Hissar, and the sixth with general comments on the war and a discussion of the art of command, moral and psychological considerations, use of the bayonet, "evening attacks," armament and equipment, and entrenchments.

The sources of the Major's information were from the members of the Bulgarian General Staff and what he obtained from his own observation. In the absence of any official account of this part of the war and generally of any information on the subject, it is impossible to criticise any of his statements of fact.

The lectures are each prefaced by a statement of the general and special situation as it was known to the Bulgarian General Staff up to the moment of decision. This is followed in each such case by an "estimate of the situation" much as it might have been made by the Bulgarian General Staff and their ultimate decision and method of execution. In this respect the lectures greatly resemble an hypothetical map problem but with the added element of reality.

The cavalryman will find much of interest in the book concerning the excellent employment of the cavalry division during the concentration of the Bulgarian Army, and its clearing the front and movement to a flank when the armies advanced

*"The Campaign in Thrace." By Major Philip Howell, General Staff, British Army, 1912. Hugh Rees, Ltd., London. Price 4 shillings, net.

into Thrace; also, its misuse during the engagements along the line Loule-Bourgas—Boumar-Hissar.

The infantryman will be interested in the formations adopted by the armies and the various divisions thereof in the advance, and in the frontages, depth of column of attack as originally ordered and the "*spreading out*" that occurred during the period of combat from October 28th to November 1st; also, in the author's remarks on "*evening attacks*," "*use of the bayonet*" and entrenchments.

The use of the Bulgarian artillery against the Turkish reserves on November 1st, causing them to break and flee in great disorder while the Turkish front line was still holding, should be of great interest to both the infantry and field artillery.

The language of the text is concise and clear. The typography and plates are excellent.



THE TENTATIVE CAVALRY DRILL REGULATIONS.

As our readers have learned from the weekly service periodicals, a set of tentative Cavalry Drill Regulations have been tried out recently at the cavalry camp at Winchester, Virginia, where there were assembled two full regiments and two squadrons of a third regiment, practically a cavalry brigade. At the same time, this was a try out, also, to a certain extent, of the proposed plan to reduce the size of our cavalry regiments.

There were present, in addition to the Board detailed to report upon these tentative drill regulations, several of our cavalry officers of experience and the result of their conclusions as to the new drill will be awaited with interest.

As but a very few of our cavalry officers know anything whatever of these proposed drill regulations, the Editor of the CAVALRY JOURNAL tried, first, to procure a copy of the drill regulations with authority to publish the same but without success. Second, an effort was made to obtain from several cavalry officers who were present as observers and participants in the try out, their views as to the merits of the proposed drill and organization. This effort was partially successful only and there appears in this number of the JOURNAL reports or notes from two of these. The first is from one of the colonels of a participating regiment and which appears as an article. The second is from one of the captains of a participating regiment and was in the form of hastily prepared, pencil notes on the camp and the instruction given there. These notes are given herewith below.

A copy of a report made by one of the observers has also been received but, up to date, authority to publish the same has not been received. It is a careful prepared report and sets forth in detail the writer's objections not only to certain features of the proposed drill regulations, particularly as to the double rank formation, but also to any change in the organization of our cavalry regiments.

It has been learned that these tentative drill regulations are now in print and will soon be distributed to the cavalry regiments with a view of being tried out by them before their final adoption.

The notes referred to above are as follows:

NOTES ON THE CAVALRY CAMP OF INSTRUCTION
AT WINCHESTER.

The following notes on the conduct and results of the cavalry camp at Winchester are furnished by request and are given for what they are worth.

The Camp.

The camp was located on rolling, mostly uncultivated ground about six miles south of Winchester. There was some timber and a small stream, sufficiently large to water the animals, ran through the camp. There was a thin soil over a disintegrated slate which made the best possible surface for a camp. Even during a rain there was almost no mud and the dust was less than one had any right to expect in a camp where there were so many animals.

The rolling, open ground offered good cover, was easily traversed and sufficiently varied for all purposes but rather too steep for horses to stand comfortably on the picket lines. As a whole the camp site was ideal.

The camp was located close to two wagon roads leading to Winchester but there was no other means of reaching that town. Winchester is a dry town and was sufficiently distant from camp to prevent an undue amount of leaving camp.

The people were most hospitable, treated the enlisted men with consideration, made no attempts to run up prices on the supplies required for his personal use or his mess, and constantly

exerted themselves to show a friendly spirit both towards officers and enlisted men.

The discipline of the camp was excellent, making so good an impression as to call forth resolutions of approval from the Business Mens' Association of Winchester. The behavior of the command fairly earned this commendation which was a source of great satisfaction to have been given us voluntarily by the people.

The water supply from artesian wells was excellent, the camp clean and the health of the camp good. Statistics as to the health of the command would show little as all serious cases of disease or injury were promptly transferred to hospitals at posts. It seemed, however, as if there was no preventable sickness and complete statistics would show a sick report below the normal of the posts from which the troops came.

Tactical Instruction.

There was no attempt made to give any cavalry instruction of a technical nature except a few set demonstrations against an outlined enemy who was set up as a straw man to be demolished. The sole purpose of the camp was to teach a new drill regulation as drill and not for maneuvers. Many officers expressed regret that two and one-half regiments of cavalry should be assembled in camp for ten weeks without utilizing the opportunity to give officers and men a chance to work together at the kind of duties that would fall to a cavalry brigade in war.

Drill Regulations.

Each troop was required to furnish a platoon of thirty-three selected men, mounted on selected horses and under an officer. This platoon was permanently organized so that each man occupied the same position every day.

A set of tentative drill regulations—essentially the French Cavalry Drill Regulations—was furnished and no variation therefrom was tolerated.

After a couple of weeks of individual and platoon drill under these regulations, the platoons were organized into squadrons of four platoons each and after some further drill as squadrons, the squadrons were organized into two regiments of four squad-

rons each. These were sometimes exercised in a regiment of six squadrons. The two regiments were, towards the end of the camp, drilled as a brigade. Troops drilled three hours per day for six days in the week.

All fences were removed from the drill ground and some obstacles, about two and one-half feet high, were built in convenient places. The troops were then drilled to pay no attention to accidents of the ground or to the ordinary obstacles.

The troops were soon excellently well drilled in all the movements given in the tentative drill regulations, easily passed over broken country or took the above mentioned obstacles in line. Even considering the conditions—fences removed, best men on best horses, all previously trained, all men in same place each day and the platoons always led by the same officer—yet the results were better than was to be expected.

The new drill gives great facility for handling large bodies of horsemen in any kind of country and makes the command very compact and mobile.

Many officers would have liked to have seen what could be done, under the same conditions as to ground, men, horses, etc., with the old drill. That is, the demonstration of the new drill would have been more convincing had it been compared on the ground and under equally good conditions with not only the old drill but also with several suggested formations that were not permitted to be tried out.

Opinions differed as to what the demonstration showed. Hardly any of the officers thought the organization of our cavalry should be changed to accord with the new drill. A great many believed the double rank advisable and that the present Cavalry Drill Regulations should be changed accordingly and that the President should be urged to use his discretion and increase the enlisted strength of the troops now in service. Most officers thought that our present Drill Regulations should be revised.

The features of the new drill that seemed to be most universally accepted as an improvement were:

(a).—*Leadership*.—The platoon in double rank has sixteen files front with a corporal as center guide. The guide is always center for the platoon which is led as in the old "Follow in trace,"

the center guide following the platoon leader at a distance of a horse's length.

(b). *No attempt to keep long, straight lines*.—In the regiment, the squadrons are slightly echeloned so that the longest single line that is attempted is sixty-four files front.

(c). *The fan shaped deployment*.—Being in column of platoons, to form line to the front the first platoon continues moving straight to the front; the second platoon obliques to the right while the third and fourth platoons oblique to the left and form on the left of the original first platoon, the original second platoon being on the right of the line when formed.

(d). *The Charge*.—The charge as prescribed is made by turning the horse loose to go as fast as horse and rider can go, but the charge is not given until within fifty yards of the objective. In this short distance horses if turned loose to go their best do not get badly out of alignment and not having been pulling at the bit are ready to obey it when applied. Such charges have speed and vim, yet do not scatter as badly as in the old method of trying to keep good alignment throughout.

(e). *Silence*.—The drills, except at night or in a fog, are solely by signal.

(f). *Simplicity*.—There were ample movements prescribed for the efficient handling of troops but the number was vastly less than in the old Drill Regulations.

Results.

The drills were rather faster than one usually sees and over rough country so that the effect on horses and men cannot be fairly compared with the old formations.

The ambulance was a regular attendant at drills, probably averaging nearly a call per drill. This seemed rather frequent but one must remember that there were about eleven hundred men drilling.

The horses were frequently stepped on by their rear rank file, resulting in many cut heels and quite a few were injured in this manner well above the pastern, injuring the back tendon. There were a considerable number of sprained shoulders. Whether these came from more than the usual amount of galloping into and out of small ravines, from too much jumping

or from the quick turning is not clear. As the platoon swings around as did the old sets of fours, the flank horses get a lot of galloping and the leader must not go too fast or he will wind his flank horses. This may have caused some of the sore shoulders. At any rate many horses, not actually on sick report seemed to be tender in front.

Plugs have no business in this game. If the training at Winchester is to be followed as a precedent, the quality of our horses will materially improve. Only good horses are sufficiently active and hardy for such long and fast drills. The others will soon appear before the inspector.

In considering the results of the camp at Winchester it must be remembered that it was a *demonstration* of what can be done under the most favorable circumstances with the new tentative Drill Regulations. There was no attempt made to compare this organization or drill with any other and discussions along comparative lines were not welcomed.

A CARBINE FOR THE CAVALRY.

Referring to the editorial note on the subject of a carbine for the cavalry that appeared in the September, 1913, number of the CAVALRY JOURNAL, p. 352, where it is stated that experiments were being made in the line of producing a carbine or short rifle for our cavalry, the following will be of interest:

The Vice-President of the Cavalry Association, Major Sayre, has received a letter from an officer of the Ordnance Department from which we quote as follows:

"As you asked especially about a short rifle or carbine, I am sending you now a little memorandum that I believe gives the pertinent points about which you ask. This modified rifle, to all intents and purposes, is the same as the old carbine.

"I think that the Ordnance Department, as well as most other people, would oppose the issue of a special cartridge for the cavalry and the question of lightening the rifle therefore,

reduces to the ability of the shoulders of your men being able to stand the punishment. As you will see from the memorandum very fair ballistics can be obtained from a carbine with a shorter barrel."

MEMORANDUM REGARDING A SHORT RIFLE FOR THE CAVALRY.

A modified rifle has been submitted for consideration by a cavalry officer. The principal points are as follows:

- (a). The barrel has been shortened four inches.
- (b). The muzzle velocity is reduced from 2,700 f. s. to 2,600 f. s. and the muzzle energy from 2,425 ft. lbs. to 2,249 ft. lbs.
- (c). The energy of free recoil is increased to 16.85 lbs. against 14.98 for the service rifle.
- (d). For 1,000 yards the maximum ordinate is increased from 14.48 ft. to 15.63 ft. The weight is decreased from 8 lbs., 11 oz. to 7 lbs., 6½ ozs.

The modified rifle, however, resembles the old carbine and if a bayonet is to be used, the weight would have to be increased to provide for extending the stock and applying a front band.

While it is believed that the loss in ballistic properties as shown by the above memorandum amounts to very little in comparison with the advantage gained in the reduced weight, yet the increased recoil may prove a stumbling block in the way of a change. It is assumed that it would never do for the cavalry to have a special cartridge for their firearm and there will be no chance, therefore, to reduce the recoil without designing an entirely new weapon. What do our cavalry officers, who are experts in this line, think about it?

The following extracts from a letter received from one of our cavalry officers will prove of interest in this connection:

"You have two editorials in the last issue of the CAVALRY JOURNAL which struck me as being especially well timed. The only trouble with them was that they were not long enough and did not go sufficiently into details.

"One was that in regard to brigade posts. * * * The other was that referring to the carbine. I believe that if we could put it to a vote that the carbine would win out over the rifle by an overwhelming majority.

"If those who forced the rifle on our cavalry to replace the carbine had to command troops of horses, aged from four to twenty-four, here in this climate with that rifle hanging from the pommel of the saddle and wearing holes in the backs of their horses, they might get some idea of a proper arm for the cavalry.

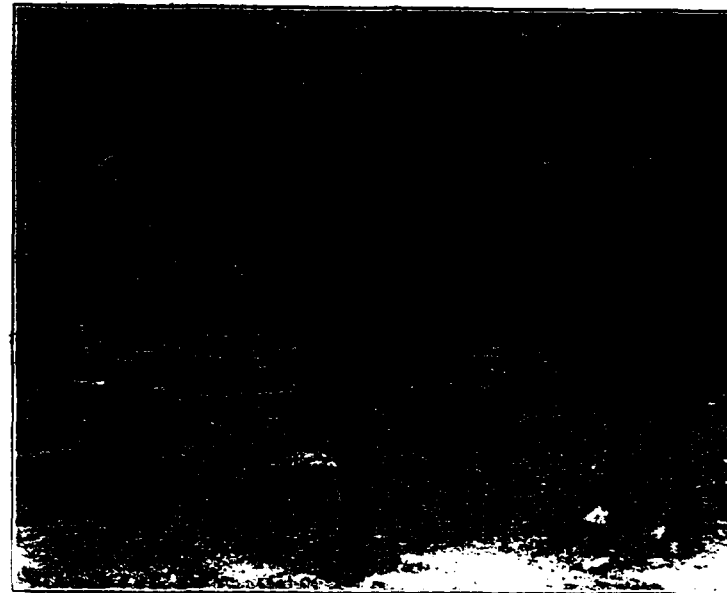
"I have no sympathy with the idea that we should be prepared to compete with the infantry at rifle competitions. Why not compete with the field and coast artillery? We are not infantry and there is no more reason for trying to compete with them than with any other arm. We have not the time for such preparation with the rifle as to make such competitions at all equal if we pay proper attention to the other training necessary to make good cavalymen. At target practice we see two months spent with the rifle and two days with the revolver and not a day in the year in intelligent instruction in the use of the saber.

"The dismounted action of cavalry in war would seldom call for firing at greater ranges than 800 yards. Cavalry that cannot get that close to an enemy without suffering severe loss before going into dismounted action is not worth the name.

"It should be a simple matter to design a carbine which would shoot the present ammunition up to 800 yards as well and with as flat a trajectory as the present rifle and thus do away with much unnecessary weight and bulk. Who ever claimed that a man could do anything in the way of controlling his horse with a log under his knee."

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HIGH CLASS.

Bay mare; 16 $\frac{1}{4}$ hands; 4 years old; weight 1,000 lbs.; by Watchman; out of Guardsman mare. Owned by Captain S. D. ROCKENBACH, 11th Cavalry.

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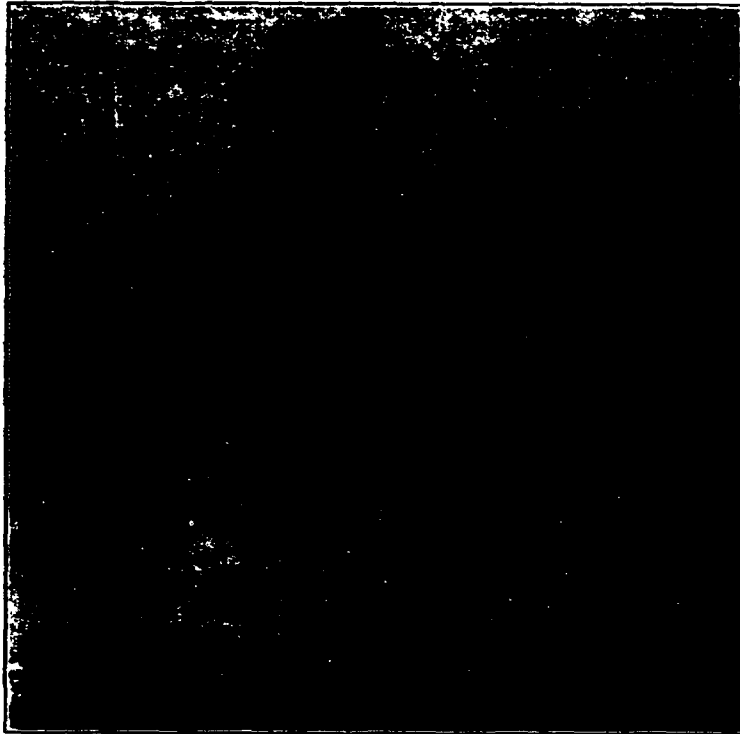


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In this connection, attention is invited to the advisability of furnishing the photographs of horses for publication without a rider, this for several reasons.



ORLENE.

Chestnut colt, (thoroughbred) by Ornament; out of Pauline Derringer. 15-2½ hands, 4 years old, weight 1,075, girth 73 inches, bone below knee 5½ inches.

This colt has the blood of Onandaga, Bend Or, Galopin, Doncaster, Thormanby, and Stockwell on his sire's side and of Spendthrift, St. Blaise, Lexington and Glencoe on his dam's side.

Second prize in "Military Horses" at the New York State Fair Horse Show, 1912. Ten entries in class. Owned and ridden by First Lieutenant WILLIAM R. POPP, Cavalry.

First.—No one cares, except possibly the immediate friends and relatives of a rider, who the rider is or how he looks; second, it usually makes the cut too large and, therefore, more expensive;

and, third, and more particularly, the conformation of the horse is shown much better without a saddle or rider. Also, the choice of the background when having photograph taken should be more carefully chosen than is frequently the case. This not



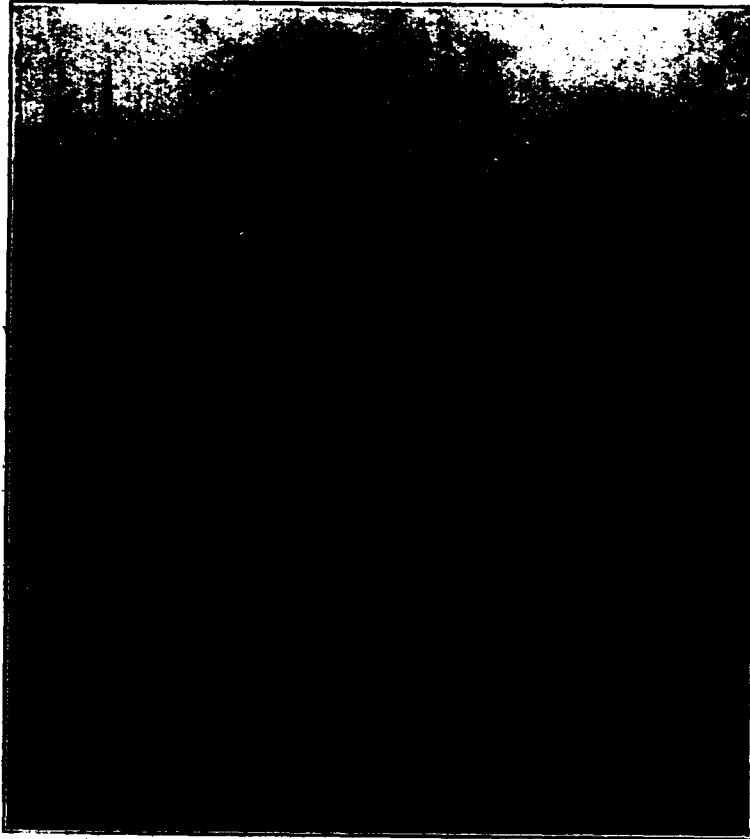
BONITA.

Black mare, 15½ hands, weight 1,073 lbs., 6 years old, girth 73 inches, bone below knee 5½ inches.

Sire "Gillig" (Morgan); Dam, Brunetta a standard bred mare out of Carmencita by Dudley. Owned and ridden by First Lieutenant WILLIAM R. POPP, Cavalry.

only so as to show the outlines of the horse to the best advantage but also to prevent the introduction of incongruous objects in the background that, in some instances, it has been necessary to have cut out of the plate at an additional cost.

A large photograph is generally much better than a small one for reproduction as the latter is frequently too indistinct or has such a poor background that it will not stand enlarging, while on the other hand, a large photograph can be reduced to any extent and the cut be thereby improved.



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BRIGADE POSTS.

The editorial, under the above title, that appeared in the last number of this JOURNAL brought forth two vigorous comments from two of our captains of cavalry, both of whom do not favor having cavalry garrisons larger than those for a single regiment. The first is from the pen of Captain Moseley and appears in this number, page 492. It is a well prepared discussion of this subject and deserves the careful consideration of our cavalry officers and those in authority. The second is from one not writing for publication, but who states: "While I am not writing this for publication, yet I felt like speaking my mind to some one and thought it best to send it to you. Possibly I am the only officer in the service with such ideas as these, but it will have its little part in influencing the editorial mind."

The writer's objection to brigade posts and with them the brigade commander and his staff appears to be, first, that these additional officers will have to be taken care of and will require additional details as orderlies, strikers, etc., and, second, that there will be interference on the part of the brigade commander with the instruction of the troops, squadrons and regiments. In other words that they will meddle with the duties of the captains, majors and colonels.

As to the first objection, while it is true, under present conditions, that additional men would have to be detailed for legitimate duties as orderlies, etc., and that thereby the strength of the men present for duty and instruction will be diminished to a certain extent, yet proper legislation or regulation could and should remedy this trouble by giving to brigade headquarters a detachment of orderlies as the regimental headquarters now have.

Regarding the second objection, it may be possible that some brigade commanders may be so constituted that they will never be able to keep their hands off of the regiments, squadrons and troops. We have had colonels who, in like manner,

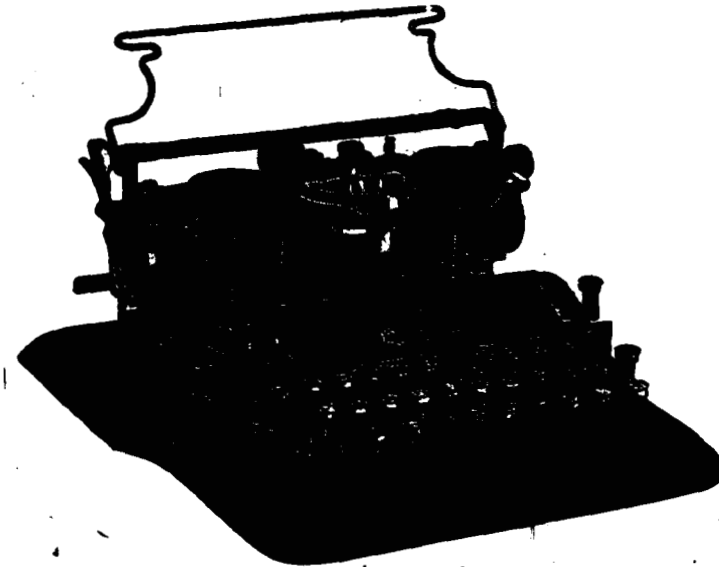
could not help trying to be majors, captains and even first sergeants as well as the colonel of the regiment and were continually meddling with every detail of their command instead of confining themselves to their legitimate duties of having a general supervision over the instruction and discipline of their regiments. The best police sergeant the writer ever knew was a colonel of cavalry.

Such colonels and brigade commanders have never learned and never will learn to command regiments or brigades. However, they are and will be the exception and not the rule, it is believed. The regulations on this subject of command and instruction should be so complete and explicit that no regimental or brigade commander could but help follow them and confine themselves to their proper functions. Such is the case in foreign armies and there the captains have the freest hand in the instruction of their troops, and the higher officers in the instruction of their respective commands and it is so prescribed in their regulations. The higher commandants, of course, as they should, have only a general supervision of the instruction of the lower units and it is only when some subordinate commander goes astray in his instruction that the colonel or other higher commander steps in and makes the proper correction. This, however, he does in such a manner that the subordinate only knows of it.

If we are ever so fortunate as to have a brigade commander who fails to appreciate the fact that he is the commander of a brigade and not of a regiment, squadron or troop, then that brigade is truly unfortunate and their commander will be a failure in time of peace and still more so in war. This same remark is equally true of a colonel as regards his regiment or of a major as regards his squadron. Such officers, of whatever grade, should be eliminated.

The writer still believes in brigade posts but we will never have them in our day and generation.

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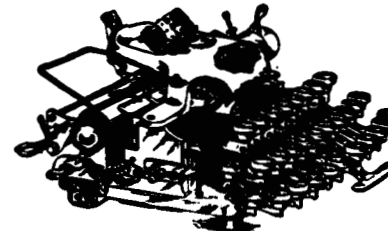
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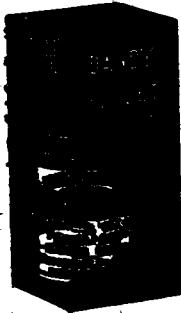
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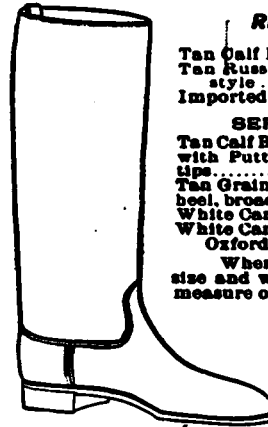
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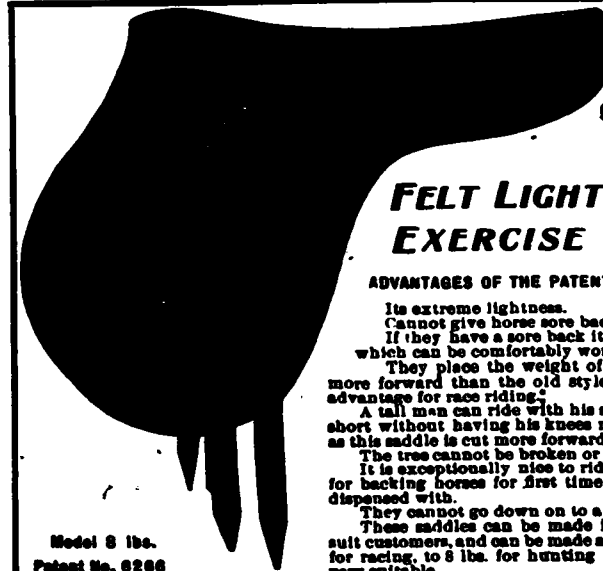
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