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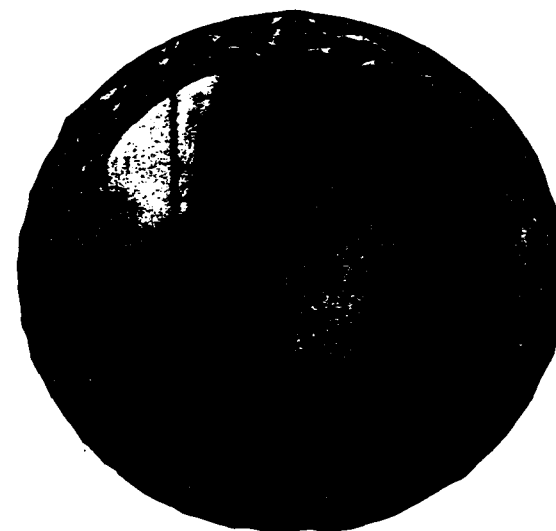
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BIOGRAPHICAL SKETCH OF EMILIO AGUINALDO.

By ISABELO DE LOS REYES.

TRANSLATION AND NOTES BY CAPTAIN J. T. DICKMAN, EIGHTH CAVALRY.



PREFACE.

THE following biographical sketch of Aguinaldo—the arm of the *Katipunan*—is taken from the second edition of a pamphlet entitled “The Katipunan Religion,” published in Madrid in 1900.

It probably reflects with accuracy the Filipino conception of current events, and shows the degree of ignorance of even

the educated ones concerning everything American. In spite of many inaccuracies it contains interesting historical data worth preserving. When the author reads of the sufferings his hero underwent in the country of the headhunters of Abra and Cagayan, he will perhaps attach less importance to his own tale of woe.

"Bathala" is the name of the ancient god of the Malays of these islands, whose worship the Katipunan religion is attempting to revive.

DEDICATION.

"To Emilio Aguinaldo, President of the Filipino Republic:

"While I, a martyr for our country, with my feet in irons on board the steamer '*Alicante*,' was making a mournful journey towards my place of exile; while grieving, completely abandoned by my family, *incomunicado* for long months, and buried alive in a gloomy dungeon in the celebrated castle of Montjuich, suffering, while almost naked, the rigors of a winter to which I was not accustomed, on the summit of a mountain then almost continually enveloped in clouds; and with a still greater chill in my despairing heart, bereft of six poor children, whose mother had died without my being able to see her while I was a prisoner and loaded with chains in the political prison of Bilibid, my thoughts nevertheless were fixed on you, famous chieftain, whose grand deeds evoke, without effort on your part, the legendary figures of Pelayo and of so many extraordinary men sent by Providence to liberate peoples oppressed by the yoke of tyrants.

"Yes, my thoughts were fixed on you as on a ray of remote hope which, like the small and distant light discovered by the shipwrecked mariner during the night of storm, lends him courage to sustain himself against the cold and the furious dashing of the waves.

"To you, therefore, most meritorious apostle of '*Bathala*,' I dedicate these humble lines, the product of serious meditations during my exile, where I passed my days writing upon a worm-eaten table resting upon two water jars, my only companions in a prison guarded by sentinels with bayonets fixed.

"Accept them with the good will belonging to so great a patriot and so intelligent a warrior, as a most modest token of the admiration of a grateful Filipino.

"ISABELO DE LOS REYES.

"MADRID, July 8, 1898."

THE ARM OF THE KATIPUNAN.

If Andrés Bonifacio was the soul of the *Katipunan*, and Emilio Jacinto the intelligence and enthusiasm which directed it, then the modest alcalde (municipal captain) of Cavite Viejo, Emilio Aguinaldo, was the arm of Providence which executed its high designs for our redemption from the Spanish yoke, and, undoubtedly, the one which will secure our independence.



BIRD'S-EYE VIEW OF MANILA.

Aguinaldo had followed with profit the second course of instruction in the college of San Juan de Letran (Manila); but the death of his father caused him to suspend his career in order to administer the estate.

Our hero on all occasions had given proof of honesty and intelligence, and for that reason he was, at twenty-seven years of age, elected by the vote of his neighbors to the office of alcalde, which was the height of the ambition of provincial Filipinos. It is unusual for persons to attain this position until well advanced in years, or for distinguished services to the municipality.

He was at the head of the few progressive spirits of Cavite Viejo and had accepted the office of provincial president of the *Katipunan* in Cavite, which of itself indicated great patriotism; for adventurers and those who had nothing to lose were almost the only ones who dared to affiliate with this society, which was greatly exposed to the terrible vengeance of the friars, who at that time were all-powerful.

He was alcalde or municipal captain of Cavite Viejo when the Filipino revolution of August 26, 1896, broke out. As alcalde he reported to the civil government of Cavite to receive orders. There he found out that the list of members of the *Katipunan* had fallen into the hands of the Spanish authorities, and that the parish friar of Cavite Viejo was plotting his capture. He then returned in haste to his town and, after an understanding with his lieutenants, Agustin Rieta, Candido Tirona, and other followers, rose in rebellion on the 31st of August, 1896. In five days he succeeded in gaining possession of all the towns of that province except the port and the region commanded by its cannon.

Aguinaldo cut off all the posts of the Guardia Civil, and with a small number of rifles captured from said detachments, resisted the column of General Aguirre, who had been sent against him by General Blanco, and caused it to retire; later on he defeated the latter general at Bakoor, Imus and Noveleta, capturing many rifles.

All this is very simple to relate, but one needs a powerful imagination and superior intelligence to comprehend the magnificent features of this brilliant campaign on account of the inconceivable accumulation of titanic efforts, sublime sacrifices and very extraordinary military talent which it reveals.

And afterwards, without having received a single rifle or a single cartridge from abroad, but improvising everything in a province which, during its entire existence had never been at war, he succeeded in frustrating the plans of General Polavieja in spite of the force of from 30,000 to 40,000 well armed men, mostly Europeans, with which he endeavored to capture this improvised guerilla warrior, who, however, possessed exceptional talents and bravery.

I do not desire to express now an opinion as to the manner of death of Andrés Bonifacio, who was replaced by Aguinaldo as chief of the revolution, because, in reality, I know nothing about the subject, and am glad of it, for, perhaps, all that might be said would be in detriment to one or the other of the two gigantic figures of our redemption.

I shall therefore only say that, worn out by financial consumption, Spain was forced to offer the treaty of Biac-na-Bató.



THE GOVERNOR-GENERAL'S PALACE.

Many, even the Spaniards, blame Aguinaldo because, apparently, he had sold his friends; but such was not the case, and the proof of it is that not one of the latter had complained of him on this account.* It must be remembered that the insurrection had been improvised, and, as I have stated, he received neither rifles nor cartridges, although Agoncillo tried to furnish them from Hongkong.

* Artacho, de la Rosa and Aragon brought suit against the Hongkong and Shanghai Banking Corporation for their share of the bribe deposited in that bank by the Spanish government. They failed to secure a division of the fund, which amounted to 400,000 pesos.

Our illustrious subject probably indulged in the following reflections: "With the insurrection as it is, I shall not achieve final success. I will, therefore, accept this treaty, although the intentions of bad faith on the part of General Primo de Rivera were plain enough from the moment when he refused to reduce the liberal reforms he offered and the order for expulsion of the friars to writing. For, in view of the omnipotence of the friars in Spain, that part of the conditions will fail of fulfillment, and this will furnish me more than ample pretext for returning to the field, well armed with the very money which they now offer me."

And, for a fact, Aguinaldo did not touch a cent of that money, and from the beginning notified the chiefs who went to Hongkong with him that it was public money intended for the purchase of arms in case Spain failed to keep her promises.*

The calculations of Aguinaldo were verified, and nobody can reproach him with anything, especially since everybody knows that he went to the verge of suffering privations in Hongkong rather than touch that sacred deposit.

General Primo de Rivera, far from paying the 400,000 pesos needed to complete the deposit, and establishing the promised reforms, commenced shooting right and left in March, 1898, and published decrees condemning to deportation even those who had merely failed to provide themselves with personal cédulas.

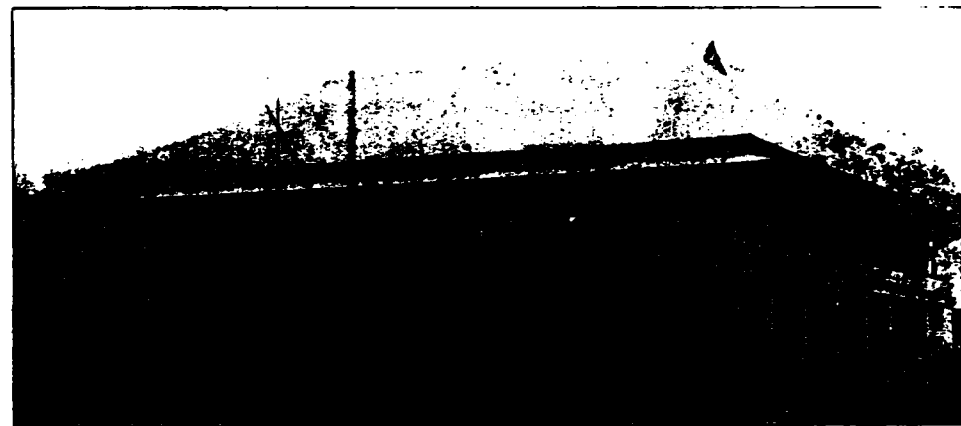
Then the Spanish-American War came, and as Dewey had no landing force (he had only 2,000 men in his ships), his only object being to destroy the Spanish fleet in order to attract the attention of Spain to that part of the world, he considered it necessary to make an alliance with Aguinaldo, to whom both he and the American consuls at Hongkong and Singapore† offered our independence. It was solely on account of this promise that Aguinaldo agreed to assist

* What the state of that fund is at the present time, whether it was expended in the cause or not, or to what extent, does not appear to be known.

† The American consul at Hongkong was Mr. Rounseville Wildman, and at Singapore Mr. E. Spencer Pratt. Aguinaldo seems to have been on intimate terms with both of them, judging from the presents of Filipino flags and rifles which he sent them.

the Yankees, for, if otherwise, what object could he have had in buying arms out of his own money to fight Spain? Did the Yankees pay him a salary and furnish him arms? They themselves admit the contrary; hence there is no doubt that they promised him our independence, as is fully proven in his well-written memorial addressed to the American people.*

In truth, Aguinaldo placed too much faith in the Yankees in not exacting a pledge in writing; but even if they had given this pledge, would they not, in any event, have been sufficiently contemptuous to attack us because they thought we were weak?



AGUINALDO'S HEADQUARTERS AT TARLAC.

But we are not as weak as they think we are, for either Aguinaldo is the same Aguinaldo who swore to defend our independence until death, or the Yankees will finally recognize their impotence to subjugate an heroic people such as

* Admiral Dewey before a Congressional Committee explicitly denied having given such a promise, and Aguinaldo himself now makes no assertion that a definite promise was made. Conversation probably was through interpreters, which, considering the interest of the parties concerned, easily led to misunderstandings. Consuls Wildman and Pratt, with an exaggerated idea of their own importance, may have led the Filipino chiefs to believe that independence was sure to come. However, early in August Aguinaldo wrote to Pratt and asked him to use his influence to bring about recognition of Filipino independence; and to Wildman asking him to secure if

the Filipinos, who to-day are the admiration of the entire world.

From the beginning of the insurrection in Cavite, Aguinaldo was proclaimed commander-in-chief of the Filipinos, and at the end of May, 1897, established the republican government at Biac-na-Bat6.

On the 14th of December, 1897, the treaty of the above name was signed, and he left for Hongkong via Dagupan with the principal chiefs of the revolution.

On the 7th of April, 1898, he went to Singapore, via Saigon. While there his assistance was solicited by the American consul, Mr. Pratt. On the 1st of May he returned to Hongkong, and on the 16th he embarked on the American transport *McCulloch* for Cavite. At noon of the 19th the ship came to anchor off Cavite, and after a conference with Admiral Dewey, who confirmed his promise of independence, Aguinaldo disembarked at 4 o'clock in the afternoon, amid the acclaim of the natives of Cavite, who had come out in their bancas to receive him.

Without resting, without losing a moment, he spent that night in sending out orders and circulars for the uprising to the provinces. And he continued to labor with astounding activity until the 24th, on which day he established the dictatorial government, issuing the first proclamation, in which he signs himself as the head of the Filipino state. Copies of this proclamation were furnished to Admiral Dewey and to all the foreign consuls, and he took charge of the civil government of Cavite.

On the 28th of May the first fight took place with the Spaniards who came out to pursue him, but he cut them all off. Then for the first time he flung to the breezes our

possible, an understanding between Americans and Filipinos, as he feared that a conflict might occur. If Aguinaldo considered himself an ally of the Americans, he certainly acted very strangely in making repeated efforts early in July to negotiate the surrender of Manila with the Spaniards, without consulting General Anderson. Artemio Ricarte and Pantaleon Garcia were appointed commissioners for that purpose, and Lagarda received the rank of colonel and a confidential mission to General Augustin. The fact is, as revealed by captured correspondence of the Hongkong Junta, that the Filipino chiefs contemplated treachery to the Americans even before Dewey left the coast of China for Manila.

national banner, which, as we have seen, was born covered with glory.

On the 31st of the same month, the date previously fixed by Aguinaldo, the whole Philippines rose to cast off the Spanish yoke, the seasoned hosts of the nation marching from one triumph to another. On the 12th of June the independence of the Philippines was proclaimed at Cavite.

On the 13th of August, Aguinaldo assisted in the capture



LAST REVIEW OF AGUINALDO'S ARMY.

of Manila, capturing Sampalok, Suspension Bridge, and Tondo as far as Paseo de Azcarraga, Paco, Singalong, Malate and Ermita. The Yankees entered Manila through the latter two suburbs *without firing a shot*.

On the 1st of September the triumphant banner of the Philippines was raised on the little war fleet composed of the *Taalno*, *Balayan*, *Taal*, *Bulisan*, and *Purissima Concepcion*. During this month our heroic Captain General proceeded to Malolos, which he proclaimed the capital of the Republic. He also organized various expeditions, which succeeded in freeing the Visayas from Spanish dominion, with the excep-

tion of a very few points. And in exchange for the great assistance of Aguinaldo's army, Admiral Dewey seized the Filipino fleet in the month of October.

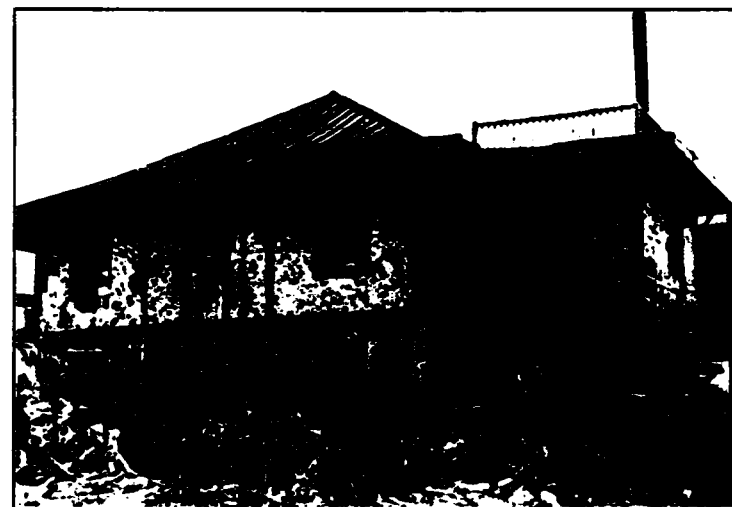
In the presence of such duplicity the Filipinos then became irritated, and only the unusual calmness of Aguinaldo could restrain them, and it was solely on his account that immediate rupture of hostilities did not ensue.

On the 4th of January, 1899, General Otis proclaimed American sovereignty, against which our invincible chief made an energetic protest. Otis proposed the naming of commissioners from both sides in order to arrange an understanding, to which Aguinaldo agreed; but while these conferences were going on in the best of harmony, the Yankees treacherously opened hostilities on the 4th of February, in order to force the American Senate to ratify the treaty of Paris.

Now let our readers imagine the mass of effort which the most meritorious labors of Aguinaldo represent. On the one hand he was fighting the Spaniards and stopping the excesses of the Yankee soldiery, who were daily exasperating ours; on the other, he restrained his own men, infusing into their minds discipline, concord and patience. He directed the organization of his improvised army, and the provincial and local governments; formed the Assembly of Representatives at Malolos, and discussed the Constitution adopted by the latter with a view to making it more acceptable to Catholic Filipinos, who formed the immense majority of the people, and whose beliefs had nevertheless been so abruptly attacked without a salutary period of transition, however brief. He attended to our representation abroad, to the organization of public instruction, to the purchase of arms, and to the selection of the officials of the government, which met with universal approval because he appointed in all the provinces those who were most worthy on account of their honesty and intelligence, without regard to their political antecedents. Thus he named Mr. Arellano as minister, although he had been very friendly to the friars, and he gave the highest places even to those who had fought him as volunteers by the side of the Spaniards.

It is very sad to state that not a few have rewarded him very badly, abandoning him as soon as they saw that the Yankees with their whole immense power were about to fall on him. The Assembly attempted to vote for him as President a salary of 25,000 pesos, and 50,000 for expenses, but he declined it all on the condition that beforehand they should pay the monthly salary of his soldiers.

In connection with the promulgation of the Filipino Constitution on the 23d of February, 1899, he was unanimously

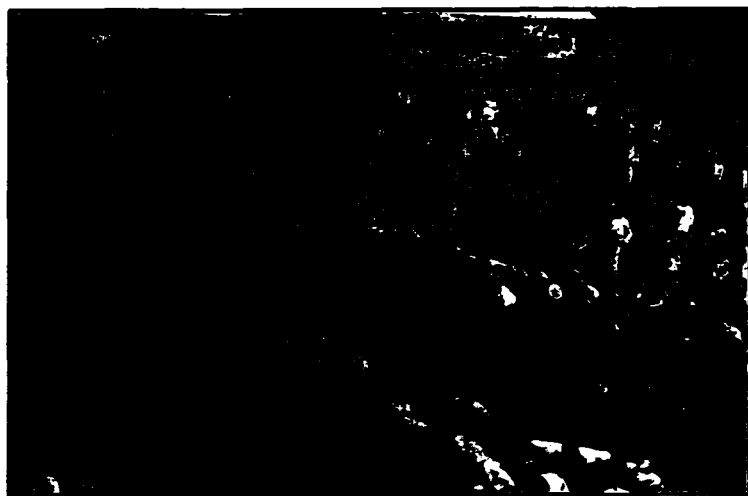


CONVENT AT FORT MALATE, MANILA.

proclaimed President of the Republic: but on account of the necessities of the severe and active campaign waged against him by most powerful American columns, he was forced to proclaim a dictatorship in November of the same year.

Who now is the Filipino who would dare to censure or place himself in comparison with this extraordinary man, this politician of exceedingly clear intelligence, this admirable strategist and fortunate general, who nevertheless is most honorable, disinterested, modest, and without any ambition whatever?

I believe I am authorized to speak in high terms of Aguinaldo, for up to the present date (November 1, 1900), I do not owe him a single favor, not even when he was in triumphant occupation of his palace at Malolos did he remember me, the poor individual who had been deported for defending the rights of our country when everybody else was silent with terror; poor indeed, but most dignified, I have never solicited the slightest favor, and neither do I expect it of him who now is being pursued vigorously by numerous Yankee columns.



PRAYER BEFORE SURRENDER AT SANTA CRUZ.

But when even the most eminent statesmen of the civilized world and the most important newspapers of Europe and America compare him to Jesus Christ, Cæsar, Alexander the Great, Bolivar, Washington, Mahomet and Napoleon, why should a poor Filipino writer, who expects of him the liberty of his people and his children, not render justice to the great merit of our illustrious compatriot?

The first thing that Mr. Silvela did, when at the request of General Polavieja I had an interview with him in regard to the liberation of the Spanish prisoners, was to break out

in ardent praise of Aguinaldo as a great general and organizer.

And during my voyage through France and England, on the trains as well as elsewhere, when foreigners spoke to me, the first one they praised and about whom they inquired was Aguinaldo: to whom they assigned a much higher place than to Krüger, because they used to say: "We can understand how the Boers are able to resist the English, because they are Europeans, have been independent, and during the last ten years have been arming themselves thoroughly: but what exceeds all our understanding is the heroism of the Filipino people, which, it might be said, was born only yesterday, and the intelligence and bravery of its young chief-tain, twenty-eight years of age."

* * *

Having given a faint idea of the *Katipunan*, and an impartial biography of its illustrious arm, Aguinaldo, we are about to condense in a few words our ideas as to what the religion and morals of the Filipinos should be.



THE CAVALRY SCHOOL OF APPLICATION AT SAUMUR.

BY CAPTAIN BENTLY MOTT, ARTILLERY CORPS,
MILITARY ATTACHÉ, PARIS, FRANCE.

THE military attachés had on several occasions made known, informally, their desire to visit Saumur, and at last they were officially informed that the visit had been set for July 10th. The foreign officers were instructed to be at the 6 P. M. train, where they would be met by Colonel Faurie, and would find all arrangements made for the trip. A car had been reserved, seats taken in the dining car, and rooms provided at a hotel in Saumur.

After a night spent at the hotel, they were shown the work of the school the next day, between 5 A. M. and 6 P. M.

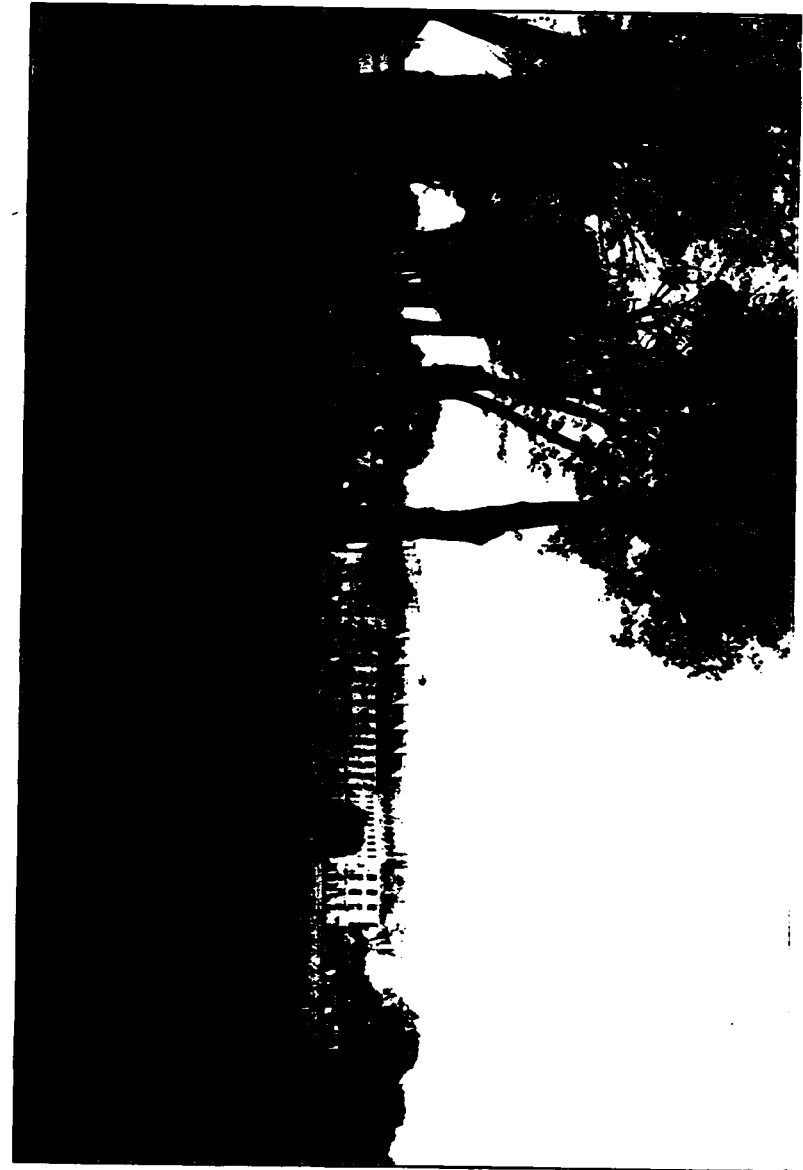
Profiting by the acquaintances made on this official visit, some weeks later I made another visit to the school in order to get a better understanding of its workings. This report is based upon what I saw in these visits, and have learned from inquiry amongst officers.

Instruction at Saumur is given to eight categories of students:

1st. A class of first lieutenants of cavalry and artillery. These are primarily at the school to be perfected in horsemanship, hippology and allied subjects, but are also given some indoor instruction (averaging about one hour per day) in military art, kriegspiel, theories, German, hygiene, etc. These officers selected by the colonels from the best horsemen in their regiments, pass ten months at the school, and upon returning to the corps are generally selected as instructors of horsemanship for the regiment, but only after being promoted captains. This class numbers from forty to fifty lieutenants of cavalry and from twenty to thirty of artillery.

2nd. A class of second lieutenants of cavalry, about eighty in number, comprising all the graduates from St. Cyr

GENERAL VIEW OF THE SCHOOL.



of the year preceding who entered the cavalry. Formerly these went to their regiments for a year and then to Saumur; the present rule is for them to go, after graduation leave, directly to Saumur for a ten months' course, chiefly in horsemanship, hippology and practical field instruction, though there is about one hour per day given to the teaching of German, hygiene, etc. This class of second lieutenants is kept wholly distinct in all instruction from the class of first lieutenants mentioned above, having even their own separate instructors.

3rd. A class of non-commissioned officers who have been selected after competition and sent to Saumur to receive a course, which, if they pass satisfactorily, brings them commissions in cavalry regiments. Their instruction is largely practical, and comprises the same amount of work with horses as for the first two classes, but the theoretical instruction is more extended. They number about eighty.

4th. A class of veterinaries, who are selected after competition from graduates of civil veterinary schools, and sent to Saumur to receive instruction in the military veterinary art and in riding. The class is usually about twenty five men.

5th. A school of military telegraphists. These are sent from the cavalry regiments and are outside the regular telegraphists of the engineer regiments. They number about 120.

6th. A school of farriers, consisting of 120 promising young farriers, sent from the regiments to be thoroughly educated in their trade. They usually are made chief farriers when they return.

7th. A school of saddlers. There is a well appointed workshop with steam power, where about one hundred saddlers are taught, and from which comes the saddlery used at the school and some intended for issue to troops.

8th. A school of fencing, consisting of thirty maitres d'armes, who teach the various classes fencing and are themselves perfected before being sent to their regiments.

The school course in general is one year, which means ten months of actual and very diligent work.

THE SCHOOL STAFF.

The instructing and administrative staff of the school consists of forty-nine officers. There is a commandant (brigadier-general or colonel of cavalry) and his assistant (lieutenant-colonel of cavalry), fourteen officers of various corps, as administrative officers, three surgeons, three veterinaries, two instructors in topography and military art, one instructor in history and military geography, one instructor in German, one in fortification and applied sciences, one in telegraphy, eleven instructors in equitation, ten instructors in military exercises, ten assistant riding masters (sergeants).

STUDENTS, ETC.

There are:

- 45 first lieutenants of cavalry.
- 25 first lieutenants of artillery.
- 80 second lieutenants of cavalry.
- 80 non-commissioned officers, candidates for commissions.
- 120 students in the school of telegraphy.
- 120 students in the farriers' school.
- 100 students in the saddlers' school.
- 25 students in the veterinary school.
- 30 students in the fencing school.
- 400 remount enlisted men.
- 160 enlisted men as grooms.

There are no troops garrisoned at Saumur.

The first lieutenants of artillery constitute a division separate from those of cavalry, and both these are separate from the division of second lieutenants, and this from the division of candidates. The divisions are subdivided into sections of such number as to assure to each section its riding instructor and its instructor in practical military exercises. In this way each instructor learns to know thoroughly every man in his section, and pursues his education accordingly. The senior instructors command in combined exercises.

Students are not marked, but at the end of the course the note "good" or "very good" is made on their records, and this stands and is of great importance in their selection for promotion.

TROOPS.

There are no troops whatever stationed at Saumur, the student officers being formed into troops, squadrons, etc., for all drills requiring such organizations. A battery of horse artillery is sent from a neighboring garrison for a few months each year to aid in campaign instruction, minor tactics, and the like.

MESS.

Married officers take their lodgings or houses where they choose and eat at home; bachelors are all required to take their meals at the mess, they lodge where they can. The mess building is a very poor affair, with very few conveniences; indeed, while money is liberally spent on horses, menéges, carrières, harness, and all that concerns riding, very little is available for the comfort of the officers. The latter may grumble at this, but they are nevertheless not a little proud of it. The horse at Saumur is everything, the man nothing except as he may shine by the light his horsemanship throws upon him.

CADRE NOIR.

The riding instructors, officers and sergeants, belong to the "cadre noir," and do nothing but teach horsemanship in and out of doors. The "cadre noir," so called from the black uniform worn, constitutes the corps of riding masters at the principal schools in France, and it is a great distinction to belong to it. There are only three majors allowed in the "cadre;" the rest are captains and lieutenants selected from the army at large for proficiency in horsemanship; they remain generally in this cadre until promoted, when they rejoin their regiments.

RIDING HALLS AND CARRIÈRES.

There are four riding halls, three of which are large and well appointed, three carrières or out-door riding schools with

every accessory, and maintained in perfect condition, and three maneuver fields, each about 100 acres in extent. The last have every sort of obstacle permanently built for instruction in jumping—stone walls, hedges, ditches, banks, bull-fences, ditches and hedges, etc., etc.

The instruction here mounts gradually from the simplest obstacle to the most difficult within the ability of the horse—and some are very stiff.

THE WORK.

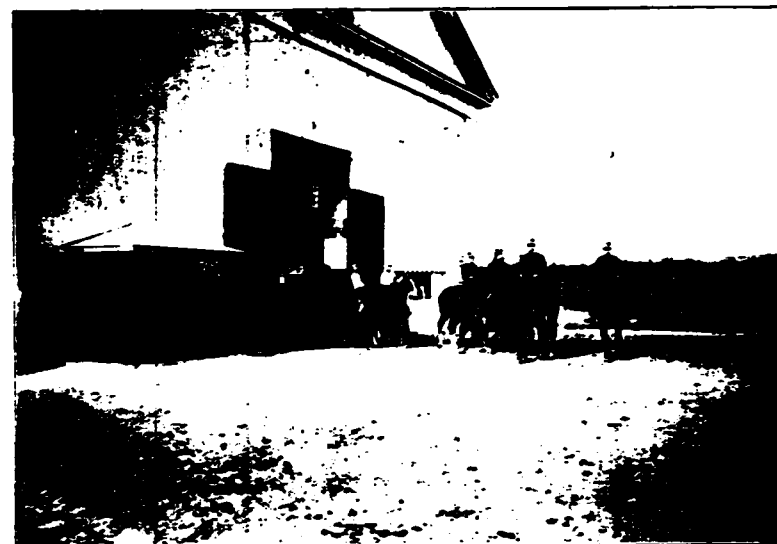
The work in the riding halls begins at 5 A. M. in summer and 6 A. M. in winter, and continues until 10 A. M. As a rule instruction in each kind of work continues no longer than one hour; the pupils go from one drill to another at the end of that time, but the instructors usually put in two hours in succession. Mounted work is resumed at 12:30 in winter and 1:30 in summer.

Each man as a rule rides four horses in the course of the day: 1st. A perfectly trained manège horse (thoroughbred) in the hall; 2nd. A young horse whose training has been confided to him; 3d. A "cheval de carrière," *i. e.*, a cross-country horse, out of doors; 4th. His own charger or an unbroken colt being mounted for the first time, or a "sauteur," *i. e.*, a horse trained to kick, to rear or to buck, and which is used for no other purpose than this instruction.

The instruction is varied as much as possible from day to day, from week to week, and following the season; every effort is made to keep the interest keen, and no indication of anything but substantial enthusiasm could be observed in either instructors or students; indeed, a detail in Saumur, whether in one category or the other, is greatly sought after, though the situation of the school offers nothing whatever of outside enjoyment to those stationed there, and the interest of the work itself is the sole inducement.

The following is a typical day's work in summer; take a Tuesday for first lieutenants:

5 A. M.—Mounted and in the riding hall. "Reprise de manège" on trained thoroughbreds, under command of an instructor, till 6 A. M. Rest for five or ten minutes.



RIDING HALL.



ARTILLERY STUDENT OFFICER.

6:10 to 7 A. M.—In the hall. "Sauteurs" and "voltige," kickers and buckers; very slow trot without stirrups. These are mostly exercises for making the rider more supple and exercising him in violent ways.

About 7 A. M.—Fifteen minutes for "coffee" at the mess, the Frenchman's first breakfast, *i. e.* coffee and a roll.

7:15 to 8:15 A. M.—Work with very young horses, either personally under the instructor, or watching him, or alone. Great variety obtains in this work.

8:30 to 10 A. M.—Practical military exercise mounted, on the maneuver field, officers' private horses (*cheval d'armes*).

10 A. M.—Breakfast and rest till 1:30 P. M.

1:30 to 2:30 P. M.—Dressage, training young horse confided to each officer.

2:45 to 3:45 P. M.—Dismounted instruction.

3:45 to 4:45 P. M.—Fencing.

5:15 to 6:15 P. M.—Hygiene.

On Fridays, in summer, generally the whole school is sent out for service in campaign, from 5 A. M. to 4 P. M. This work is on the roads surrounding Saumur, and consists of marches, reconnaissances, scouting, etc.; writing and interpretation of orders in the field as nearly as possible as would be the case in war. A theme is, of course, always drawn up for the day's work.

Take another typical day, Monday in summer, second lieutenants:

5 to 7 A. M.—*Carrière*. Instruction in jumping all kinds of obstacles, in making, say heats of about three miles across country, over twenty varying jumps: jumping in lines, four to ten men abreast, etc. Type used, "*cheval de carrière*," or Irish hunter.

7 to 8:15 A. M.—Work with the colts.

8:15 to 8:30 A. M.—"Coffee."

8:30 to 10:15 A. M.—Practical military work on the large maneuver field.

10:15 A. M.—Breakfast; rest till 1:30 P. M.

1:30 to 2:30 P. M.—Training young horses, practice or lessons in, or practical hippology.

2:45 to 3:45 P. M.—Fencing or lectures.

4:15 to 5:15 P. M.—History.

5:15 to 6:15 P. M.—Questions; a sort of oral examination on any subject of the course—"Quiz."

Take a Tuesday in winter for candidates:

6:00 to 7:00 A. M.—Lecture.

7:00 to 7:45 A. M.—Fencing.

7:45 A. M.—"Coffee."

8:00 to 10:00 A. M.—Riding hall.

10:00 A. M.—Breakfast.

12:30 to 1:30 P. M.—"Carrière" out-door work, jumping, work with weapons, etc.

1:45 to 2:45 P. M.—Target practice.

2:45 to 3:45 P. M.—Work mounted, military instruction, drill.

4:00 to 5:00 P. M.—German.

5:00 to 6:15 P. M.—Questions.

In all the military exercises on the terrain, the students command in turn; the instructor gives the theme and supervises.

THE HORSES.

Each officer brings to Saumur his own horse, his "cheval d'armes." Counting these and the mounts for candidates, etc., there are:

350 chevaux d'armes or troop horses.

400 English thoroughbreds.

150 Anglo-Arabians.

350 half-breds.

Total, 1,250 saddle-horses maintained at the government's expense.

Leaving out the horses brought by their owners, practically all the horses have been selected by the horse board of the school and trained by instructors or students.

The thoroughbreds come to Saumur generally unbroken and uncastrated; they are castrated and when well their training begins. A horse of exceptional value or difficulty is taken in hand by one of the riding instructors; each student

is given a young horse to train for his and the horse's benefit. On leaving the school an officer frequently gets permission to have assigned to him permanently or to buy the horse he has trained. Any excess of trained horses is obviated by this means, by transfer to other schools as the Ecole de Guerre, and by the fact that officers serving with regiments are only too glad to take a Saumur horse.

A class of fine animals known as general officers' horses are trained at Saumur especially for the purpose indicated, and general officers have the privilege of buying them.

The English thoroughbreds (two and one-half years) cost anywhere from \$350 to \$1,000. Their castration made and training finished, they are worth, of course, much more.

The hunters are not bought so young nor for such high prices, but a few hunters have come pretty high, as I noticed in the stables several prize winners of steeple chases. One or two such horses are to be found in all the schools—as St. Cyr, Fontainebleau, etc., that student officers may know and occasionally ride a really crack horse and thus improve their standard of excellence.

The Saumur horse board visits the various remount depots, horse fairs, etc., and selects promising animals for the school. The officers at the depot are nearly all old Saumur men, and are glad to let the commandant have their best; at least, I imagine, after they have picked good ones for themselves and their regiments. The Minister of War is empowered to augment beyond the budget average the prices paid for especially good horses for the use of the school.

Sauteurs.—There is a class of horses at Saumur, as at all the French military schools of riding, which does not exist in our service, called "sauteurs." These horses are taught to kick vigorously, to rear and some even to buck. The rider is placed on a heavy saddle with large rolls in front and behind, at first with stirrups, afterwards without. The instruction is with the horse tied and at liberty. When tied, he stands between two posts, a halter strap attached to each. The instructor at one side and to the rear, lays the lash of a long whip on the horse's rump with a wide flourish, making him kick out with both feet behind. The old "sauteur" soon gets

to know what is wanted of him, and kicks with tremendous vigor at a signal. When at liberty he does the same thing on the touch of the whip on the rump and rears on lifting the hands as for a jump,

The practice seems very useful. The beginner, after getting a firm seat, is given progressive lessons, and the instructor shows him how to manage to stick on and avoid the jar; the rolls on the saddle help him, and soon he is quite at ease on a kicking horse. Here, as in everything else, the French believe in teaching and not leaving to chance the knowledge of what to do on a bucking horse. These "sauteurs" are used for no other purpose except the above and for instruction in the very slow, hard trot without stirrups, to give a firm seat and ease at the jog.

THE RIDING HALLS, CARRIÈRES AND MANEUVER FIELDS.

Three of the riding halls are in constant use; the third is very old and small. They greatly resemble the one at West Point in size, and arrangement, the largest exceeding it somewhat in area.

There are three carrières, with soft covering of sand or sand and earth. It is here that the use of saber, lance and pistol and much of the jumping is taught. To maintain these outdoor-riding schools costs very little, and they furnish an excellent means of transition from the riding hall to the cross-country work on the large maneuver fields.

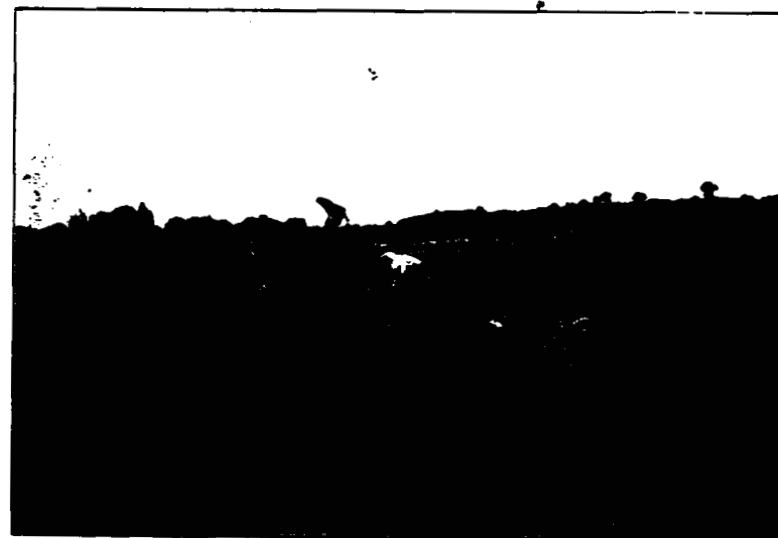
The three maneuver fields are intended for mounted drills, instruction in "service in campaign," jumping and training for races. One of them is a steeple chase course belonging to a club, and is only used once or twice a fortnight, as it is six miles from the school; the other two are near by and belong to the institution.

All are provided with every kind of obstacle, training track, etc.

Polo is not played at Saumur or anywhere in the army as a military sport, as far as I know, but officers are encouraged to take part in military races (in uniform), steeple chases and horse shows. A sum is appropriated each year by Parliament



INSTRUCTOR AND STUDENT OFFICER.



STUDENT OFFICER.

for prizes in military races, and in the fall a military tournament lasting a week is held at Paris and presided over by the President of the Republic.

THE RIDING.

It is unnecessary, in view of all that precedes and will follow, to go into the minutiae of the horsemanship as seen at Saumur; it can be judged from the material entering the makeup of both horses and men and the daily work mapped out for them.

Bareback riding is never taught, though riding without stirrups is; work familiar to us, such as mounting and dismounting at the gallop, throwing horses, picking up the handkerchief, etc., is not practiced; independence and individuality do not receive the encouragement we give them, and thus it would seem that scouting work must suffer. But an excellent seat on both the English and the regulation saddle is observable; better work is done with the lance than with the pistol or saber; jumping is admirably taught, and in the games of the *carrière*, mounted fencing, the pursuit, *mêlées*, etc., fearlessness, confidence and great dash are readily noticed. Complete knowledge and mastery over the horse they do have, and the rider as well as the mount is expected to have "manners."

The average French officer — the *average*, not the occasional swell or the occasional dissipated Parisian, by which the nation is generally judged — is a hard working, abstemious man, and in the mounted arms an enthusiastic rider. If he is not, he tries to think he is and induce others to the same opinion, or he loses caste as a cavalryman.

Nothing illustrates this so much as to see the men stationed in Paris, and doubtless keenly enjoying all the pleasures it offers, yet feeling they must ride every day; and the scores and scores of generals and field officers stationed here without troops fill the Bois of a morning from 6 o'clock on. There are few of them who fail to put in one or two hours on horseback before going to their desks, for a general officer in France must not only be able to ride, but he must *do* it constantly or have it count against him in his possible appoint-

ment to a desirable command; but most of them do it for health and from a genuine love of the exercise.

The average French cavalry officer has an income about equal to his American brother's pay, but he is given a horse and a striker, both of which enable him to keep up the appearances of a gentleman.

ONE DAY AT SAUMUR—JULY 10, 1902.

The day spent at Saumur by the foreign military attachés was filled with a special programme drawn up for their benefit.

6 A. M.—Drive in a four in-hand break belonging to the school to the Verrie, a large tract of rolling land belonging to a local racing club, which permits the cavalry school its free use.

7 A. M.—Exhibition of cross-country riding at la Varrie, over every nature of steeple chase obstacle, some very stiff. Ninety officers took part, riding generally in groups of four abreast at convenient distances. They were mounted as follows:

- 25 lieutenants of artillery on half-bred horses.
- 45 lieutenants of cavalry on thoroughbred horses.
- 10 instructors in riding, on thoroughbred horses.
- 10 sergeants, assistant-instructors in riding, on half-bred horses.

The course was nearly four miles over rolling ground and comprised twenty jumps. All the horses took the jumps in perfect form except one, which was put at a very broad mud wall at too little speed; the results showed thoroughly good cross-country horsemanship; the seats were noticeably good, hands likewise, training of horses perfect. All rode the English saddle and plain English bit and bridoon. A high platform in the middle of the field enabled the colonel and the visiting officers to see the whole course and every jump.

8:30 A. M.—Exercises in crossing the small river Thouet on a raft constructed by the method known as the *Radeau Sac* (a pamphlet by that title was sent the M. I. D. about a year ago giving complete description of the system).

The raft was made of the canvas grain sacks carried in campaign by each trooper. These were stuffed with straw, tightly choked and formed into a raft by poles and lashings. A small wire rope was stretched across the river and two pulleys attached in the manner of a trolley. The system worked very well and ten officers were taken over without difficulty and without wetting.

9 A. M.—Exhibition of the regular outdoor instruction of the second lieutenants in minor tactics on the maneuver field of Breil, about 100 acres of flat grass land. This field has a one mile training track and obstacles of every sort for jumping.

The second lieutenants, eighty in all, were formed into a troop of cavalry, officered and commanded from among themselves. We were shown an attack of cavalry against cavalry the enemy being represented; then an attack of cavalry against artillery, the enemy being a battery of horse artillery with a represented support of cavalry. These exercises, though elementary, indicated the method—the very *practical* method pursued in all instruction, of teaching on the ground by reiterated practice all the work that is done in the field by a squadron of cavalry. The idea is that each young officer shall become, through constant practice, so familiar with every detail of the work he is called upon to do in campaign, that he decides and does it in action as instinctively as he would command "mount and forward."

9:30 A. M.—Illustration of the work in the "carrières" or open-air riding schools. This was shown in two of the "carrières," a very large one about the size of the cavalry plain and a small one larger than the area of barracks, at West Point. The large carrière was a rectangle surrounded by stables and barracks and covered with soft sand. Here one-half the class of second lieutenants exhibited their skill with saber and lance against manikins, riding at will and over low obstacles. The other half worked in the smaller carrière.

This deserves a longer description. The ground is covered with a mixture of sand and loam. A fence surrounds all four sides and a stout, well-made artificial hedge about three and one-half feet high and two feet wide runs across from side to side, dividing the carrière into two equal parts.

This hedge could not be knocked down, but it was removable. The troopers rode about here jumping the hedge at each moment, attacking manikins, etc. The most novel thing in this work was the use of manikins life size, fastened in their saddles on the horses turned loose in the carrière, to be pursued and attacked with saber and lance. I had never seen this before and I gathered that none of the other foreigners had; all united in finding it an excellent exercise from every point of view, amusing as well as instructive in horsemanship. To make this manikin an old saddle tree is used and a flexible but strong strip of wood is screwed to it so as to stand vertical. On this an old uniform coat properly stuffed is put with canvas face and forage cap. The horse with this trooper of straw on his back is turned loose in the riding school, and it is remarkable how difficult it is to catch him and get in a blow of the saber, especially in an enclosed space with a hedge running across. The horse gets very cunning, and the pursuer can never count on what he is going to do; he, of course, can turn more quickly and stop more suddenly than a horse bearing a real rider.

The lances used in this game had large foils on their points.

All the manikins used at Saumur are arranged to give to a blow or to sway, but not to drop. Thus the Turk's head on a post to be cut in going over a hurdle, yields to a blow, but comes back into position again. This saves having a man stand by to replace it, as is the custom with us. Most of the manikins are a man's body and head stuffed around a piece of oak bolted to a post.

In all this riding at will in the carrières, the troopers were much mixed up, going, coming, meeting and crossing. The sabers were drawn and lances in rest. This was intentional, in order that all should get accustomed to avoiding accident in mêlées and used to taking care of themselves in a mix-up. No accident of any kind happened the day I speak of, and the practice seems to be a useful one.

In these exercises officers rode their regulation saddles. In all of this, as in every other class of work at Saumur, the effort is made to keep all hands interested, and if anyone in-



STUDENT OFFICERS.



SECOND LIEUTENANT OF CAVALRY—STUDENT

vents a new game that is instructive, it is put into effect. As the commandant, Colonel Dubois, explained to me, there is no intelligence in making a soldier's work drudgery when it can be avoided, and what is done with pleasure is done with triple effect. So when from six to eight hours of horseback is exacted of a man every day, the effort is constantly made by the authorities to keep up interest by ensuring variety.

9:10 A. M.—Visit to the fencing school, where we saw several bouts with the saber and the foil, by the maitres d'armes, visit to the veterinary school and the horse hospital. We were shown several thoroughbred colts recovering from castration, that had been performed by the new method of a single incision. The recovery was apparently in a very short time. The chief veterinary also showed several horses that had been treated for strained tendon by a method that has not yet been thoroughly proven, though it is hoped that results will show lasting cures. The method used is to inject air (rendered aseptic by passing through gauze wet with any good solution) into the limb and around the tendon affected. The apparatus is a simple hand bulb and tube attached to a hypodermic needle. The stimulant of the oxygen directly applied is supposed to effect the cure, and no blemish, as in firing, remains.

2:00 P. M.—Work in the riding hall. First, twenty-four lieutenants of cavalry mounted on English thoroughbreds, then the ten riding instructors, captains and lieutenants, on half-breed horses, jumping the bar up to five and one-half feet; then ten riding instructors, lieutenants and sergeants, on sauteurs at liberty on the French saddle with double rolls and without stirrups; these horses were taught to rear and to kick viciously at signal; then twenty riding instructors on thoroughbred horses executing "haute école."

These five "reprises de manège" were beautiful exhibitions of perfectly trained horses doing the work most suitable to them; they were designed not to show daring feats of riding but to exhibit in all their paces spirited horses of various breeds yielding quick and intelligent obedience to skillful riders. All of the work was done at a walk, a very slow trot or a very slow gallop.

The horses were groomed to perfection, the leather and steel work being in the pink of condition; no private stable of a millionaire could turn out better appointments.

In this riding hall work the saddles used are the old style French saddle, very heavy, with leg rolls, and covered with white buckskin in the manner of a housing. This saddle has nothing to recommend it, and is clung to only because it is showy and is a tradition. There are apparently so few traditions in the matter of horsemanship in France that they like to retain what is possible. But this saddle is only used in the riding hall. No sabers are ever worn in riding hall work.

The spectacle presented during these exhibitions was truly exquisite to the lover of horses. Beautiful animals groomed to the taste of an emperor, with scarlet saddlecloths showing a bright border under a snow white saddle; the tail in some reprises, clubbed and bound with three straps of white leather while a long white strap leads loosely on each flank from the tail to the saddle; white reins; the mane plaited with a white ribbon and the forelock coquettishly knotted with the same; the riders in patent leather boots, white breeches, black tunic and epaulettes; a cocked hat (made so familiar by all of Napoleon's pictures); silence, the air of complete repose and confidence, the quiet word of command and then all in action—only restrained, held in, as though the canons of riding school taste would be offended at any hurry or noise or lack of perfect ease—all this made a picture unfamiliar to American eyes and wholly admirable.

What I have described above with perhaps pardonable enthusiasm, constitute, of course, the holiday trappings put on in honor of our visit and which are used only for show occasions in the riding hall. For regular work the equipment is entirely business-like.

After the reprises were over, Colonel Dubois took us down on the tanbark to examine at leisure a half dozen representative French breeds of horses. There were presented six horses from Vendée, half or three-quarter bred; dam Vendéen mare, sire English thoroughbred; ten horses from Normandy, half or three-quarter bred; dam Norman, sire English thoroughbred; six horses from Tarbes, Anglo-Arab thorough-

breeds, one-half Tarbes and one-half English thoroughbred; six other Anglo-Arab thoroughbreds having seventy-five per cent English thoroughbred blood; six thoroughbreds of English blood but borne in France.

The French officer believes more and more in thoroughbred horses for war purposes, and all officers who can get them do so. The Anglo-Arab Tarbe horse is the ideal light cavalry horse—certainly *our* ideal cavalry horse, since we do not believe in cuirassiers and dragoons who have to be mounted on heavy horses. They come of a very old stock left in the Tarbes district by the Arabs, and the improvement of the breed in long ages has produced a short coupled, deep chested, active and hardy horse with ideal shoulders.

When the fetish of the *arme blanche* has disappeared from the French cavalry, they will use no other horse for their troopers as long as Tarbes produces enough.

4 P. M.—Visit to the saddle shops, the farriers' shops and their collections and means of study. We then went through one of the stables, an airy, well built place with feed troughs of cement and stone floor, the whole not greatly differing from our arrangements. However, the bedding is left down at all times and the horse stands in it and in his stall all day when not at work. They have no picket line, though the climate would permit a horse to stand out most of the days in the year.

CONCLUSIONS DRAWN.

After this summary description of Saumur, I think the question may fairly be asked, What have we to learn from French methods as there exhibited, and what benefits result to the French service from keeping up such an extensive and costly establishment.

I will try to answer the last question first. Saumur and its offspring have created all that exists or that ever did exist of genuine love of horses, and practical knowledge of horsemanship or horse training, in the French army.

This is abundantly proved by an examination of cavalry conditions before and after the establishment of the school

on its present basis, and it is freely admitted by authoritative writers.

Between 1804 and 1830 the orders prescribed that during the winter season cavalry horses must be exercised (blanketed and led) two or three times a week; in the summer season mounted drill for the poorest riders is to be held from three to five times a week, but so arranged that no horse is used over two or three times a week. The non-commissioned officers must be exercised at the gallop *twice a month*, but "caution should be observed not to give this work indiscriminately to all horses!"

Thus Murat's cavalry, which is pictured by the uninformed as a marvel of efficiency, drilled one-third its men—the worst—three times a week during the summer, and the non-commissioned officers galloped their horses regularly twice a month! As a matter of fact, the chief care in peace time was to preserve the horses from injury.

From 1830 to 1870 some practical progress was made, especially due to the Algerian wars, but the imperfections in horsemanship, methods and training were brought out in glaring light by the war of 1870.

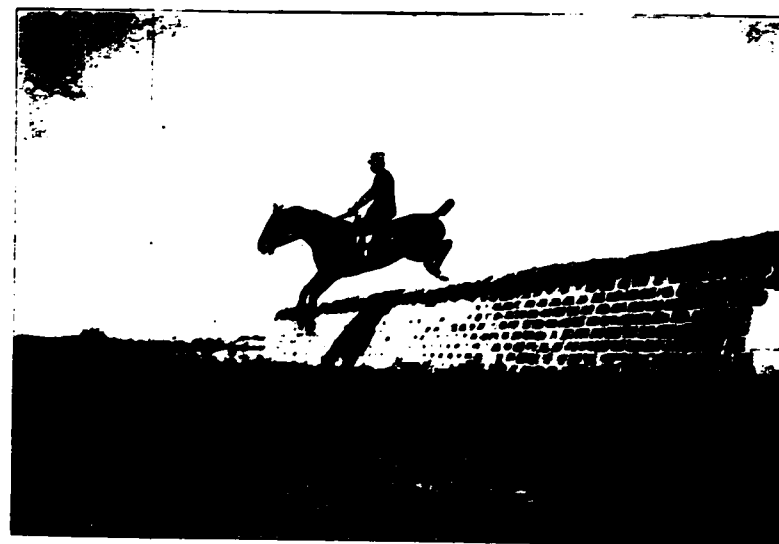
To-day the average French cavalry or light artillery officer is a good rider, but there exists an élite of French officers who are, probably, taken all in all, the best military horsemen in the world.* These men represent the product of thirty years of patient, intelligent development at Saumur. They grow more numerous every year: the circle of their influence in and out of the army extends continually; they have taught the other officers (whether at Saumur itself or in the regiments) not merely by precept and example, but by diligent daily drill in and out of doors, until now the results are evident to the most careless observer.

France still is not and may never be a country where riding is loved and practiced for itself; the countryman, the

*Comparisons are always difficult, but if other European countries have any better military horsemen than France, they were not sent to the international tournament at Turin last summer, nor to the Brussels-Ostend ride. At both events the superiority of the French, the Saumur school, was overwhelming against all comers.



ONE OF THE RIDING COURSES



RIDING INSTRUCTOR

farm hand, the farmer, never rides, though he may spend his life with horses. Last year I made a bicycle trip of six weeks through a great horse-raising province of France, and I saw not one human being mounted on a horse except soldiers.

Riding among the aristocracy and the fashionable set, especially in Paris, is practiced chiefly because it is the thing to do. In the season the Bois is filled with these, but when there is no crowd there to look on, the bridle paths are deserted except by officers and grooms. Many of these French fashionables ride well and know the horse, but in speaking of the nation this class is wholly negligible.

But recruits must be taught to ride—each year some 30,000 who never had a leg over a horse—and the cavalry and light artillery officers must be accomplished instructors; Saumur furnishes these in two ways: every cavalry officer spends a year there just after or just before receiving his commission; he is taught by past masters in all the arts of equitation and on all kinds of horses; they set him a standard both of the horseman and the instructor.

Then apart from this, the school sends out each fall a class of about forty-five cavalry and twenty-five artillery officers, who some six or eight years after their graduation from Saumur have returned there for a ten months' course. Saumur perfects them in horsemanship, brings them up to the latest ideas in all that relates to their arm, enables them to do some theoretical study (though this is secondary) and upon their return to their regiments, they are ready in turn to instruct others. From these the colonel selects his "capitaine instructeur," whose chief work is supervising the riding of the lieutenants and non-commissioned officers united into a platoon for this purpose.* He also lectures on target practice, topography, hippology, etc.

Thus a mounted officer while pursuing the regular studies of his arm, goes himself through several courses of instruc-

*The writer has never heard of an American colonel uniting his lieutenants and non-commissioned officers into a platoon for instruction in horsemanship under a captain. If it were done, it is probable that each lieutenant would consider himself insulted in exact proportion to his ignorance of horsemanship.

tion at the hands of officers who have given proofs of superior talent as horsemen. This system unifies the methods throughout the mounted service.

Let me make a résumé of this work:

St. Cyr—First year, one hour a day mounted instruction.

Second year, two hours a day mounted instruction.

Saumur—As second lieutenant, one year, six hours a day mounted; riding hall, carrière, cross-country, field work, reconnaissance, topography, hippology, etc.

Regiment—Say seven years doing regimental duty as lieutenant. During part of this time his instruction in horsemanship is continued by the "capitaine instructeur."

Saumur—One year as "officer d'instruction," receiving the finishing touches to his knowledge of horses, horsemanship and how to teach it. Instruction, also, in German, field work, kriegspiel, etc. Six hours a day mounted.

Thus Saumur polishes off the young graduate of St. Cyr, and sends him to his regiment with a very considerable baggage of horse knowledge as well as other professional equipment; the regiments yearly send back their best horsemen to draw new inspiration from the school, and incidentally to keep it in closer touch with the service, which latter liaison is further ensured by the periodical replacing of commandant and instructors from the line.

This school then bears somewhat the same relation to horsemanship in the French army that West Point bears to discipline in the American army.

WHAT HAVE WE TO LEARN FROM SAUMUR?

Much. There exists in and out of our army a belief not only that West Point is a magnificent school of horsemanship, but that the graduate of West Point is a better rider and horseman than the graduate of any other institution in the world. It makes no difference that the holders of this opinion have never been outside of American territory or had a

chance to make the comparison, the opinion is prevalent, and it is pernicious, since any opinion which causes us to overrate ourselves is a bar to progress.

Horsemanship may be considered as ability to ride, ability to train a horse for riding, and that general knowledge of the animal which fits the rider to get the best work out of his mount.

An accomplished officer of cavalry or light artillery should be a horseman in all three senses of the word, and an instructor to boot. In our service, he may or he may not be, this depending wholly upon the individual, since we have no school where all mounted officers must necessarily accomplish a complete course in horsemanship.

West Point is not such a school, and that we have no such school outside of West Point, is due to the prevalent belief at West Point and in the army at large, that the Military Academy sends out its graduates armed with a sufficient knowledge of horsemanship. The graduate himself, unfortunately, believes this more firmly than anybody else, and this is bad for him and bad for the service.

What then is wrong? Our standard both of horses and horsemanship. The quality of horsemanship taught at West Point is all right, but the *extent* of the knowledge imparted is insufficient; as far as the training goes it is excellent; its insufficiency is entirely due to two causes, lack of time and lack of tools. If this insufficiency were known and acknowledged, there would be no danger for the service. Means would be provided to continue and perfect the work well and correctly begun; unfortunately the almost universal belief that the graduate is fully prepared to exercise the office of teacher to the horses and recruits of his regiment, bars the way to the rapid and necessary progress he could make from being a good rough rider to being a capable horseman.

This would be but a step were the conditions favorable. He is like a young physician who has just taken his degree with high honors and immediately begins to treat diseases and perform surgical operations; he may develop into a splendid doctor in ten years, but think of what is suffered at his hands while he is learning! Think how much more

rapid and certain would have been his progress had he stood by in a hospital for a year to watch and aid his seniors before beginning to practice himself.

Certainly one-half the members of an average class at West Point are not accustomed to riding when they enter, and these are the men we must consider, for the cavalry arm gets its officers from this half as often as from the other. Leaving out the few who are really horsemen from long practice on farms at home, what does a cadet know of horsemanship when he graduates? He knows how to stick on, to be quite fearless and at his ease in any position on *any horse which the stables contain*; he becomes, in general, a first rate rough rider; he can do the things he has been taught, and do them so well as to excite unlimited and dangerous admiration. What does he know of a horse's mouth? A few things that he has been told. But what he has felt of a horse's mouth? He has felt the callosities or the tender wounds made in that sensitive organ by many unskillful hands. Has he ever seen a young horse getting his first exercise, his first handling, biting, mounting? Has he ever seen and tried what skill and patience is required with a well bred colt to teach him the beautiful art of carrying himself and a rider? He has not; the tools are lacking, and West Point is partly responsible for that. In these days at least the War Department, sooner or later, procures for the Academy whatever in the way of equipments the Academy urgently demands.

Has a cadet when he graduates ever ridden a perfectly trained horse that answers to each movement of hand or leg as a musical instrument to its master? Has he ever known the joy of riding such a horse or the instruction one gets in bringing these results out of a rough colt? Certainly not. Then what is the standard in horse flesh and horse knowledge of the young lieutenant who joins his regiment? The standard created for him by riding for three years, *and riding nothing else*, the horses we all know so well as constituting the "detachment."

What is the result of this upon the mounted service? The young officer joins his regiment; he knows how to stick on



RIDING INSTRUCTORS.



RIDING INSTRUCTORS.

with consummate ease, saddle or no saddle; he can guide his horse with hand and leg; he can use his weapons fairly well; he has jumped the bar in the riding hall if perchance the horse he rode was that kind; he has had some troop drill; he has splendid pluck and loves to ride. But he does not know anything about cross-country riding; he is no judge of a horse's powers of endurance or how to eke them out in a pinch; he never took a stiff hedge and ditch; he never was on a horse that *could* take such an obstacle; he believes firmly that the McClellan saddle is the only saddle in the world (unless Colonel Treat has lately disturbed that idea, because he never rode any other; above all, he has never ridden first rate horses or different classes of them—the thoroughbred, the hunter, the half-bred; no experience has taught him what are the qualities of each; he has ridden chiefly or wholly what is commonly known as the "plug," and in spite of any hope for the future or envy of better things, that "plug" is his standard of horseflesh; it must be; he knows by intimate daily contact nothing else. He is undoubtedly a first rate trooper, but is he prepared to step at once into the office of instructor? Has he those accomplishments which a good cavalry officer is expected to have? Certainly not. This alone is sufficient to account for the poor class of mount which this graduate we are speaking of is generally content with for the rest of his life.

A good horse out of the troop is perfectly satisfactory to most officers for they have never had a chance to regularly ride or train anything better.* Not one per cent. of the officers in our mounted service own what would be called a well-bred excellent mount. This is not due to poverty, but due to the low standard of excellence in horse flesh prevail.

*The writer believes it is wholly accurate to say that during eight years of his personal experience at West Point only two cavalry officers owned their mounts one of these, a fine young Kentucky horse, was regarded by the cadets with the admiration and reverence one might bestow upon a Derby winner. The idea of riding such a horse, as a matter of course, never entered their heads. This animal was about the grade of a horse regularly used for much of the instruction at St. Cyr and Saumur. This was in the '80's and '90's; whether things are now different at West Point, Leavenworth and Riley is not known.

ing throughout the army. While the horses raised in our country excite admiration the world over, our officers know little of such except by sight. Poverty is not the cause, but indifference to the need of being well mounted. If an officer loves dress and has a high standard of its requirements, he can gratify his taste; if he loves to gamble or travel or drink, he can gratify these passions; if he loves and understands a good horse, he can own one; if he felt that to be badly mounted was ignominious he would soon find means to turn out better, even if he did not take his greatest pleasure in riding; but the present standard of taste in horse flesh is deplorably low.

How can it be improved? First, by having at West Point in addition to a sufficient number of the present type of horses for cadets to learn on, twenty perfectly trained thoroughbreds for riding hall work and twenty perfectly trained hunters for outside work; if this is impossible, ten of each. These horses should be ridden only by first classmen, and those who have not shown sufficient aptitude should not be given these horses till their last six months.

A cadet who has ridden for one year such horses as these would have indelibly fixed for all time his standard of the type of horse proper for the service of a mounted officer; he would probably never be content until he owned one equally good, and to do so is well within his means.

Riding such horses under the eye of a watchful master would exhibit every fault committed by the rider and show the latter, as only experience can, the standard he should aspire to in his work of training young horses himself.

In addition to the horses mentioned, ten colts of about two and one-half years old, of good type and breeding, should be bought each year for West Point. These should be trained before, and as much as possible by the first classmen and under competent instructors, that a clear understanding and some little practice may be had of what training a good horse means. So, when the time comes to leave the Academy the young graduate has a fairly good estimate of what he knows well (*viz*: riding—sticking on), what he knows slightly and what he has yet to teach himself or be taught. If he deserves

half the name of cavalryman, the rest of his instruction will be an enthusiastic pleasure.

But his standards must be high, and only experience with good horses can establish them; he must understand the incompleteness of his education at this point, that he may go forward willingly toward perfecting it. With such foundations to build upon, the cavalry graduate should go at once to Fort Riley for a year's course in equitation and the duties of the troop officer in garrison and in field topography, reconnaissance, reports and the like: from four to six hours a day in the saddle, one to two hours a day of indoor study (map reading, lectures, hippology, Spanish).

This school should be equipped with a full complement of excellent horses of two types—thoroughbred and half bred; the instructors should be the picked horsemen of the army. The work should include riding hall work, regulation saddle, bareback and English saddle: the outdoor work, in addition to service in campaign, a careful program leading up to the stiffest jumping as well as long distance rides.

A number of unbroken colts, of good type, should be bought for the school, and one given to each lieutenant to train under the eye of an instructor. On leaving the school the officer should be allowed to buy the horse he had trained for what it cost the government as a colt: while at the school he should not be required to own a private horse.

Can any one doubt that such a method would quickly raise the standard of horseflesh and horsemanship in our mounted service? And would not the graduate entering the cavalry arm, hail the opportunity of spending a year in the daily practice of riding and training good horses, the most delightful pastime that the soldier in peace has ever yet found in all the ages since Alexander? And would he ever be satisfied with the indifferent class of mount he now rides?

The good of our mounted service demands some such leavening, especially for the future, and Fort Riley could easily be made to our cavalry a fountain of inspiration and a standard of excellence in all that concerns the horse and his uses in war. To have graduated from the cavalry school under such a system, would carry with it not merely the

stamp of good rider, but of all round capable horseman, and the prestige of our cavalry, already so high, would be still further increased. No distinction is too proud for that arm in the American service to grasp it; its traditions are splendid, but is not improvement always desirable?

After careful examination of the subject it cannot be advanced that, considering the four years spent at West Point and the time given there to riding, such a post-graduate course is unnecessary. In the third class year at West Point about forty hours are devoted to riding, in the second class year about sixty, in the first class year about 115, total in three years, about 215 hours.

At St. Cyr, in the first year about 240 hours are devoted to riding (both cavalry and infantry cadets); in the second year the infantry cadet has about 120 hours, the cavalry cadet 480 hours. Total at St. Cyr in the two years—infantry cadet, 360 hours; cavalry cadet, 720 hours. The cavalry graduate then goes, after two months' leave, to Saumur for a ten months' course. For six days in the week he puts in never less than six hours a day mounted; once or twice a fortnight, eight hours a day mounted field work. In the year this means, counting six hours a day, 1500 hours of actual work with horses.

Thus the French second lieutenant joins his regiment three years after entering St. Cyr, having devoted (1500 + 720) 2220 hours to learning riding, training and horsemanship; this on the very best horses of every class, with every accessory that money can buy, on all sorts of ground, over all kinds of obstacles, and directed by the most accomplished horsemen on the continent.

The difference between 215 hours, devoted in three years to the American's instruction, and 2220 hours, devoted during an equal period to the Frenchman's instruction, is rather glaring, and one must be inspired by an overwhelming contempt for the French race, and a prodigious ignorance of the French cavalry officer, if these figures and facts related above leave him convinced that the American cavalry officer has nothing to learn in France.

"Si, dans notre arme, le cheval n'est pas tout,
Tout n'est rien sans le cheval."

THE AUTOMATIC COLT PISTOL.

THE action of this pistol is automatic, except that the trigger must be pulled to fire each shot. The arm can be discharged at the rate of five shots per second, the cartridges being automatically supplied from a detachable magazine inserted in the handle of the pistol, with a capacity of seven shots.

After the pistol is charged with a filled magazine, one opening movement is made by hand, bringing the first cartridge into the chamber. On pulling the trigger the cartridge is fired, the empty shell is extracted, and a new cartridge loaded into the chamber, all these operations taking place automatically without any manipulation of the arm. This automatic operation of the pistol is effected by the recoil of the moving parts, and as a consequence the recoil is so absorbed in being utilized that it has not the usual disturbing effect.

Length of barrel 6 inches.
Length of pistol over all 9 inches.
Weight of pistol 35 ounces.

COMPONENT PARTS OF THE AUTOMATIC COLT PISTOL.

Caliber .38 rimless smokeless.

- | | |
|----------------------------|--------------------------------------|
| 1. Receiver. | 13. Hammer screw. |
| 2. Barrel. | 14. Hammer roll. |
| 3. Slide. | 15. Hammer roll pin. |
| 4. Firing-pin. | 16. Trigger. |
| 5. Firing-pin spring. | 17. Sear. |
| 6. Rear sight. | 18. Safety. |
| 7. Firing-pin Lock-pin. | 19. Sear and safety pin. |
| 8. Shell extractor. | 20. Sear, safety and trigger spring. |
| 9. Shell extractor spring. | 21. Mainspring. |
| 10. Shell extractor pin. | 22. Mainspring screw. |
| 11. Slide lock. | 23. Ejector. |
| 12. Hammer. | 24. Ejector pin. |

- | | |
|------------------------------|---|
| 25. Recoil spring. | 33. Magazine catch pin. |
| 26. Detractor spring. | 34. Magazine. |
| 27. Follower. | 35. Magazine follower. |
| 28. Plug. | 36. Magazine spring. |
| 29. Plug and link-pin, long. | 37. Scales (2), right and left hand, and escutcheons. |
| 30. Links (2). | 38. Scale screws (4). |
| 31. Link-pin, short. | |
| 32. Magazine catch. | |

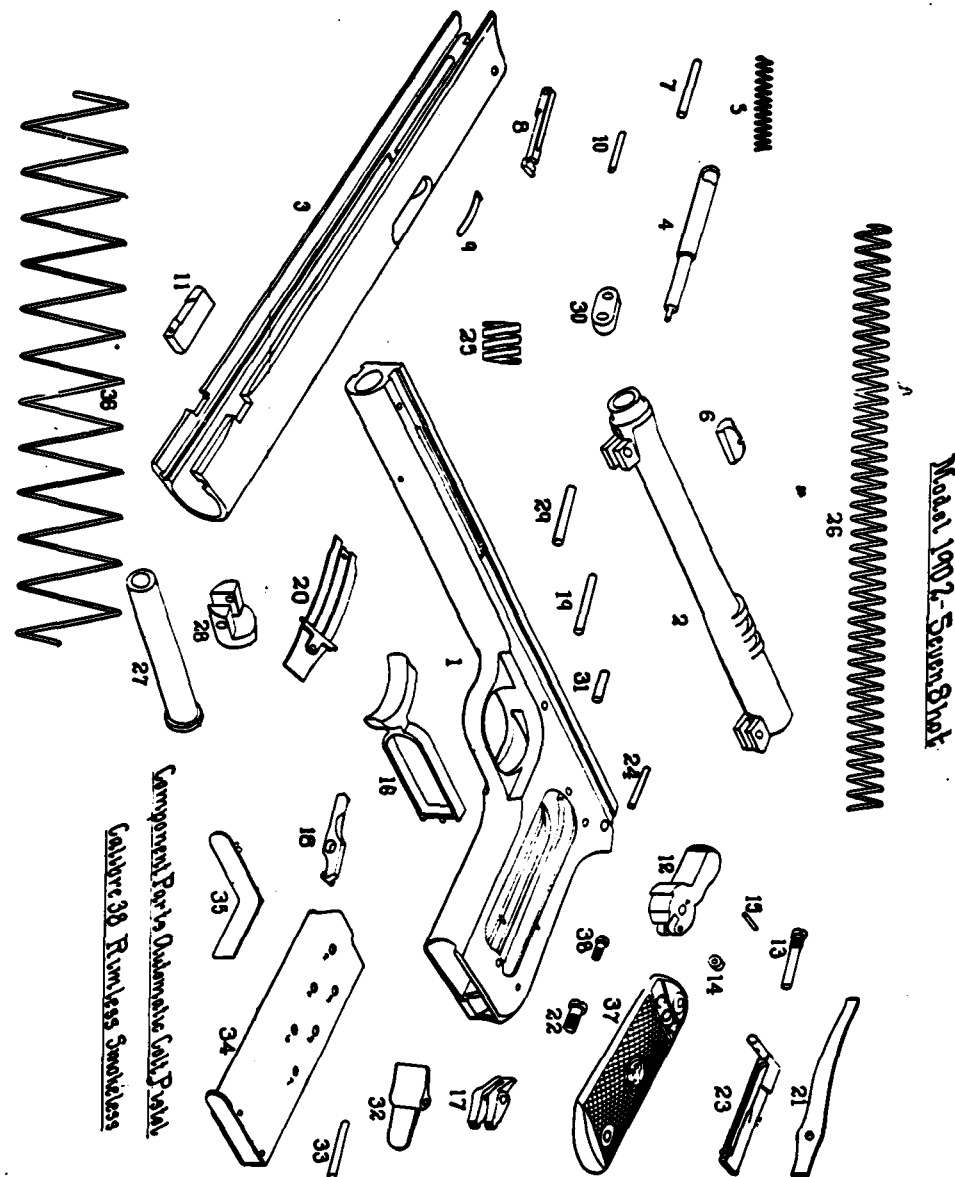
The three main parts of the pistol are the receiver, the barrel and the slide.

The receiver has suitable guides for the reciprocating slide, and below is the handle, which is hollow, and encloses the cartridge magazine. This is inserted in the handle from below and is there held by the magazine catch, which slightly projects from the bottom of the handle; this projection serves to release at will the magazine from the catch, when it may be readily drawn from the handle for recharging.

In front of the handle is the trigger guard, in which the trigger is located; in the rear and above the handle is arranged in the receiver the firing mechanism, consisting of the hammer, the sear, a safety device and the mainspring; also the sear, safety and trigger spring. The lower part of the latter serves to actuate the magazine catch.

The top of the receiver extends forward from the handle and to it the barrel is attached by two short links, one near the front end of the barrel and one at its rear end; these links are attached to the receiver by a link-pin and also to the barrel by a similar link-pin, and allow the barrel to swing rearward thereon. As both links are of the same length, the rearward movement of the barrel in swinging thereon carries the barrel slightly downward, but the longitudinal axis, during all the movements, remains parallel.

Below the barrel the receiver has a tubular seat for the retractor spring, which in front is closed by a plug fastened in the receiver by the lower link-pin. The top surface of the receiver and two longitudinal grooves on its sides form the seat for the slide, which is guided thereon in rearward and forward movements. The rear part of the slide forms a bolt, the forward extension of which is a partially tubular cover enclosing the barrel.



In the forward part of the receiver is a transverse mortise extending through the retractor spring seat, and transverse recesses in the forward part of the slide serve to admit the slide lock, which, passing through the sides of the slide and through the mortise, serves to lock the slide to the receiver. The retractor spring in its seat in the receiver consists of a spiral spring, the rear end of which rests against a short stiff recoil spring located between the retractor spring and the receiver, and the front end of the retractor spring carries a follower.

The rear face of the slide lock has a slight recess, and when this lock is in its place, the front end of the follower rests in this recess, thereby confining the slide lock laterally; thus the tension of the retractor spring is exerted to force the slide to its forward position, while the recoil spring serves to receive any excess of recoil of the slide.

Upon the barrel are three transverse ribs, and in the interior of the slide are three corresponding recesses. These serve to lock the barrel and the slide firmly together when in their forward or closed position.

Between the locking recesses and front of the bolt the slide has an opening on the right side for the ejection of the empty shells. The bolt is provided with an extractor, a firing-pin and a firing-pin spring.

The magazine is a tubular holder, in which the cartridges are placed one above the other, resting upon a follower acted on by a spring which presses upward. The upper end of the magazine is open to permit the escape of the cartridges; the side walls at the rear of the opening are turned inward and engage the rim of the topmost cartridge to prevent its escape from the magazine when it is pushed forward.

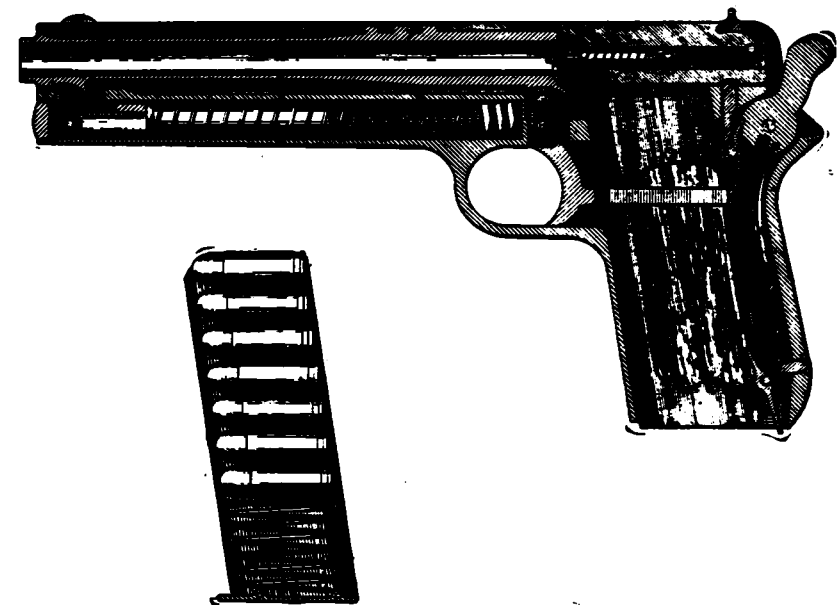
OPERATION.

The magazine can be loaded with any number of cartridges from one to seven, its capacity being seven. The charged magazine is inserted in the handle; the slide is drawn once to the rear by hand.

This movement cocks the hammer, and when the slide is in this position the magazine follower and follower spring

raise the topmost cartridge so as to bring it into the path of the bolt: the slide on being released is carried forward by the retractor spring, and during this movement the bolt places the cartridge in the chamber. As the slide approaches its forward position the front of the bolt encounters the rear end of the barrel and forces the barrel forward. During this forward movement the barrel also swings upward on the links, and thus the locking-ribs on the barrel are carried into

Model 1902 Seven Shot



the locking recesses in the slide; the barrel and slide are thereby positively interlocked and the pistol is ready for firing.

A pull on the trigger now serves to move the sear so as to release the hammer and fire a shot. The force of the powder gases driving the bullet from the barrel is rearwardly exerted against the bolt, overcoming the inertia of the slide and the tension of the retractor spring, and as a result the

slide and the barrel recoil together. After moving rearward together for a distance, enough to insure the bullet having passed from the barrel, the downward swinging movement of the barrel releases the latter from the slide, leaving the barrel in its rearmost position. The momentum of the slide causes the latter to continue its rearward movement, thereby cocking the hammer and compressing the retractor spring until, as the slide arrives at its rearmost position, the empty shell is ejected from the side of the pistol and another cartridge is raised in front of the bolt. During the return or forward movement of the slide, caused by the retractor spring, the cartridge is placed in the chamber, the slide and barrel are interlocked, thus making the pistol ready for another shot. These operations may be continued as long as there are cartridges in the magazine, each discharge requiring only the slight pull on the trigger.

It will thus be observed that the method of operation is, briefly speaking, as follows: Load the magazine, place it in the handle, draw back slide and let it return forward; pull the trigger. If you wish to continue firing, all you have to do is to continue pulling the trigger.

SAFETIES.

It is impossible for the firing-pin to discharge or even touch the primer except under the full blow of the hammer.

The pistol is also provided with a safety device which makes it impossible to release the hammer unless the slide and barrel are in their forward position and safely interlocked; this safety device also serves to control the firing and to prevent more than one shot from being fired for each pull of the trigger. It consists of a small vertical piece mounted in front of the sear in the receiver, the end of which slightly projects from the top of the receiver; in its raised position, when the bolt and slide are in the forward position, interlocked with the barrel, it finds a corresponding recess in the bottom of the bolt. In this raised position, the safety-piece does not interfere with the operation of the trigger, but when the slide is moved rearward the bottom of the bolt depresses the safety-piece which, in that position, prevents the

movements of the trigger from operating the sear, and thus the hammer cannot be released until the slide is again in its forward position, locked to the barrel.

TO TAKE THE PISTOL APART.

In order to take the pistol apart, the hammer is cocked and the slide is drawn to the rear until the slide lock has passed above a small hole in the bottom of the receiver leading into the retractor spring seat. By inserting a pin into this hole the retractor spring and follower are prevented from



moving forward the lock, and the lock (13) thus freed from the pressure of follower will readily pass from the left side of its seat in the receiver and slide. The lock thus removed, the slide may be drawn rearward entirely from the receiver.

To remove the barrel from the frame it is only necessary to drive out the link-pins which hold the barrel links to the frame. This also releases the plug, which may then be removed from its seat; then the retractor spring, the follower and the recoil spring may be readily removed from their seat in the receiver.

After removing the scales from the handle, by turning out the screws, all the parts of the firing mechanism may be readily removed on taking out the screws and pins holding them in the receiver.

To assemble the pistol, proceed in the reverse order.

AUTOMATIC PISTOL—BORCHARDT-LUGER SYSTEM.

PARTS.

1. Barrel with front sight (1^I) and bifurcated receiver (1^{II}).
2. Breech-block, in connection with
- (3). Forward and
- (4). Rear link of toggle-joint, with coupling link for recoil spring (4^I) and pin (4^{II}).
- (5). Connecting-pin between the breech-block and forward link.
- (6). Connecting-pin between forward and rear link.
7. Hinge-pin between rear link and bifurcated receiver.
- (8). Retaining catch on rear link, with
- (9). Connecting-pin and
- (10.) Spring.
11. Recoil spring (double) with rivet (11^I).
12. Firing-pin.
13. Firing-pin spring.
14. Breech-block end-piece.
15. Cartridge-extractor.
16. Cartridge-ejector.
17. Stock with catch (17^I), sling swivel (17^{II}) and breech-block catch-link rivet (17^{III}).
18. Trigger-bar with spring-stud (18^I), spring (18^{II}), and rivet (18^{III}).
19. Trigger-bar spring.
20. Trigger with spring (20^I).
21. Trigger plate.
- (22.) Trigger lever.
- (23.) Trigger lever pin.
24. Locking-bolt.
- (25.) Locking-bolt spring.

26. Breech-block catch-link with spring (26^I).
27. Magazine catch.
28. Magazine catch spring.
29. Automatic safety sear.
30. Automatic safety sear spring.
31. Safety catch.
32. Pin for same.
33. Butt side-pieces of wood.
34. Screws for same.

The loose magazine (or cartridge-holder), consisting of the following parts (which may be taken to pieces):

- (a) Metal-plate frame.
- (b) Cartridge-feeder spring.
- (c) Cartridge-feeder or carrier (or magazine platform.)
35. (d) Cartridge-feeder pressure-knob.
- (e) Cartridge-feeder guide-knob.
- (f) Bottom-piece.
- (g) Connecting-pin.

Accessories.

- I. Screw-driver.
- II. Cleaning-rod.
- III. Gun-pick.

V. B.—Among the above parts, those with their consecutive numbers in parenthesis, as well as the parts joined by riveting, etc., and which are designated with references (a, b, c, 1^I, 1^{II}, 4^I, 4^{II}, etc.), should never be detached unless absolutely necessary.

DIMENSIONS.

Calibre	7.65	mm.	0.301 inch
Depth of the four concentric rifling grooves	0.125	mm.	0.004 inch
Widths of same	3.0	mm.	0.117 inch
Length of rifling (right-hand twist)	250.0	mm.	9.84 inches
Length of barrel	122.0	mm.	4.80 inches
Distance between sights	215.3	mm.	8.46 inches
Length of pistol (in center line)	237.0	mm.	9.31 inches
Height of same	135.0	mm.	5.30 inches

		Pounds.	Ounces.
Weight of same	835 grains.	1.0	13.4
Weight of magazine	56 grains.		1.96
Weight of cartridges complete	10.5 grains.		0.36
Weight of smokeless powder charges	0.33 grains.		0.012
Weight of projectile (hard lead core with full or half envelope of steel plate coppered and nickel-plated)	6.0 grains.		0.21
Length of cartridge, complete.	29.8 mm.		1.18
Muzzle velocity of projectile	350.0 m.		382.8 yds. (say 1150 ft.)
Maximum range with an angle of elevation equal to about 4° 30'	1800 m.		1967 yds.

MANIPULATION AND ACTION.

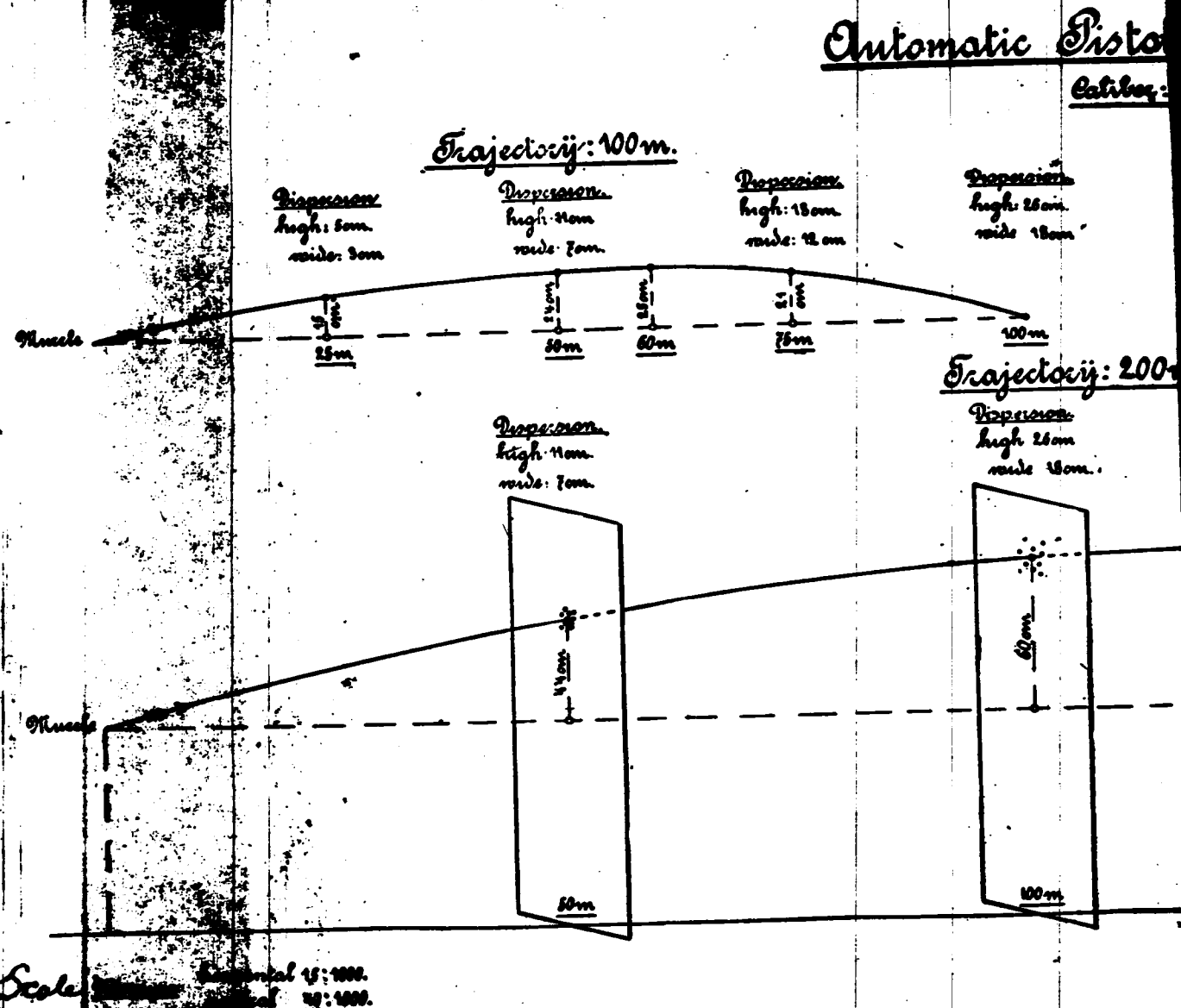
1. Charging the loose magazine.

Grasp the loose magazine (or cartridge-holder) with the left hand, the aperture turned upwards and its point to the right, place the thumb on the chequered guide-knob (35°) and pull it down to an extent equal to the thickness of one cartridge; at the same time push with the right hand a cartridge under the overlapping lips of the magazine, in the direction from the front towards the back, and repeat this operation until the magazine is filled, but in doing so the guide-knob must always be pulled down, *step by step, so as to afford space, each time, for one additional cartridge only*, in order to avoid needless jerking caused by the recoil of the strong spring (if pulled down too far), and to ensure that each cartridge is properly lodged.

(Emptying the magazine is effected by removing the cartridges, one by one, each time drawing back the guide-knob a little. The cartridge-feeder, or magazine platform, with the guide-knob, *must never* be allowed to spring up freely, as this would cause the lips of the magazine to be widened out and the cartridges to be ejected from the magazine.)

2. The introduction of the loose magazine into the pistol

is always effected with the left hand, while holding the pistol firmly with the right hand, as in firing. The magazine is then inserted in the butt of the pistol, with the points of the cartridges turned towards the muzzle, and pushed upward



Automatic Pistol Borchardt-Luger.

Caliber: 7.65 mm.

Dispersion
high 15 cm.
wide 15 cm.

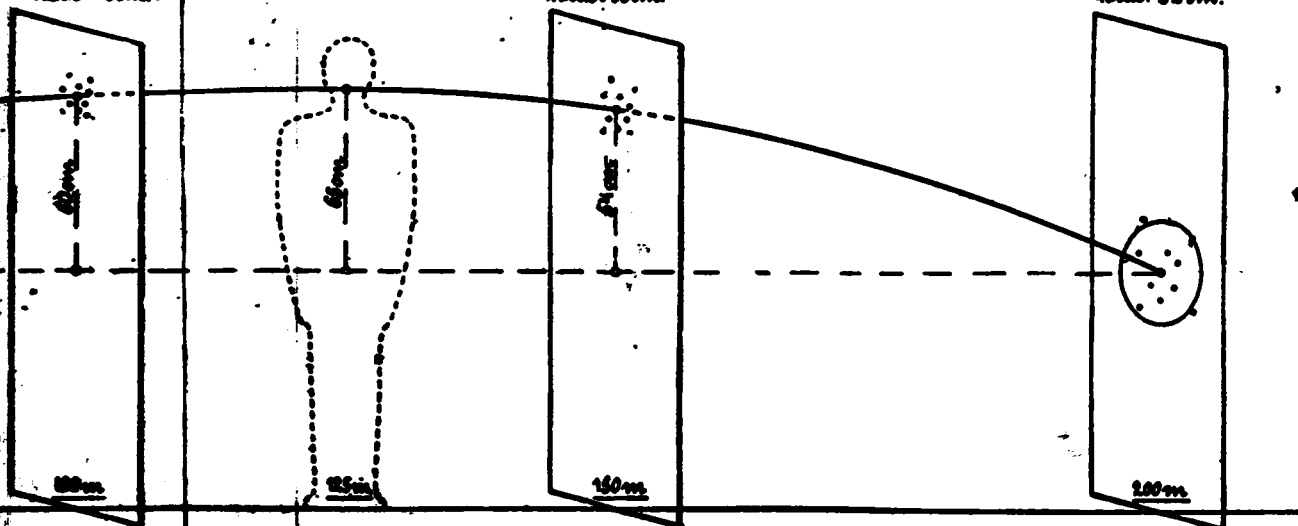
100m

Trajectory: 200m.

Dispersion
high 15 cm.
wide 15 cm.

Dispersion
high 15 cm.
wide 15 cm.

Dispersion
high 15 cm.
wide 15 cm.



BORCHARDT-LUGER PISTOL.

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until the catch (27) snaps into its seat; this is ensured by a light tap with the left hand upon the bottom of the magazine.

3. Loading the barrel.

Hold the pistol by firmly grasping the butt (17) with the right hand (in doing so, as in firing, the automatic safety sear (29) must be pressed inward), the barrel horizontal, turn the breech-block to the left, firmly grasp with the thumb and forefinger of the left hand the two cheeks of the toggle-joint and pull *backward in a straight line*, until the head of the breech-block is placed *behind* the uppermost cartridge in the magazine; then let it spring forward abruptly.

4. Firing.

Hold the pistol firmly in the right hand, so that the automatic safety sear (29) projecting from the stock is pressed inward firmly. To fire the pistol, pull the trigger (20) and release the pressure after each shot until the magazine is empty.

5. Action at the moment of firing.

(To be demonstrated with *dummy* cartridges in accordance with the sentences placed in parentheses.)

(a) The powder gases acting upon the base of the cartridge propel the barrel and breech system backward, causing them to slide along the guide until the toggle-joint cheeks strike against the curved surfaces of the sides of the stock.

(Illustrate this by pressure exerted with the palm of the left hand, placed flat against the muzzle, while the right hand grasps the butt as stated under 4.)

The retaining catch (8) in the right-hand link cheek of the toggle lever has receded behind the catch (17¹); the toggle-joint links are free to spring up.

(b) The barrel with the breech system continues its motion.

(As previously described under 3, grasp the butt of the pistol firmly with the right hand, whilst the left hand seizes, with the thumb to the right and the forefinger to the left, the link cheeks, pulling them down quickly backward, in a

straight line, whereupon their ejection will ensue automatically.)

The toggle-joint will rise until the recoil spring and the firing-pin spring are fully cocked.

(c) The spent cartridge strikes against the ejector (16), which intercepts and ejects it.

(d) The magazine spring raises a new cartridge into position in front of the breech-block.

(e) The recoil spring (11), which is cocked but not retained in this position, propels the breech-block forward by means of the coupling link (4¹), which oscillates on the rear link, thus extending the links of the toggle-joint system, at the same time catching the firing-pin spring (12), which is cocked against the trigger-bar (18).

(f) The forward motion is communicated to the barrel and the bifurcated receiver (1st), the barrel, with its shoulder (see below in the sketch of the bifurcated receiver), advances up to the locking-bolt (24).

(g) The toggle-joint links are now fully extended; the firing-pin spring, being held back by the firing-pin, is kept cocked.

(h) The retaining catch (on the right-hand cheeks of the links) springs down over the center catch on the stock-casing, so as to catch into it, and the breech mechanism is now fixed in position.

(i) The trigger is released (as otherwise the trigger-bar spring-stud cannot move forward, and it would be impossible to act on the trigger-bar); the spiral spring presses the trigger-bar spring-stud forward, underneath the lever (22) which effects the transmission of the trigger motion, with a "pressure (pull off) point."

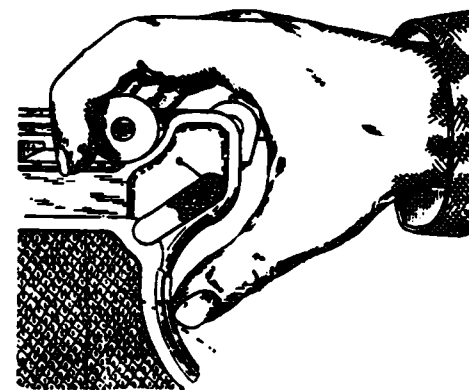
(j) *The pistol has thereby been again loaded, locked and cocked, and is ready for firing again.*

(k) *After the last shot (i. e., when the magazine is empty) the guide-knob (35e) acts on the breech-block catch-link (26), causing the breech to remain open and the toggle-joint to remain erect, so as to obstruct the line of sight.*

(l) *After removing the empty and inserting a full magazine, draw back the toggle-joint cheek slightly, with the left*

hand, and let it spring forward; this prepares the pistol for firing.

To close the breech, when it remains open, after the magazine has been emptied (or when an empty magazine has been inserted), partly or entirely remove the magazine and proceed as for loaded magazine.



6. To remove the magazine.

Hold the pistol in the right hand and turn slightly to the left, and press, with the thumb of *this* hand on the magazine catch (27); at the same time seize the magazine with the left hand, by the projecting knobs, and draw it out. In case of great urgency, let the magazine drop out, so as to be able to introduce a full one immediately with the left hand.

7. To remove the cartridge from the chamber.

After removing the magazine, carefully open the breech, whereupon the cartridge will drop through the butt into the hand held underneath to receive it.

8. Dismounting and assembling.

(Ordinarily the only parts necessary to be removed for cleaning purposes are the recoiling portion from the stock, and the hinge-pin and toggle-joint and breech-block from the bifurcated receiver.)

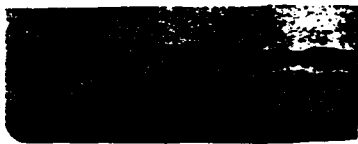
EFFECT OF SHOTS IN BLOCKS OF PLASTIC CLAY.

Fig. 1.



Smith & Wesson, Cal. .44.
Usual cartridge, 11 yards.

Fig. 2.



Luger Automatic, Cal. .30.
Usual cartridge, 11 yards.

Fig. 3.



Luger Automatic, Cal. .30.
Reduced charge, 11 yards.

Fig. 4.



Smith & Wesson, Cal. .30.
Expansion bullet.

Fig. 5.

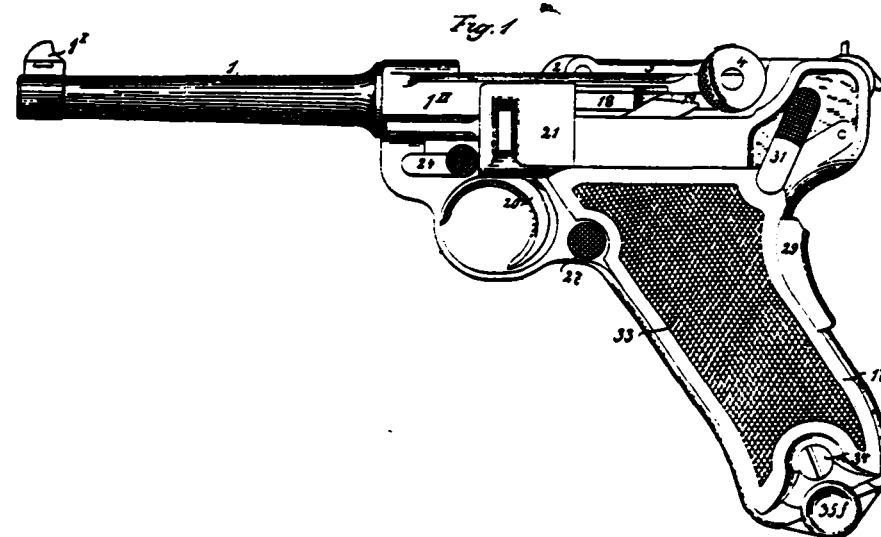


Luger Automatic, Cal. .30.
Expansion bullet.

(a) *Dismounting (for cleaning).*

1. Take out the *magazine*.
2. Take off the *trigger-plate* (21).

For this purpose, place the thumb of the right hand on the automatic safety sear, pressing it inwards. Grasp the left cheek of the toggle-joint with the forefinger and the right cheek with the middle finger; draw back the recoiling portion in a straight line, up to the curved surfaces, and hold in this position (as shown above). Turn the locking-bolt



lever (24) outwards with the thumb of the left hand; lift off the trigger-plate and let the recoiling portion slide forward.

3. Slide the *barrel with breech mechanism* forward and remove the same.

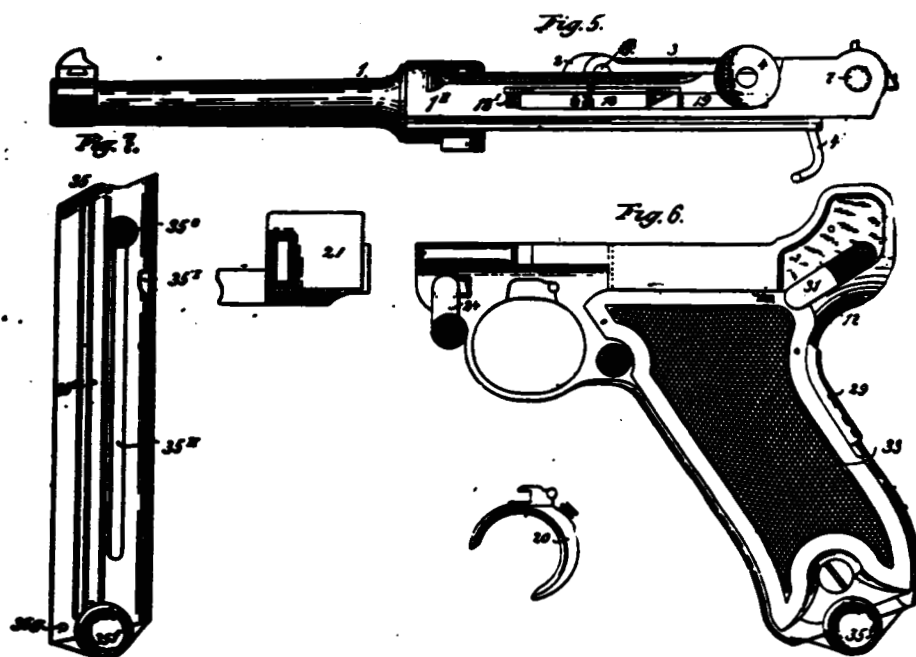
4. Withdraw the hinge-pin (7) from right to left, previously releasing the firing-pin spring, if compressed, by pressing on the forward end of the trigger-bar (18¹).

5. Withdraw the *breech-block*, slightly raising the toggle-joint cheeks.

6. Take out the *firing pin* (12) with the forefinger of the right hand (or with a suitable screw-driver); first press

the breech-block end-piece (14) firmly inwards, so as to compress the firing-pin spring, then, by quickly turning it to the left, release its shoulder out of the groove, and let the bottom pin, yielding to the pressure of the spring, slowly glide out. Then remove the firing-pin and spring.

7. Remove the *cartridge-ejector* (16); at first, only lift the rear end with the thumb-nail just sufficiently to cause its round shoulder to issue from its socket and lodge against the edge,



then press with the forefinger, from inside toward the outside, against the nose which projects through the bifurcated receiver (1st). The ejector will then jump out; the operator should therefore place the thumb over it, so as to intercept it.

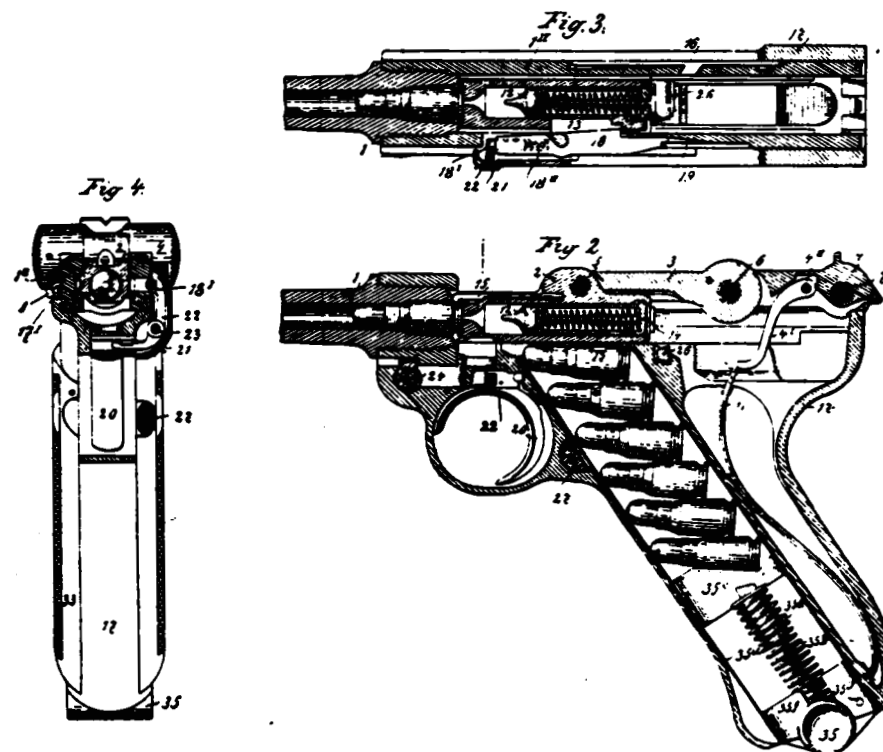
(b) Assembling

is effected in the reverse order of dismounting, namely:

1. *Insert the injector* by placing it over the slots in the receiver; first enter it in the central slot, then press it gently

home. (This operation, like that of taking out, should always be performed without using any force.)

2. *Insert the firing-pin.* Put the firing-pin and spring into the breech-block, then insert the end-piece with its shoulder in the slot in the breech-block. Compress the spring, and rapidly turn to the right, so that the shoulder or catch will recede through the transverse groove into the axial notch and the nick stand vertically.



3. *Insert the breech-block into the bifurcated receiver.* Depress the trigger-bar (18) from the front (in order that the breech-block, with the firing-pin, may be freely pushed forward).

4. *Connect the breech-block with the barrel by means of the hinge-pin* (7). (The pin should be inserted from left to

right; the pin fits nicely if the shoulders on the rear link are made to bear against the shoulders on the bifurcated receiver.)

5. *Insert the barrel with the breech mechanism in the stock.* This is done with the left hand, the barrel with the foresight downward. Hold the parts horizontally, the coupling-link to the rear, the firing-pin forward; slide the pistol stock with the right hand over the breech mechanism and push it forward, sliding along the guide grooves. Then turn the whole, bringing the barrel with the breech mechanism a little forward and then back again, at the same time engaging the coupling-link in the recoil spring; particular care should be taken to see that the coupling-link (4¹) is correctly caught in the hooks or clutches of the recoil spring (11).

6. *Put on the trigger-plate*, when the recoil spring is properly caught. Draw back the recoiling portion to the curved surfaces with the right hand (as when taking to pieces, by pressing the automatic safety sear and holding the joint cheeks). Hold it fast in this position, insert the trigger-plate (with the backward projecting narrow fillet under the slot in the casing), turn the locking-bolt lever (24) upward. By repeatedly drawing back and releasing the toggle-joint (*i. e.*, opening and closing the breech), satisfy yourself that the recoil spring is securely caught and is acting properly.

(c) *Further dismounting and assembling.*

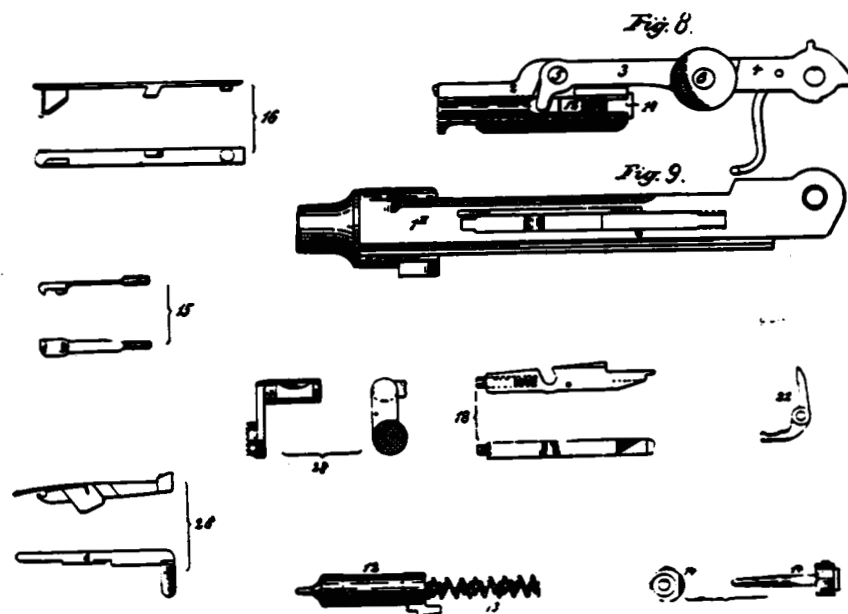
1. *Take out the trigger-bar (18).* Slightly lift the trigger-bar spring (19) by catching with the thumb-nail under the upward-bent part, and slide it forward in a straight line (previously depress the trigger-bar in front so as to lift the spring, and thus facilitate catching underneath it). Turn the barrel to the left, whereupon the bar will drop out (if necessary strike with the pistol upon the palm of the hand).

To assemble: Introduce the trigger-bar, with the pin turned forward. Insert the spring in its groove and push inward, at the same time pressing it a little in the center.

2. *Remove the extractor (15) from the breech-block.* Holding the breech-block in the left hand, with the forefinger over

the spring part, catch with the screw driver, held in the right hand, under the claw of the extractor and *only* just lift it sufficiently far to make the supporting nipple issue from the breech-block, then pull the extractor out in a forward direction.

To reinsert it, place it in position, and push backward in a straight line until the supporting nipple snaps into its seat.



3. *To take out the breech-bolt catch-link (26).* Press with the forefinger of the right or thumb of the left hand against the adjacent side of the casing, lift only a little (*only* in proportion to the extent to which it is "let in"), and pull backward in a straight line.

Reinserting: Hold the adjusting piece with the thumb and forefinger of the right hand, depress the point of the spring into the slanting slot or notch in the casing, push the link in, in a forward direction, so as to bring the hook under the pin.

4. *Take out the trigger* (20). Compress the spiral spring by a slight counter-pressure, and remove the trigger horizontally.

Reinsert it, in a horizontal position, push in the spiral spring (with the wire to the rear). Compress it against the slant in the casing.

5. *Take out the locking-bolt* (24). Seize it by the lever, moving it a little to and fro with a simultaneous upward pressure, and pull it out in a straight line.

Reinsert it by simultaneously lifting the lever and pressing it in.

6. *Take out the automatic safety sear*. Unscrew and remove the left-hand side-piece of the butt. Press the automatic safety sear (29) inward against the spring, hold it in this position, remove the lower end with the stud or catch, and pull out the piece in a downward direction.

To reinsert it, push it under the safety catch (31) from the left to the right, then lifting it, below at the stud or catch, let the latter drop into its seat; in doing so take care to see that the shoulder or projection acting upon the spring does not lodge between the spring and the partition in the stock or butt, but behind the spring.

N. B.—If the automatic action of the safety sear is not required, remove the spring (30) which bears against it; then the pistol can be "made safe" by means of the safety catch (31).

7. *Removing the safety catch* is effected by pushing out the pin (32), holding it from the interior of the stock, in doing which the lower arm should be turned downward.

COMMENTS ON THE LUGER AUTOMATIC PISTOL.

CAPTAIN T. R. RIVERS, FOURTH U. S. CAVALRY.

1. The method of loading the barrel and of throwing the pistol into action (see pages 8 and 9 of descriptive pamphlet sent with pistol) is awkward and rather hard to perform on horseback. It is difficult to tell when the toggle-joint is

pulled back sufficiently to throw a cartridge into the barrel. If it is not pulled back far enough, no cartridge is thrown up, and then the pistol works on an empty chamber. This occurred to me numerous times at pistol practice when I thought I certainly had exercised enough force. Of course, in the hurry and heat of action, this would be much more likely to occur, and at a critical time one would find himself at quite a disadvantage until the operation of pulling back this toggle-joint could again be performed. Of course, the argument can be advanced that all this should be done beforehand, and the safety catch turned on. The carrying of a cartridge in the chamber of any piece, though, is dangerous in a body of men. When the toggle-joint has been properly pulled back through and a cartridge pushed into the chamber, and the pistol thus all ready for action, there is no outward and visible sign to show that this condition exists. Really the only way of finding out if you have a cartridge in the barrel is to pull back the toggle-joint slightly and look, or to take a trial shot. This objection seems to me very serious, for there should be some outward indication by which one could tell at a glance whether or not the pistol is ready for action.

2. In quite a number of cases I found that during the process of firing the links of the toggle-joint would not always return to a flat position after the ejection of a cartridge, but would remain "humped up" to a certain degree, and had to be forced down by the hands.

3. On three occasions, after firing one or two shots, the pistol absolutely refused to fire any more until the toggle-joint was again pulled back by hand and another cartridge thus pushed into the barrel. At first I could not account for this, but afterwards concluded that it was due to the fact that the bullet had become loose in the cartridge-case and had fallen back into it slightly, thus shortening slightly the whole length of the cartridge, and preventing the mechanism from working correctly. This would seem to be rather a defect of the ammunition, and raises the question, Can it be corrected? The magazines do not seem capable of carrying a crimped cartridge, which, I suppose, would remedy this trouble.

4. The magazines of this pistol cannot be recharged on horseback, and seems too expensive to throw away. If a sufficiently cheap magazine could be made, then several could be carried and the empty ones dropped. This would tend to remedy this trouble, but then would come the question of the working of a magazine that had been carried in the belt

for some time and had probably gotten bent and distorted in some way, so that it would not fit.

5. While this pistol has great force, long range and a very flat trajectory, it seems to me that a larger caliber, with greater shock and consequent greater stopping power, is desirable. This does not affect the principle of the weapon, though. While great range is no objection to a pistol, yet there is little need for it, as the pistol is more a weapon for personal defense and for use in a melee and at close range, but is inaccurate at any range over fifty or sixty yards.

I think the following may be given as some of the principal requisites of the desirable pistol for cavalry:

1. Absolute certainty to fire when the trigger is pulled.
2. Ample stopping power.
3. Accuracy and rapidity of fire.
4. It should be easily and quickly reloaded on horseback.
5. It should balance well in the hand, have a good trigger pull and a mechanism serviceable under all conditions.

The Luger pistol seems to fill the first condition well with the exceptions noted above, which can probably be remedied; increased caliber would give it stopping power; and it certainly possesses accuracy and rapidity of fire far above the revolver. The fourth of these conditions it does not fulfill. As to the fifth condition, it is finely balanced in the hand, has a fine trigger pull, and the mechanism seems to be serviceable except as noted in my criticisms.

OTHER POINTS COMMENTED ON.

1. The advantages and disadvantages of automatic pistols as compared with revolvers.
 2. The advantages and disadvantages of this particular arm as compared with the revolver.
 3. The advantages and disadvantages of this pistol as compared with other automatic pistols.
 4. Suitability of automatic pistols for use of enlisted men.
 5. If not deemed suitable for enlisted men, would it be advisable to issue them for use of officers and non-commissioned officers?
1. Advantages: Utilization of all the gas, giving more power; greater rapidity and accuracy of fire; greater certainty of fire, for I believe the revolver will fail to fire oftener than a good automatic pistol. About the only advantage the revolver has is in its ease of manipulation.

2. Same as under No. 1, and in addition it is a much better balanced weapon, and has a much better trigger pull than the revolver.

3. I am not sufficiently well posted in automatic pistols in general to intelligently discuss this.

4. An automatic pistol is desirable for the enlisted man, provided it fills all proper conditions, is easy of manipulation, and not so complicated as to be beyond his intelligence, thus becoming dangerous to himself and others around him.

5. I rather believe that pistols for officers, non-commissioned officers and enlisted men should be of uniform pattern, and that none should have automatic pistols till one suitable for all is obtained. Different types of arms in one organization are not desirable.

While I have criticised the Luger automatic pistol, I do not want to be understood as wholly condemning it, for it is certainly a beautifully built weapon, very accurate and very rapid in its fire. It is also extremely well balanced in the hand and has a good trigger pull. I do think, though, that full consideration should be given to the points I have mentioned.

CAPTAIN M. C. BUTLER, SEVENTH CAVALRY.

The Luger pistol is not suited to the cavalry service nor any other service as it is at present constructed. At pistol practice recently I discovered a fatal defect in the cartridge extractor—Part No. 15.

The nipple of the extractor is too short; it should be twice the length of the claw of the extractor, so that when the latter slips over the rim of a cartridge, the nipple will not be lifted out of its seat. The end of the extractor that enters the breech-block should be made square, to keep the extractor from turning and failing to extract the empty shell. The spring of the extractor is weak. On several occasions during pistol practice the extractor failed to extract the empty shell, thus causing the next cartridge to jam in the receiver, and on two of the pistols the extractors pulled out and were lost.

For mounted troops the pistol ought to be constructed so that the breech-block will close as soon as a new magazine is inserted, thus avoiding the necessity of pulling the breech-block back to release it from the catch (No. 26). As it is, both hands are necessary to accomplish this, endangering the horse, rider, and those near by.

The pistol seems to shoot quite accurately, and the trigger pull is right.

I can't say I am an advocate of so small a caliber.

CAPTAIN T. Q. DONALDSON, EIGHTH U. S. CAVALRY.

1. *Advantages and Disadvantages of Automatic Pistols as Compared with the Revolver.*—Assuming that the calibers are the same, the advantages of the automatic system are as follows:

(a) For the same charge of powder, the velocity of the bullet is greater, as there is no loss of gas until the bullet leaves the muzzle.

(b) The rapidity of fire is much greater after the first shot.

(c) It can be more rapidly loaded.

(d) The recoil is less.

(e) It is more accurate.

Disadvantages:

(a) The first shot can not be fired as quickly as with the revolver.

(b) It requires the use of both hands to insert the first cartridge.

(c) Where a misfire occurs, the weapon is put out of action until both hands are used to insert a fresh cartridge.

(d) The mechanism is generally complicated, and some parts of it are liable to be weak.

2. *Advantages and Disadvantages of the Luger Automatic as Compared with the Revolver.*—The advantages are the same as stated under heading one.

Disadvantages:

(a) The extractor is too fragile, being easily broken.

(b) The mechanism in general is liable to get out of order.

(c) The breech block does not always close tightly after firing, requiring the use of the hand to make it do so.

(d) There is sometimes difficulty in getting the first cartridge into the chamber from the magazine, and when it does go in there is nothing to indicate that fact.

(e) The magazine slips in easily and quickly, but it is too valuable to throw away, and time would be lost in attempting to save it after its contents are exhausted.

3. I have not had the opportunity of comparing this pistol with other automatic pistols, but I have carefully read the reports of the tests of others, and my opinion, formed from those reports, is that the Colt Automatic is a superior weapon to the Luger.

4. I believe a serviceable automatic pistol to be suitable for the use of enlisted men.

5. I believe officers and enlisted men should use the same pistol and same ammunition, and that a good automatic pistol should be used by both.

My report is based on the results of experiments with five Luger Automatic pistols issued me for trial and tested in my presence. A total of about 900 shots were fired from the five pistols. I selected three enlisted men making the best record mounted with the revolver, and they, with myself and one other officer, followed the course for mounted firing laid down in the Small Arm Firing Regulations. I inclose a schedule of the result of this firing.

In this practice three of the pistols would fail to work at least once during the firing of each five shots. The pistol I used would invariably fail to fire when the trigger was pulled the third time, and in one other the breech-block invariably failed to close completely after each shot and had to be closed with the hand. A third worked erratically, and only two worked perfectly while firing the 120 shots.

The five pistols were carefully examined before the practice began, and all appeared to be in perfect condition.

A strong wind was blowing at the time of practice and the air was full of fine dust, which may have affected the working of the mechanism. The pistols were also tested dismounted, and while found to be very accurate, were not satisfactory in action. In one the ejector broke before twenty shots had been fired from it.

I recommend that this pistol be not issued to the cavalry as a service weapon.

CAPTAIN WILLIAM T. LITTEBRANT, TWELFTH U. S. CAVALRY.

The firing-pin spring (illustrated in pamphlet, Figure 2, constituent part No. 13) should be twice as strong as it is or else the pin (illustrated in pamphlet, Figure 2, constituent part No. 12) should penetrate the primer more deeply. On one occasion I had two cartridges of one magazine charge fail to explode (pistol 6282) and since then it has occasion-

ally failed. When a cartridge fails to explode, the case is worse than with the present revolver, for both hands must be used to effect the removal of cartridge and insertion of another. The impression of pin on cartridge primer in cases cited was very faint. This delay in an emergency might be fatal. The cartridge extractor (illustrated in pamphlet, Figure 2, constituent part No. 15) on one pistol broke in two during cleaning, and it is therefore deemed wise to have this either so tempered or strengthened that such accidents will not happen.

The action of the pistol is simply superb. In accuracy it is satisfactory, and in rapidity of fire one can pass a point ten yards to the right of the road, mounted, at a gallop, and easily and accurately discharge at object the whole magazine full of ammunition. This makes this a formidable weapon in the hands of a cavalryman in attacking either artillery, infantry or cavalry. It will undeniably inspire a cavalryman with absolute belief in his own safety against the saber or bayonet, and on account of its speedy action and lack of arm motion necessary in the present weapon to discharge it, the fears of most nervous and irritable horses are speedily dispelled. I believe that all cavalry soldiers should have it or a similar weapon—

1. Because it is the best weapon I have ever seen [I have heard the Mauser spoken of very highly, but have had no personal experience with it], and from having observed some of my men use the "Luger," I am satisfied that they could use it more safely and with far more intelligence and skill than they use the present revolver.

2. It is simple, and even the most stupid soldier can easily understand and master its mechanism.

3. As to caliber, I believe the "Luger" more desirable than the present weapon on account of the increased amount of lead that can be accurately discharged within a given period.

When a cavalryman in war needs a pistol he needs it badly, and the "Luger" satisfies in all respects, provided the faults mentioned be corrected. The balance grip and weight are all eminently satisfactory.

Of course, I disapprove of a small caliber pistol.

CAPTAIN ARTHUR THAYER, THIRD U. S. CAVALRY.

I find the favorable points of the Luger to be its wonderful rapidity of fire, its range and its accuracy. I fired the pistol at ten, fifty, one hundred and one hundred and fifty

paces, and believe, from the results, it to be a more accurate revolver than the Colt's.

The unfavorable points of the Luger I find to be its small caliber, complicated mechanism, and liability to miss fire. It seems doubtful whether one of its bullets would stop a man immediately. Its mechanism makes it a bad arm to give to any but old soldiers or men thoroughly conversant with fire-arms. The revolver misses fire very frequently, due, probably, to the weakness of the firing spring.

On the whole, it seems that its disadvantages outweigh its advantages, and, in my opinion, it should not be adopted as a service revolver.

CAPTAIN KIRBY WALKER, FOURTEENTH U. S. CAVALRY.

1. Practical tests, both by officers and enlisted men, have demonstrated that the automatic pistol, as compared with the revolver, possesses the advantages of rapidity and ease of reloading, accuracy, penetration and rapidity of fire. As a disadvantage, it is dangerous in the hands of unskilled or excitable men. It requires a safety lock, which delays firing of the first shot.

2. The principal advantages of this pistol, as compared to the revolver, are these: The manner of exploding the cartridge by means of a firing-pin moving in the line of fire, gives lightness of trigger pull, and does not disturb the balance of the pistol at the moment of firing. The cartridge being inserted in the barrel, obviates the spattering of lead and the escape of gases so often noticed in a new revolver, when the bullet passes from the cylinder into the barrel. As a disadvantage, may be noted the liability to jam.

3. As far as it has been possible to make comparisons, the Luger pistol is the best of its class. It is simpler of construction: there is no escape of gases; no falling of a hammer at the moment of firing to disconcert the aim; its general efficiency is perfectly reliable. It has not been practicable to test the pistol for durability of mechanism under field conditions.

4. The indiscriminate issue of automatic pistols to enlisted men is not deemed advisable, and is not recommended.

5. It is advisable to issue the Luger pistol to skilled officers and non-commissioned officers.

The ammunition, on the whole, was satisfactory; no misfires occurred during the tests. Occasionally the cartridges

jammed, owing to the bullets being driven backwards into the shell by rough handling before being inserted in the loose magazine. This can be prevented by placing a slight crimp on the end of the shell.

CAPTAIN R. C. WILLIAMS, THIRTEENTH U. S. CAVALRY.

The pistols were issued to officers and non-commissioned officers, and carried by them upon a march of about 375 miles, from Fort Assinniboine to Fort Yellowstone.

The weapon is light, handy and well balanced; it is easily taken apart and cleaned, and less apt to get out of order when in the hands of careful, experienced soldiers than the present service revolver; it withstands the bad effects of dust and moisture very well indeed; it is easily and quickly loaded; its accuracy at all pistol ranges (I have not tested it at long distances) is excellent; its rapidity of fire after the first shot is very great; after cocking the piece it can be used to much more advantage on horseback than a double action revolver, for the aim is not deranged by recocking, as invariably happens with the latter.

Its disadvantages appear to me to be: 1st. That it requires the use of both hands to make ready for firing the first shot unless a cartridge be kept always in the barrel. 2d. The ease with which it can be taken apart, and the desirability of doing so to clean it, thus rendering disablement liable in the hands of a stupid or careless soldier, who loses some one of the small parts, which are entirely detachable. 3d. Though I have seen no instance of it, the safety depends upon the stiffness of a rather thin piece of steel, which it would seem could easily be bent outward by a blow or fall sufficiently to allow the trigger-bar enough play to discharge the piece. 4th. The prominence of the front sight which renders a quick aim by a glance along the barrel difficult. 5th. The small caliber. In this connection would state that I was present when a mule afflicted with glanders was shot, the Luger pistol being used. The ball entered the forehead apparently a trifle below the brain and passed through the animal's head and neck in an upward direction, but failed to knock it down, and two or three additional shots were necessary from the same weapon to kill, the mule finally lying down deliberately and dying.

On the whole I do not believe this particular automatic pistol or the Mauser either is adapted sufficiently to the needs of our service to be generally issued. A larger calibered

weapon would be an improvement, and one to be cocked and made ready for firing with one hand would, in my opinion, be more effective for a mounted man charging with the pistol. Also a weapon which was much more complicated and contained many more parts than the comparatively simple Luger, would possess a practical advantage over it if those parts were undetachable and not likely to be meddled with and lost.

FIRST LIEUTENANT LANNING PARSONS, FOURTH U. S. CAVALRY.

I found it necessary to use both hands when putting the first cartridge into the chamber, and in case one expected to use the weapon on short notice, it would be necessary to have a cartridge in the chamber at all times, and to make use of the safety catch to avoid accidents. It is my opinion that the balance is as good as that of the Colt's, now in use in the service.

As far as range and penetration are concerned, it is far superior to the Colt's. It is very difficult, while mounted, to take out the magazine, reload it and replace it; much more so than to reload the Colt's.

I have found that a good many cartridges permitted the bullet to slip part way into the shell, and then, after firing the first shot, the short cartridge would fail to reach the chamber and would catch and throw the revolver out of action.

I believe that the majority of the cartridges would become thus affected if they were carried loose, as in saddlebags or pockets. The cartridges should have a slight crimp to prevent this.

I believe it is a dangerous weapon to place in the hands of any but old and experienced soldiers, as under excitement and when the horses are acting badly, many men would undoubtedly keep the revolver in action and cause accidents.

To sum up, I would say that the Luger is more accurate, of longer range, and has greater penetration than the Colt's; also, that it is less liable to miss fire than the Colt's.

It is objectionable, because it is difficult to reload the magazine and replace same while mounted, and to throw the first cartridge into the chamber, and is dangerous in the hands of an excitable person after it is in action.

It is a great improvement over the present Colt's, in that it seldom catches and fails to fire. The Colt's as issued, as

every one knows, is a nuisance, and it seems impossible to make two consecutive runs without a miss-fire, owing to the cartridges slipping down at the "Raise Pistol," and not permitting the cylinder to revolve.

FIRST LIEUTENANT J. C. RHEA, SEVENTH U. S. CAVALRY.

As to its merits as a military arm, it seems to me to have none. Its demerits are best shown by a comparison with the Colt's double-action revolver now in the service.

1. It requires more time to load, unless loaded clips are to be carried for it.

2. It has to be cocked, or in other words pull back the breech-block, before it can be fired, while the Colt's double-action does not.

3. After being once fired, all the cartridges in the clip have to be fired, or the safety turned; in other words, if you wish to fire less than seven shots, you have to "do something" to the pistol, or carry a cocked pistol in your hand, thereby endangering the lives of all the men and animals in the vicinity. In the case of the Colt's double-action revolver, one or more shots can be fired, and then nothing has to "be done" to the revolver before it has to be returned to the holster.

4. When a man wants to use a pistol he usually wants to use it quickly; the double is quicker because it does not have to be cocked. If a man's horse shies, or falls, or the rider is thrown, or any accident of this kind happens after a man has fired a shot, there is no danger of the double-action being accidentally discharged, while the automatic is almost sure to be discharged, since it has been cocked after a shot has been fired.

5. In the military service it will not be required to fire a pistol faster than can be done with the double-action. With it a man can see the effect of his shot and steady himself before the next one, without having to go through the danger of having a cocked pistol in his hand in the meantime.

I recommend the retention of the present revolver, and the condemnation of the automatic pistol as a service weapon.

SECOND LIEUTENANT C. A. STOTT, TENTH U. S. CAVALRY.

Its advantages are as follows: Balance, good; shooting, very accurate; velocity and penetration, great; trigger pull, good; no escape of powder gas; no possibility of exploding shell clogging mechanism.

Its disadvantages I believe to be as follows: Trigger mechanism complicated and weak; plunger spring weak; clip is too expensive to be thrown away; breech-block does not always close after recoil; moderate amount of dirt and sand will clog and prevent pistol working automatically; caliber is too small .38 or .45 would be better. .45 best; can be fired more rapidly, with less effort, and more accurately than Colt's revolver, and I believe is a great improvement on that weapon, but weak points should be strengthened and caliber enlarged before adoption as a cavalry weapon.

SECOND LIEUTENANT WILLIAM C. POPE, SECOND U. S. CAVALRY.

The Luger of course fires much more rapidly than the present revolver, which is a great advantage in many ways; but would not an excitable man be more apt to take a more careful aim with a slower firing pistol and do more damage?

The Luger is beyond doubt more accurate than the revolver. For instance, at a distance of nearly 300 yards the writer, together with other officers of his regiment, fired at a buoy anchored in the water and experienced little difficulty in hitting it; at sixty yards birds were killed by taking a careful aim, and at thirty-five yards it was an easy matter to puncture a small visiting card. Could this be done by the average person with the revolver?

While the range of the Luger is much greater than the revolver, that is considered by many as rather a disadvantage; the pistol is essentially a short range weapon, and is rarely used at ranges exceeding one hundred yards. The Luger is not as durable as the revolver on account of the more intricate mechanism of the former; the firing-pin spring is very apt to weaken, thereby causing a miss-fire, in which case a mounted man would have great difficulty in extracting the cartridge (which is necessary before firing again), while in the revolver this is not necessary. Much care must be given to assembling the Luger, else the coupling link of the toggle-joint would not catch in the recoil spring, thereby causing the toggle-joint to fail to fulfill its proper office. It does not seem that the small bore weapon has the "stopping power" of the larger one; I have read of instances during the Santiago campaign in which men hit by Mauser bullets would walk many yards before falling, and have been told by hunters that the mere shock of a large missile would stop a deer sufficiently to enable them to fire at a vital spot while the small high power bullet would not accomplish the same

ends; for this reason—that of “stopping power”—it seems that the large caliber weapon should be preferable to the small.

For the cavalry (the greatest user of the pistol) one is wanted that will need only one hand to manage, as the other must be used to control the horse; that will fire every time the trigger is pulled, and the pull must be easy; that can be easily and rapidly reloaded on horseback. A man on an excitable horse would have greater difficulty in refilling an empty clip than in reloading the chambers of a revolver.

The object of all improvements in the matter of arms is to insure success in war, and I do not believe that the Automatic pistol will replace the revolver until one is found that combines the best qualities of both with none of the bad.

The 1902 model Colt's Automatic pistol lately issued for trial seems to be, and should be, much better than the Luger, but as yet it has not been subjected to a fair test.

FIRST LIEUTENANT H. M. MORROW, NINTH U. S. CAVALRY.

In tests made with about two hundred cartridges it was found that about one-third failed to fire when used in four of the five pistols. This was remedied by filing down the firing-pins so as to permit the pin to penetrate about one thirty-second of an inch into the cartridge. Since then all the pistols have worked in an entirely satisfactory manner.

On one occasion a clip was accidentally dropped in the sand on the beach, and although immediately picked up, was found to be so clogged with sand that it failed to work unless taken apart.

This experience suggests that the mere dust and dirt which would often gather in a clip, in actual service, would obstruct the platform of the clip to a sufficient extent to neutralize the full force of the clip spring, and a cartridge would not be forced up into the receiver. In attempting to use the pistol as a single-loader it is found to be impossible for one person to reload it.

It is found to be impracticable to refill a clip unless the pistol is laid down or returned to the holster, so that two hands may be used, as both hands are required to refill a clip, and as the clip spring is quite strong it is ordinarily not practicable to refill one while mounted. The result is that the pistol is useless to a mounted man after the clips are empty, unless he can dismount and use both hands in refilling a

clip. If the horse is not a quiet one, the process of refilling a clip becomes quite a feat.

The present .38 calibre revolver will by merely pulling the trigger fire six shots. The Luger pistol will at the most fire nine shots. The revolver is easily reloaded. The Luger pistol is reloaded only with difficulty, unless filled clips are conveniently carried.

As the result of the limited tests I have made, I do not recommend the Luger pistol for cavalry use.

SURRA.

BY CAPTAIN N. F. MCCLURE, QUARTERMASTER FIFTH CAVALRY.

THESE remarks apply generally to both horses and mules, unless otherwise stated. This terrible disease of surra should be called to the attention of our officers in order that they may know what to do should they at any time encounter it. The malady was first noticed in the Philippines about July 1, 1901, but it was several months before it was known what the disease was. It was variously diagnosed as general debility, pneumonia, glanders, farcy, septic fever, stomach trouble and tropical fever. Everyone was at sea because of the impossibility of making the symptoms fit any disease; and this is a characteristic of surra, viz: the great number of symptoms accompanying it. These are as follows:

- 1st. Constant fever.
- 2d. Surra microbe in the blood.
- 3d. Lack of coördination in movements of hind legs, the back and hind legs being weak. This is especially noticeable in a cavalry horse just as the rider mounts or dismounts, or when the horse turns around. Also dragging of hind legs, the toes of the hind hoofs being often worn off.
- 4th. After the disease progresses a few days, rapid emaciation and weakness develop. The horse often lies on the ground for several hours, and suffers great agony before death. In some cases, however, he dies suddenly.
- 5th. Dullness and stupor.
- 6th. Horse seldom loses his appetite except at first; after that he eats mechanically without appearing to enjoy his food, but in most cases eats his full forage if he can get it.
- 7th. Horse drinks often, though not in very large quantities unless long without water.
- 8th. Dullness of the eyes.

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9th. In some cases swelling of sheath, swelling of one or both hind legs; œdema of the belly and forming of sac of soft matter on breast between fore legs. Also swelling of glands of throat.

10th. Sometimes there is a thick greenish mucous discharge from the nostrils. This is called the "glanderous form."

11th. Sometimes there are sores on the legs. These probably result from run down condition. They occur in but few cases.

12th. In some cases there is constipation, while in others there is extreme diarrhœa. In the latter cases the muscles about the dock often seem to lose their strength, and the dock remains flaccid and the rectum open.

The first three symptoms mentioned above are the characteristic ones, and of these, the peculiar weakness of the hind legs and dragging of the same is the most characteristic visible symptom. In most cases it is not practicable to make a microscopic examination of the blood. Where this can be done, the presence of the disease can quickly be discovered.

There is no well authenticated case on record of where an animal in which the surra parasite has been found has ever recovered. Of over one hundred cases under my personal observation, none have recovered. One treatment has been to give tonic of Fowler's solution and other drugs. These simply strengthen and thus prolong the life of the animal until death ends his agony.

It is natural that a great diversity of opinion should have arisen about surra, and that some errors should have grown up. One of the reasons for this is that observations were not at first carefully made, as no one knew what the disease was. Another was, that, on account of the great number of different symptoms, it was possible to have two or more horses sick with the same disease and not know it unless very careful observation and analysis of the cases were made. One belief that grew up was that the disease was more fatal among mules than among horses. After careful observation I am convinced that this is an error. I know of at least one

case where mules and horses were in the same stable under exactly the same conditions. Sixty per cent. of the horses died, but only twenty-five per cent. of the mules. In many places where the rate of mortality of mules has been greater than that of horses, I believe that the mules have either had harder work to do, have not been so well stabled or have not had as good care. Under the same conditions of stabling, care and work, I think it will be eventually shown that the mule is less susceptible to the disease than the horse.

Another idea was that the disease was much worse during the rainy season. It is believed that this greater mortality was not due to the effect of the rainy season itself, but to the fact that when the last rainy season began (July, 1901) there were many animals in the islands with poor stabling, or no stabling at all. Such animals rapidly ran down, and were in a favorable condition to contract the disease. When the specific surra microbe appeared, it wrought great havoc. The following is taken from a report of one of the most flagrant cases of this nature:

"When I came to this station I found that the quartermaster horses then here were for the most part without shelter, that they were tied on ground lines, fed from the ground, and were unexercised except for being daily led to water. They had been received from abandoned infantry and scout stations, and had been used in mounted scout organizations. Whatever the nature of the service that they had had, hard though it doubtless was, it could not be a justification for the wretched physical condition that they were in, or the equally wretched physical condition of other large numbers of horses subsequently received by me from similar sources. Lack of proper care is the only explanation. Before adequate shelter could be provided, and in spite of every care, surra broke out among them, and eventually killed nearly the entire lot.

"It seems certain that the disease was contracted as a direct result of the bad condition of these horses; the more so from the fact that of the horses of Troop "A," Fifth Cavalry, at the same station, only thirteen died of the sickness. There is no doubt that surra is contagious, or infectious, whatever the distinction drawn between these terms by veterinarians and doctors may mean; and that it was in this manner that, though every possible means were taken to prevent it, the troop horses contracted the disease. I understand that

in the Third Cavalry the disease was practically unknown. Their immunity I believe due to their having been able to avoid contact with infected stock. I think that an investigation will show that, of all the animals lost from surra on these islands, less than twenty-five per cent. have been from cavalry regiments, and that a further investigation will prove that the losses in cavalry regiments were due to unavoidable exposures to infected quartermaster or other stock; in other words, that the disease has never originated among the horses of the cavalry.

"From the time that I was able to give shelter to the quartermaster horses here, and carry into effect the cavalry system of watering, grooming and feeding, and place reasonable restrictions, proper in a tropical country, on their work, surra among them ceased, and it is now some months since I have had any. In the lack of a cure for the disease, preventive measures, which to be effective must look to the highest degree of physical health of the animal, seem the only ones that promise results."

One of the most virulent examples of the ravages of surra within my knowledge occurred in the middle of the dry season. The disease appeared January 20, 1902, in one troop of the Fifth Cavalry ("C"), and in spite of every precaution, sixty per cent. of the horses died in three months. This was proof enough to me that the wet weather of itself has little effect in making the malady more fatal, provided that the animals have good care. In the case cited above the animals were without shelter for three months just prior to the outbreak, and were much run down.

It was the belief for awhile that the feeding of native grass was the cause of surra. Many still think so. In July, 1901, when the disease first appeared at Pasig, P. I., it puzzled all. The conclusion was soon arrived at that the native grass was the cause of the trouble. All possible changes were made experimentally, but no difference could be seen in the progress of the disease, even when native grass was no longer used. I have known of cases during the past year where native grass has been fed for over seven months without a single case of disease of any kind appearing, and this, too, right in the midst of the epidemic, and with surra at a station only twelve miles away. During the past three

months—May, June and July—though native grass has been fed throughout the archipelago, there has been little or no surra. If the grass is cut from clean ground it is believed that there is little danger. Quartermasters should exercise careful supervision over the grass supply, and should frequently inspect the fields from which it is obtained and see that it is not cut from stagnant water or from ground overrun by native animals. The business of furnishing grass is such a profitable one that those selling it can afford to raise it on clean land.

Some have advanced the theory that the malady of surra is contracted from contaminated drinking water. I believe this to be doubtful, though it can easily be seen that it may be possible. Animals at San Fernando, Pampanga, have had the disease, though artesian water only is used there. This of course does not prove conclusively that it may not be contracted from the drinking water, because one infected animal might cause others to become diseased, irrespective of the kind of water used.

It thus appears that there is doubt as to how this disease spreads from animal to animal. From all the data that I have been able to obtain from some four hundred cases reported on, I am of the opinion that surra is not caused by the animals eating native grass; that it is not communicated in the drinking water, and that one infected animal does not directly infect a healthy animal by contact.

It is probable that the cause of the infection is the big horsefly found throughout these islands. This fly feeds on the sick horse, and carries the blood, loaded with the surra parasite, to the healthy animal, and by biting through the skin, inoculates him with the germ. In numerous instances microscopic examination of the bodies of these flies has shown the surra parasite in the blood with which they are filled. It has not yet been determined, however, whether the germ is in the organism of the fly as well as in the blood in the fly's stomach. Whenever and wherever the disease has been epidemic, great quantities of these large flies have always been found.

The treatment of the disease is to completely isolate all

suspected cases and to kill all animals in which the disease develops. Give the non-infected animals good stables and excellent care. Shelter them from the heavy rains and, when practicable, from the midday sun. It should be always remembered that animals must have in the tropics good stables, excellent care and shelter from the midday sun.

Should surra appear in the vicinity of a post or station, try to meet it by promptly isolating suspected cases and by strengthening the healthy horses. A dose of hyposulphite of soda and of Fowler's solution should be given to each well horse twice a week during the time that it is feared that the disease may appear. The mistake that has been made in the islands is the large amount of time and medicines that have been expended in trying to cure animals sick with surra. Had the same energy been expended on the well animals, I am sure that better results would have been obtained. I am of the opinion that up to the time of this writing no remedy of any value whatever has been found for surra. It is therefore better to kill animals that certainly have the disease and to strengthen the well animals by prophylactic treatment. My theory is to prevent the disease, not to try to cure it. This is also the theory of Veterinarian Robert Vans Agnew, Fifth Cavalry, and the above is part of his preventive treatment.

A description of the bacteriology of the surra germ will be found in G. O. No. 390, Headquarters Division of the Philippines, dated Manila, P. I., December 11, 1901:

HEADQUARTERS DIVISION OF THE PHILIPPINES.
MANILA, P. I., December 11, 1901.

GENERAL ORDERS,
No. 390.

The careful attention of all officers in this division is invited to the following information relative to a parasitic disease often mistaken for glanders, prevalent amongst horses and mules in these islands. Every practicable effort will be made to stamp it out, and great care will be taken to keep those affected isolated from healthy animals as much as practicable.

A PRELIMINARY NOTE ON A PARASITIC DISEASE OF HORSES.

By ALLEN M. SMITH, Captain, Asst. Surg., U. S. A.,
and J. J. KINYOUN, Surg., U. S. M. H. S.

On October 15, 1901, information was given us by J. W. Jobling, Assistant Bacteriologist of the Board of Health of Manila, that an epidemic sickness of an undetermined nature was now prevailing in this city, and also that he had just taken a specimen of blood from a sick animal, which on examination revealed the presence of a parasite; whether this was accidental or was the causative agent of the disease in question, he was unable to say. On investigation and inquiry it was learned from the veterinarian in charge of the corral of the quartermaster's department, and from the city veterinarian, that there was now, and had been, a fatal epidemic among the horses in Manila, the quartermaster's department having lost over 200 within the past four months.

One of the corrals was visited by us on the 15th inst., where we were shown, by the veterinarian in charge, twenty horses and mules ill with an undetermined disease. These animals presented the several stages of the malady; some were quite recently attacked, while others had been ill for over two months.

The symptoms first noticed are: impairment of appetite, constipation, fever, and thirst. These are followed within a few days by a rapid and progressive emaciation.

The temperature for the first few days ranges from 104° to 107° F.; the pulse is full and strong. This may be termed the acute stage. Then begins an asthenic state, which may terminate fatally within a variable period, or by a slow convalescence. During this stage, usually within ten days after the onset, there appears a commencing oedema above the belly, involving the soft parts; coincident with this, or soon after, the oedema extends to the feet and legs. The pulse becomes rapid, weak and dichrotic, the respiration increased, shallow and jerky, the gait staggering. Emaciation is rapid and extreme.

The disease has a tendency to relapse; this may occur at any time, even after convalescence appears to have been fully established. The relapses are invariably fatal.

The mortality in this epidemic has been about seventy-five per cent. for American horses and mules, and 100 per cent. for native ponies.*

* This has since proved erroneous; mortality 100 per cent.

The gross pathology shows serious effusions into the pleuræ, pericardium, and sometimes the peritoneum. There is also a serous exudate into the cellular tissue of the legs and abdomen. The organs are pale, but otherwise normal in appearance.

At the time of our inspection, five acute cases were examined, the duration of the attack being from six days to two weeks. All these animals presented the several clinical appearances as above described.

Blood specimens were taken from the jugular vein of each, and examined microscopically shortly afterward. In four of these a parasite was demonstrable. The other was negative, but a specimen taken the following day showed the presence of this same parasite.

On the day following, specimens were obtained from twelve others, all chronic cases, with the result of finding this same parasite in the blood of four. In three they were very few, whilst in the fourth, they were present in great numbers; as many as twenty could be seen in one microscope field. The animal from which the specimen was taken had suffered a relapse.

It would appear that the parasite may disappear from the peripheral circulation, or exists there in such few numbers that it is not easily demonstrable after the acute stage has passed. It would require repeated blood examinations to decide this point.

DESCRIPTION OF THE PARASITE.

The parasite resembles a whip-like worm, having much the appearance of the *Tricocephalus dispar*; its length is from 10 to 14 mikrons and is from 1. to 1.2 mikrons in diameter through its body; the neck is nearly one-half its length, tapering gradually to a point representing the mouth (?). It has a limiting membrane, which is well defined; the contour is in most cases symmetrical, but in some the body line is quite irregular. The larger part of the parasite body contains granular material and clear spaces, which latter vary in size and number; they are irregularly distributed, and may encroach on the wall so as to cause irregular outline. The granular material does not extend to the neck.

The parasite is actively motile, having both a vermicular, (contractile) and spiral movement. It moves forward in a very peculiar manner, the long, whip-like process is thrust forward by a spirillar motion, followed by a contracture of the body.

We have not so far been able to determine its intimate structure, further than the limiting membrane, and the protoplasmic substance of the body.

Two sizes of the parasite have been seen in all the specimens examined; the larger appears to be more numerous, and contains considerably more granular material than the smaller, and usually two or more vacuoles. Whether these two sizes represent male and female, has not been determined. We are inclined to believe from our observations that these do represent the male and female, because we have observed in more than half the fresh specimens, the joining of a large and small parasite in such a way as to appear to be something more than accidental.

The pathological changes caused by this parasite is a rapid destruction of the red blood cells, causing an acute anæmia. The changes occur in the blood coincident to the invasion of the parasite. In one horse, which had been ill seven days, the red blood cells numbered 3,500,000, the white, 14,500. In another, ill six weeks, the red blood cells were 3,200,000, and the white were 13,900. The blood of a healthy horse, taken as a comparison, gave red blood cells, 6,900,000; white, 9,800. There is also a slight diminution in the amount of hæmoglobin—about eighty-five per cent.

After convalescence has been fully established, no parasite can be found; the blood gradually assumes its normal constitution.

The parasite is not confined to the blood, as it can be demonstrated in the serous effusions.

It is quite easy to detect—all that is necessary is to make a microscopical examination of fresh blood films; a one-sixth inch objective will suffice. Dried films, fixed, and stained with any of the nuclear dyes.

The organism appears to be a strict parasite. It lives but a short time after removal from the body; the longest time which it has been kept alive, in blood serum, was not more than ten hours.

The parasite has many of the properties in common with the filaria, and resembles more nearly that of *filaria perstans*, only it is smaller, and its movements dissimilar. Yet, on the other hand, the clinical history of animals infested by it, the changes occurring in the blood, the lesions observed in post mortem, point very strongly towards its classification with the spirochæte.

The mode of transmission has not yet been studied. It does not appear to be highly contagious, as it does not appear

to spread from one to another, even under the most favorable circumstances.

It more nearly resembles malaria in this respect. It is more than probable that its extra corporeal state is different, or another supposition equally tenable is that its intermediate host is some insect, such as the fly or mosquito.

ARMY PATHOLOGICAL LABORATORY,
MANILA, October 17, 1901.

ARMY PATHOLOGICAL LABORATORY,
MANILA, P. I., Dec. 7, 1901.

The Adjutant General, Division of the Philippines, Manila, P. I.
(Through official channels.)

SIR:—I have the honor to submit a brief memorandum of the result of my investigations of a fatal infectious disease among horses and mules and natives ponies.

This disease is at present epidemic in Manila and vicinity, and is widespread throughout Luzon, especially in the southern provinces. In Manila alone during the past four months approximately 300 government horses and mules have died from this disease.

This very fatal and infectious disease we have found to be identical with a disease well known in India and Burmah, where at one time in recent years it caused the death of fifty per cent. of the English cavalry horses in those countries.

The disease is called "surra" and affects horses, mules, camels, dogs and monkeys, and probably other animals.

History of investigation conducted at the Army Pathological Laboratory, Manila, P. I., on surra or equine relapsing fever:

This epidemic was first brought to my attention on October 15, 1901, and on that day Surgeon J. J. Kinyoun, U. S. M. H. S., and myself began its study, a few days later publishing a preliminary note including the results of our investigations up to date. As stated above, I have identified this disease as surra. This disease is caused by the presence in the blood of a flagellated animal parasite, in length three or four times the diameter of a red blood cell, and in width one-quarter the diameter of a red cell. It resembles a whip-like worm, one end, probably the head, being represented by a slender flagellum. This parasite exists in the blood in immense numbers, and produces so great a blood destruction that the animals almost invariably die.

The mode of infection is as yet not known, but there is a strong probability that the parasite is introduced through the bite of some suctorial insect, probably either a fly or a mosquito.

The disease is communicable from one animal to another by subcutaneous and intravenous inoculations, as has been proven at the Army Pathological Laboratory and at the corral.

The symptoms noted are fever, of a remittant and relapsing character, progressive emaciation, swelling about the sheath, abdomen and legs, anæmia of the mucous membranes, enlargement of the submaxillary and sublingual glands, and later weakness of the extremities, a staggering gait, and very frequently a broncho-pneumonia.

It is worthy of special notice that this disease has been quite generally diagnosed as glanders, and I have no doubt that hundreds of animals ill with surra have been killed on the supposition that they were affected with glanders. From our experience, after inspecting many times the animals in the hospitals at the corrals in Manila and Pasay, and after numerous physical examinations, and microscopic examinations of blood and nasal discharges, we are in the position to state that at least four-fifths of the deaths of horses and

mules in Manila (aside from deaths due to injury) were due to this disease known as surra. We are not in a position to say how much glanders there has been among the government stock in the past, but we can say that at the present time there is *comparatively little* of it in the corrals at Manila and at Passay.

In surra there is frequently submaxillary enlargement, sometimes with a breaking down and a discharging of these glands, and very frequently there is a more or less profuse muco-purulent discharge from the nose. These symptoms to the casual observer have been sufficient on which to base a diagnosis of glanders.

The early recognition of surra is of the utmost importance, and this can be accomplished with certainty only by blood examinations of suspected animals, as frequently the parasite is found before the symptoms described above supervene.

The disease lasts from three to six weeks and sometimes longer—ten to twelve weeks—and is almost universally fatal, being more so for mules than for horses.

Treatment.—I have been experimenting in the last six weeks in the treatment of surra, and have delayed this report in the hope that I might be able to give some encouraging results along this line; so far I have been only partially successful, but will continue my investigations and report further progress. Quinine, with iron and arsenic, in large doses, given early in the disease, seems to be of some value.

RECOMMENDATIONS.

1. That all animals sick with surra be isolated from healthy animals or those sick with other diseases, in separate corrals at least half a mile from healthy animals.
2. That the blood of all animals suspected of having glanders be examined before recommendation for the disposition of said animals is made.
3. That the veterinarians and others in charge of corrals and hospitals be informed of these investigations.
4. That a veterinarian with some experience in laboratory methods be detailed in the Army Pathological Laboratory, to assist in further investigations.

Very respectfully,

ALLEN M. SMITH,
*Captain and Assistant Surgeon, U. S. A.,
In charge Army Pathological Laboratory.*

By command of Major-General Chaffee:

W. P. HALL,
Assistant Adjutant-General.

Since this order appeared there has been a number of new points learned about the disease. But in the main, the order covers the ground well.

When the great epidemic of epizootic appeared in the United States some thirty years ago, thousands of horses and mules died. The disease has never reappeared. During the first two years of American occupation there was no surra in the Philippine archipelago among the government horses. From these two facts I advance a theory that surra is not always prevalent and that we will not have to battle with this discouraging enemy every year, but only now and then,

just as we have to fight cholera, bubonic plague, smallpox, etc., at periods of a greater or less number of years.

Let us then take up the struggle against surra with renewed hope, and possibly we may find safety in good stables, good care and preventive treatment.

INFECTED HORSE EQUIPMENTS.*

WAR DEPARTMENT, SURGEON-GENERAL'S OFFICE,
September 29, 1902.

Respectfully returned to the Adjutant-General of the Army.

In my opinion leather equipments can be sufficiently disinfected by ordinary processes to guard properly against "surra." In my opinion it is not necessary to destroy equipments of horses that have been exposed to "surra."

The disease is conveyed by the introduction of the living "surra" parasite into the alimentary tract through the wet native grass grown on rice paddies being used as forage or through the agency of flies and other blood suckers by direct inoculation. The parasite is found almost exclusively in the blood and serous effusions, and is only conveyed by fresh blood, as the parasite quickly dies when the blood clots, or has stood for some time. It is therefore safe to say that horse equipments that have been used on "surra" animals, even though they have been smeared with blood and other discharges from infected animals, will *not* convey the disease, if these equipments have been exposed to the air sufficiently to dry any discharge that may have contaminated them. In this respect "surra" is entirely different from glanders.

(Signed) R. M. O'REILLY.

Surgeon-General U. S. Army.

In view of the opinion expressed by the Surgeon-General, the Secretary of War believes there is no necessity for the destruction of cavalry equipments believed to be infected, and that disinfection is sufficient. The Secretary of War directs that this be done in the most thorough and complete manner.

*Endorsement upon a communication regarding horse equipments supposed to be infected with "surra," by Surgeon-General R. M. O'Reilly, U. S. Army.

THOUGHTS ABOUT CAVALRY.

By MAJOR WILLIAM GERLACH, U. S. A., RETIRED.

THE excellent performances of the German cavalry during the recent Kaiser maneuvers in East Prussia have been witnessed by distinguished American generals. Their comments on what they have seen will doubtless provoke discussion in our service and create a desire to draw profit from the object lesson so presented. To accomplish fully this commendable purpose, we should examine closely the means employed to bring about the efficiency we admire in our German comrades-in-arms. We need not be bashful, for any one familiar with German military literature knows that the experience gathered by us in Indian wars, and especially both North and South, during our tremendous struggle of 1861-65, has been diligently studied and turned to account by able German soldiers.

If we analyze the cavalryman, we find that his principal arm is the "horse;" the power, the speed and weight of the latter determine his efficiency. The attack is the best card of the mounted man; by a counter charge he can best defend himself against an enemy who suddenly rides down upon him. The speed and endurance of the horse enable the trooper to do good work in the service of security and exploration. To provide efficient mounts is therefore of prime import. With this in view, German governments have for a long time past established large breeding farms, chief among them Trakehnen in East Prussia (established 1732) and Ashselschwang in Bavaria. In these, both saddle and draught animals are systematically raised; by the crossing of oriental and occidental races, prominently among them the English full blood and Arabian, good animals for military use are obtained. Stallions and mares are then distributed to smaller

establishments in various sections of the country. To encourage farmers and other horse owners, stallions from the public stables stand at convenient points from February to May each year, for breeding purposes, and in due time their offspring is purchased by the State for remount purposes to a large extent. In peace this is a source of revenue to the farmer; in war it assures a supply of horses suitable for the army. Might we not adopt some of these methods in a modified form? With our large military reservations and areas of public land yet available, one of the chief aids to such a course is conveniently at our disposal.

Considering the cavalry "*man*": He must be enterprising, quick, bold and daring. (Such qualities we find readily among our young men. Many of them are familiar with the horse and are good riders.) But in addition to all this, his faculties of observation and military judgment must be developed: he must learn to communicate what he sees in concise, lucid style, with or without explanatory sketches of terrain, when he is sent out to explore or put on outpost duty. Such work devolves in various degrees on all ranks in the field, and thorough peace training is essential to insure efficiency in war. Six weeks, or even six months, are not a sufficient time to form an intelligent man into a good cavalry soldier. Leaders and instructors, in ample numbers, must be provided in advance, as long as we continue to put our trust in the volunteer.

Historically considering the cavalry arm, we find that the invention of firearms first led the knights of old to increase the weight of their armor. This made them unwieldy, inferior to the foot soldier. Then the attempt to reestablish their superiority by adopting firearms themselves, lessened their offensive power. In spite of this, we find the cavalry playing a prominent role in the Thirty Years' War. Gustavus Adolphus lightened their equipment, thereby increasing their mobility and offensive capacity. Later we see good cavalry work under Cromwell, the great elector (of Brandenburg), and Charles XII. of Sweden. Austria was well served by her hussars and other mounted men in the wars against Frederick the Great. At the commencement of the latter's

campaigns his cavalry was poor. After his first battle (Mollwitz, 1741), he writes to Leopold v. Dessau: "Our infantry are all Cæsars; their officers are heroes; but our 'cavalry' it is not worth that the devil would take it—no one cares to associate with it." Minute instructions for the guidance of the mounted force now follow quickly; their spirit is best exemplified by the king's order, that "any cavalry officer who hesitates and allows himself to be attacked, shall be cashiered." Under this pressure, led by distinguished commanders, typical among them Seidlitz and Ziethen, the Prussian cavalry soon excelled in individual training, maneuvering capacity and dash. With the loss of their able leaders, both Prussian and Austrian cavalry lost their prestige, and their work in the Napoleonic wars cannot be compared with the performances of the actually inferior French force, which, under the direction of the great Napoleon, performed brilliant tactical and strategical feats.

After 1815, during the long peace period, the cavalry again retrogrades; infantry principles govern its training more and more, and both in the Crimea and Italy it plays only a secondary part. Its use, both North and South during our War of the Rebellion, was a revelation to European soldiers. The study of the exploits here performed under "cavalry leaders," and the experiences of the Prussian-Austrian campaign of 1866, led to the measures which made possible the creditable work of the German cavalry in 1870-71. That it has not once more gone to sleep is shown by the conditions now presented to the close observer.

The current of thought which has prevailed in recent years in German military circles regarding their mounted force is well set forth by Colonel v. Gisycki (artillery), in No. 6, (retrospect), of his strategical-tactical problems. His remarks contain so much of general intrinsic value that will benefit the military student, that I believe it worth translating them for home use. The Colonel says:*

*The translation is almost literal, only a few passages wherein the Colonel refers to problems treated in preceding numbers are left out as not pertinent to the cavalry instructions in general.—Wm. G.

"In our long peace period, 1815-64, and even later on, few divergent views regarding the value of cavalry prevailed among us. Officers not lacking in military judgment would not comprehend why we strove to increase our cavalry. The value of cavalry in exploration service is unquestionable. Without good cavalry an independently acting infantry division can seldom perform satisfactorily the task assigned it. An infantry division, operating as part of a corps or army, need look forward to the next day only; an independent division, on the other hand, must look ahead several days, and in corresponding manner enlarge its sphere of security and exploration. On this account additional cavalry is usually assigned to it.

"First of all the cavalryman must be educated to care conscientiously for his horse, that he may do this, even when not immediately under the eye of his superior. It does not suffice that if he has to start out early, he feed his horse betimes, and saddles properly. He must lighten the animal's work in every possible way, dismount whenever practicable, avoid unnecessary use of rapid gaits, water en route if opportunity offers it. Then the horse, too, must be well trained, so he may better stand hardship, and will carry the rider only where he desires to go. Without these fundamental conditions great cavalry performances are not attainable; explorations frequently will fall short because the horses are unable to do full work.

"The number of officers, too, is limited, hence non-commissioned officers, even lance corporals, must ride patrols miles in extent. They cannot be given maps in such cases always, as not enough are available; furthermore, in hostile country the man, as a rule, is not familiar with the language of the inhabitants. What an amount of ingenuity and circumspection must the cavalryman be possessed of to orient himself on such a ride, and keep up proper deportment towards a hostile population. Next, his duty is to report about the enemy. To do this correctly he must not only be able to see, but comprehend what he sees—he must have military discernment. If he has such judgment he may save his horse many a longer ride: by reasoning from what he observes upon the still unseen he may escape exposing himself to dangers in which he might perish; certain apparently meaningless signs often are enough to enable one to draw fargoeing inferences. While such are no part of his report, but devolve rather upon the superior to whom the report goes, the correctly judging scout knows in case of such seemingly unimportant indications, that the moment to

report has come, and he consequently sends back much earlier a report, sufficient it may be, to put a whole division in motion. The cavalryman must also understand how to compose a written report; he must be competent to weigh every single word, otherwise questions might arise in the mind of the recipient which, in absence of the party reporting, cannot be answered. A badly edited report may become totally worthless; a false one can cause mischief.

"The principal difficulty in the conduct of war, is ever the want of clearness regarding the conditions with the enemy. The more exhaustive the advice is about the opponent, the more certain a commander becomes in his actions and resolves; the more vague news is regarding the enemy, the more easily irresolute action and false measures are liable to appear.

"But news of the enemy is not obtained by patrols alone, there are many entirely different ways. In our day, when the whole fighting force of a nation is in the army, there is hardly a place in the land which does not keep up relations with it. To seek for information in letters and newspapers is therefore proper work for cavalry far in advance. True, newspapers, as a rule, are prohibited publishing news of troop movements in their own country. Here and there, however, we may draw valuable inferences from the simple notices of a death, giving time and place with designation of men who have fallen, from advertisement for supplies, and like items. Training in this direction is consequently part of cavalry education.

"When exploring at long distances, relay posts are indispensable. Usually these consist of only a few mounted men. However, we must not ignore the fact that in a hostile country, with unreliable population, these relay posts should be made much stronger, so as not to endanger communication. Great circumspection is demanded of the commander of such a relay post, and is more than ordinarily needed in locating a picket. He must be on his guard against malicious attacks by the populace, and take position and measures of security accordingly. In this direction the taking of hostages may be profitably considered. As we school the cavalryman in peace, in posting a picket, so he should be instructed in these other duties.

"When we already require such a high degree of schooling, circumspection, energy and bold daring from the non-commissioned officer and private even in our cavalry, so he may ably respond to the demands of war in our day, these

qualities must be developed in a much greater measure in the cavalry officer. The day has passed long ago when the education of the cavalry officer comprised the training of a 'rider and horse alone.' All the qualities which a commander of troops must possess in order to perform distinguished service, must likewise be possessed by the cavalry officer of the present day, simply that he be equal to the tasks which fall to his lot. These qualities are sharp understanding, correct and rapid military discernment, prompt resolution, boldness and intrepidity. The fact that the demands made on the cavalry officers are so high that they can only be satisfied by a degree of talent seldom found, explains why the cavalry frequently falls short in its war performance. A distinguished cavalry officer will always make a capable leader of troops.

"Exploration, however, is not the sole sphere of cavalry active in war. Its work in battle can also be quite prominent. Against such performance the precision of the modern firearms is continually quoted. If we demand of our infantry that it shall hurl itself with 125 paces a minute against shaken or even solid hostile foot soldiers, it is hard to understand why horsemen with fourfold speed should not ride at least against shaken infantry. True, the individual cavalryman presents four times the mark of the infantry soldier, but on the other hand, the impression of cavalry charging upon the enemy is far more powerful, and then the infantryman shoots so much worse. We must not allow ourselves to be led astray by the hits on the target range. There we shoot with perfect repose of mind, and make hits correspondingly; few men, however, fight for life and death with absolute tranquility. Let us suppose that the hostile infantry has already suffered severely from the fire of our infantry and artillery; the sight of the dead, the groans of the wounded, all impressions never felt in peace, have already robbed the opponent of much of his presence of mind. Now cavalry suddenly appears and charges the infantry. The tremendous impression this cavalry makes, hardly permits longer a well aimed fire of the infantry; furthermore, even if less men are cut down in a successful charge than were shot down by the infantry, the moral impression upon the over-ridden enemy is incomparably greater than in case of previous losses inflicted by infantry and artillery fire. This was shown us thoroughly by the Brigade Bredow at Mars la Tour.

"In war all hinges mainly upon the moral impression. If an army of 200,000 has lost 25,000 men in an unfortunate

battle, it is not the mere absence of these 25,000 which makes it impossible for it to face again at once the enemy, but rather the circumstance that the remaining 175,000 have lost their moral firmness so completely that they may not be trusted. In this lies the full import of battle. If the victor, near the close of the action has put in his cavalry, and possibly ridden down 1,000 of the enemy, losing a like number of his horsemen, this attack has effected incomparably more than if the thousand had been shot down at long range by the artillery, which in the latter case the beaten foe might make a new stand twenty miles off, the impression he would receive in the former case would cause probably such consternation that a renewed resistance need not be expected in twice the distance.

"The effect of a well initiated attack upon artillery, too, is generally underestimated. Getting the range under conditions of perfect tranquility against rapidly moving objects on the practice grounds is in itself extremely difficult. How difficult will it be in the excitement of battle, under the sudden impress of a powerful cavalry attack? If gunners and battery chiefs do not preserve perfect *sang-froid*, so satisfying the highest demands, they easily fail to hit anything. In any event, it is easier for cavalry to take the artillery than it is for the latter to defend itself against a well laid attack of a large force of horsemen.

"If the cavalry shall attain grand results in battle, the conviction must permeate governing circles that grand performances are possible. Cavalry generals must feel confident that they can accomplish such success. An army wherein such a confidence is not felt will not even attempt to achieve such success. If we have seen entire campaigns without such deeds we should, however, not presume, as has been done by some, that the day of '*battle cavalry*' has passed. That something has not been accomplished is no warrant for the assertion that it cannot be done."

COMMENT BY MAJOR-GENERAL S. B. M. YOUNG, PRESIDENT WAR COLLEGE BOARD.

"This translation includes much interesting matter, from one whose opinions should carry great weight, and will furnish food for thoughtful consideration of cavalry officers.

"A point, for example, that is clearly brought out by Colonel v. Gisycki is that everything hinges upon the moral

impression produced upon a defeated enemy; the actual casualties may be great, but if the enemy retains his morale he is still formidable. With the same casualties the degree of demoralization of a defeated enemy is great in proportion to the influences under which the fight was lost. Thus, if with an enemy shaken to the point of breaking, it is possible to deliver a mounted charge, the demoralization of defeat is incomparably greater than if the final stroke were accomplished by infantry or artillery at a distance."



MOUNTED RIFLES.

BY CAPTAIN GEORGE H. MORGAN, THIRD U. S. CAVALRY.

AS a result of recent wars, there has been much discussion concerning so-called mounted infantry. Some of the more enthusiastic theorists have made themselves believe that the new discovery is to determine the results in future wars, and that the cavalryman is already relegated to his niche as a relic along side of his renowned ancestor, the man-at-arms.

There may be danger that the cavalryman be legislated out of his saber and pistol in this country, as here the soldier must face the condition that the United States can never probably be prepared for a great war. The fact that when war is declared, no expense will be spared or considered, should not cause the survivors to forget that when peace once more broods over us, even necessary cash for a meager attempt to prepare for the next struggle will be rigidly scrutinized by the authorities, not always experts, but who hold the purse strings, and by them pared if not pruned, the result requiring expedients to do the work of proper machinery. Yankee tricks have prevailed, but Yankee wisdom and foresight is better and cheaper in men, money and honor.

If we intend to have a proper mounted force to do anything properly required of it, with due arrangement for expansion for war, it must be cavalry.

If it is decided in our wisdom to abolish cavalry let the new mounted force be called mounted rifles.

Under the name of mounted infantry, we must adopt and combat many prejudices incident to both the cavalry and infantry, and inapplicable to the new arm, merely because it is neither cavalry nor infantry.

Originating, as many of the practical ideas of the service have, in the warfare on the Western plains, the tactics of the mounted rifles were further developed during the Civil War, partly on account of the poverty on one side, and finally have been made a practical part of the cavalry regulations. The mounted infantry was so inferior to the cavalry during the Civil War that many lost sight of its real strength: and during the long semi-peace following, a regiment was purely cavalry or mounted rifles in its tendencies according to the knowledge, ability or perhaps prejudices of its officers.

Common sense is generally overthrown in a struggle with prejudice in military matters, and the new arm should not be hampered with the prejudices of either of the schools, because it partakes partly of the nature of both. It must work out its own role to be worth while.

The history of the war in the Philippines shows, from an almost complete absence of cavalry in the first campaign, that the arm was much increased later, and also aided by mounted contingents from nearly all of the infantry regiments, the later campaigns being practically concluded by these forces.

Thus we made use of a makeshift to cover an emergency. The excessive loss in horses from the use by make-shift mounted troops should not be charged to the cavalry or to the mounted infantry. It is a charge to be placed at the door of "emergency."

Everybody knows all about a horse, and almost every young American can ride; but even in the cavalry the good horsemen are not in the majority. By the term is meant one who has the capacity, not only to ride and care for horses under great strain and difficulties, but to impart that knowledge to others. Time was formerly considered necessary in the making of a cavalry soldier; a five years' enlistment was about the shortest term for an apt recruit. It was often the experience in the active work in the islands to get our horses one day and be on the trail with them the next. The horses and men untrained, it would have been a miracle if there had not been much friction and waste.

The writer had command of such a mounted detachment in the Twenty-eighth Volunteer Infantry. The size of the

detachment allowed personal supervision over all details. The country—northern Mindanao—was similar to New Mexico, and the horses, when turned over to the Fifteenth Cavalry after the campaign, were generally in good condition. The conditions were exceptional, and the results were probably exceptionally good. The men were previously well drilled as infantry—subordinate, inured to hardships, and selected from a large regiment for their ability to ride and shoot. It was possible, under the conditions, to drill them daily at mounted formations and target practice at known and unknown distances, except when actually on the trail. The actual field duty was thus not much harder on the horses than the daily work except for the lack of grain. Cavalrymen will appreciate how much personal supervision was necessary in the details of shoeing, care of the sick and wounded, packing of saddles, care of the equipments, training of the horses and riding.

With more time and additional equipments the troop could have been made American cavalry.

Nearly all of the infantry mounted detachments in the Philippines used their long rifles, carrying them in a manner similar to the method used by the cavalry. We obtained the shorter carbine for the reason that it is handier, lighter and shorter, and thus less liable to make the man uncomfortable and the horse sore, and is quite as efficient as a weapon.

However, notwithstanding the good results, the detachment was a makeshift, efficient as it was against such an enemy.

Perhaps after all, the enforced economy of our peace times is not a bad preparation for the study of the inevitable use of makeshifts in war times. A campaign is a study in emergencies. A junior officer is expected to do what he can with what the harassed general can give him; do it as well and as quickly as possible and not make too much complaint about his troubles.

The troubles of moment encountered with our mounted detachment are worthy of note and consideration. They were, in order: Ignorance of horse nature on the part of the

men who used and commanded their services, difficulty in healing even slight sores, and shoeing.

There can be no help for the first except proper instruction and experience. If the wound was covered at once, it healed as readily in that climate as in a more friendly one. As to the shoeing proposition, instruction and personal supervision on the part of officers responsible was the only method that worked.

It is conceivable that a man has a limited amount of energy. If he must expend three-fourths of it in drilling at the "setting up" exercises, he has but one-fourth of it left for more advanced work. If we must do our work with makeshifts, let us prepare for them the best we know how, and be sure that when the time comes we have the practical knowledge and experience sufficient to make them "go". But why make use of a second-rate article when we know how to manufacture the real thing? The mounted rifles are more mobile than infantry, less efficient than cavalry, and probably more costly, as we use it. Still, if not a hurried makeshift, but properly organized under efficient officers, who know how to care for the mount, be it horses, bicycles, carts or elephants, it must make itself felt in future wars. Mounted on small, active, hardy horses, it is peculiarly adapted to a people who from childhood is accustomed to firearms and horses.

When we consider the weary way traveled to the state of efficiency we had before the Spanish War, it seems as if prejudice had too much to do with the actual results in our military world. The military mind ought to be always striving for exact knowledge. The lives of his men and, incidentally, his own, may depend upon the line officer's familiarity with certain details; and although he may at times, from a too limited experience, jump too quickly to a conclusion as to some detail, he is, however, responsible, and must feel the responsibility as no one else can. Therefore his demands as to what he wants in the way of equipment should be given heed.

The utility of such a force as the mounted rifles should no more argue the abolition of the cavalry than the infantry. The great use of a machine gun with a mounted force does not

detract from the work of the regular light batteries. Any country that refuses to make use of all the arms that should form the *product* of its efficiency is simply handicapping itself, and unnecessarily sacrificing its first line of defenders, not easily replaced.

The name mounted rifles is, in our service, an honorable one. As an incentive to good work the arm might be granted a claim to be the direct descendant of the rifleman of the Revolutionary War, and of the mounted rifles of the war with Mexico.

It is probable that the mounted rifles must be considered as a part of every civilized army of the future. The rifle appeals to an American as a natural and efficient weapon; if we have time it appears only common sense to add to the soldier's equipment a saber and pistol.

It is a costly thing—an "emergency purchase"—to try to make a mounted force out of infantry. It is not right or wise to reduce the efficiency of the cavalry by taking officers from it to handle makeshift organizations. An arm to be worth while should have its own organization, officers, drill regulations, and work to its own proper end. If riding and marksmanship are, for example, to be the requisites of the mounted rifles, the officers should be selected or appointed to it on account of their ability in those lines. The resulting organization would be fit for any soldier to command, and could do good work, in its own line, in less time than cavalry proper could be trained.

To be thoroughly fit, however, an arm must be regularly organized upon its own lines, as a school for the proper study of its capabilities.

Upon considering the above, it appears that the reason for the suggestion from a cavalryman of the organization of a rival arm of the service, may be pertinent.

In case of a great war, when it would be supposed necessary to raise in our usual way twenty new regiments of mounted troops, and a cavalryman is appointed to the command of one of them, what must he expect, and in what manner should he conduct the instruction of his command to meet the probable emergency in the shortest time?

The instruction must be progressive, and fortunately the easiest lessons for Americans are the first ones naturally taught, *i. e.*, training of the horses and the instruction in marksmanship for the men.

If an inspector sees this regiment a month after its organization and the horses are bridle wise, know some of the aids, and the men can dismount and form readily for work on foot, and can shoot, and the horses are in as good condition as they should be, the chances are that the regiment gets its orders for the front. It is merely a regiment of mounted rifles. As the instruction proceeds, and it is conceivable that it, the instruction, may continue in the field, eventually the commanding officer may expect to have a cavalry regiment fit to hold its own with any organization on the face of the earth.

It is repeated for the sake of emphasizing the writer's views, perhaps prejudices, that we cannot afford to mount our infantry on horses, and mounted rifles cost just as much as cavalry, probably more, and is less efficient.

The commander of such a newly organized regiment is called upon to determine, as above, the steps of his progress in training his recruits and mounts.

Mobility is the important point of superiority over infantry, and that is his first care. Coincident with the handling of the horses goes the target practice of the men, for in that respect they must at least equal the infantry.

Finally, to be superior to mounted infantry, and the equal of cavalry, he must add shock tactics. With the regiment then in hand, the best soldier in the army can hope for nothing better excepting increased efficiency through drill and experience.

The abolition of true American cavalry is more likely to be accomplished through our own lack of experience, laziness or ignorance, than by legislation.

COMMENTS ON MOUNTED RIFLES.

COLONEL J. A. AUGER, TENTH U. S. CAVALRY.

I agree with Captain Morgan in almost everything he says, but I would go further than I understand him to go, and say that all mounted rifles and mounted infantry (whether using horses, bicycles, carts or other "mounts") are makeshifts, only warranted as temporary expedients, and not to be tolerated in our peace establishment, which is limited, and apparently always will be limited, to a small number of men. Even to discuss the subject of establishing in our service in time of peace a corps of mounted rifles seems to me almost useless, unless one could follow the example of Captain Morgan, who has taken advantage of the opportunity to say a number of good things, some of them as relevant to a great many other subjects as to the one under discussion.

In my opinion there is sufficient in Captain Morgan's article to condemn mounted rifles, and a statement of my views will be somewhat a repetition of what he says in a different form.

Our cavalryman is, or we believe him to be, the highest development of the mounted fighting men. He not only fights mounted and does all the other duties reserved exclusively for cavalry, but he is, dismounted, a match for infantry. He is much more useful than the mounted rifleman brought to the highest imaginable state of perfection. But it takes time to make the cavalryman, and if we want him at the beginning, or at any time near the beginning of war, we must train him in time of peace. Our infantryman is our ideal of the dismounted fighting man. It takes time to make him, too, but less than for the training of a cavalryman. The mounted rifleman brought to a corresponding state of efficiency would cost almost as much in time and money as the cavalryman without attaining half his usefulness.

Let us, then, in time of peace, devote our time and all the money available for the purpose to the training of cavalry. Let us at the same time train as infantry all that can be trained as regulars, and give every possible encouragement and assistance (as seems to be the present policy of those in authority) in increasing and training the auxiliary force now generally known as the National Guard. The proper training of mounted troops in this auxiliary force, except in isolated cases and small numbers, is not to be hoped

for. Let us never lose an opportunity of having more of the best kinds and of making them better.

We will then not only have taken the most effective steps to avoid the necessity for a makeshift, by having provided the greatest possible number of the best kind of mounted men, but we will have made the best possible preparation for supplying the makeshift if it becomes necessary. We will have the greatest possible number of men trained to fight on foot with the rifle, and it will only be necessary to furnish some of them horses, bicycles, or other means of moving rapidly from place to place when not in fighting distance. If horses are used for the mount, proper saddling, care of the horse, attention to sores, shoeing, etc., will have to be a part of the makeshift.

The average American has had enough experience in riding to sit on and guide a horse, and the average American horse can be ridden and guided when bought for service.

Suppose we should, in time of peace, organize and thoroughly train a corps of mounted rifles. On the completion of the work there would be a body of trained men on trained horses ready, as our cavalry is, to fight on foot, and ready to use the shock action mounted, but lacking the proper armament for the latter; and ready, too, to do the other duties of cavalry, but lacking, perhaps, both arms and equipments suitable for the work. They would have cost about as much as cavalry, but would be equal to cavalry in only one respect and superior to cavalry in no respect. More labor and money would be required to make them as good as the best.

We passed years ago the stage of mounted rifles except as a makeshift. We had mounted rifles and abandoned them, preserving in the cavalry the elements worth preserving. We have had ample experience with mounted infantry, using it for emergencies and abandoning it after the emergencies passed. To adopt anything of the kind now as a result of foreign wars would be folly, not that these wars do not emphasize the importance of rapid maneuvering, but because we can have but a small number of mounted troops; and we want the best. If we can have mere mounted troops on condition that they shall be rifles, let us have them; call them mounted rifles and give them as nearly as we can, within the limits of the law authorizing them, the arms and equipments we have found to be the best for mounted fighting men.

We should by all means endeavor to profit by the experience of other nations, but we should not forget that the material with which we start out differs somewhat from theirs,

and we should first remember our own experience with our own material.

Let me say, aside from this discussion, that were it possible for one people to profit fully by the experience of another, a study of our Civil War, especially the campaigns of the latter part of it, would have prevented some of the disasters resulting from making partial attacks on intrenched positions in the Boer War, which I take to be the principal of the foreign wars referred to by Captain Morgan.

It is impossible to say what may be most needed in our next war or the number or kind of makeshifts we may have to adopt, because we cannot now know the nature of the enemy we may have to meet, the nature of the country he may occupy, and a great many other things we will have to consider when the time comes, but it would certainly be a mistake to prepare a makeshift now for particular conditions, while the real article, capable of doing all the makeshift can do and a great deal it cannot do, can be prepared with practically the same time and money.

CAPTAIN C. B. HOPPIN, SECOND CAVALRY.

From the experience obtained in the Spanish-American war, the war in the Philippines, and especially in South Africa, it seems certain that in the wars of the future large bodies of mounted troops with machine gun accompaniments must be counted as absolute necessities: the main question being how best to provide in time of peace for their efficient organization. From my observation of conditions prevailing during the Spanish-American War, it is evident that officers from the regular army regiments should not be taken in large numbers for service with such troops, though a sufficient number must and will be spared to at least command such regiments, and furnish at least one officer for each who is trained in staff work incident thereto.

Every regular regiment has a few officers who, by their thorough knowledge of the care and use of horses, as well as their skill in the use of the rifle and ability to impart instructions along these lines, are especially qualified for commanders of mounted rifles, while men fitted for the staff work in such regiments are plentiful in all the regular regiments, both among the officers and older non-commissioned officers. Now, as to the remainder of the force. In many portions of our country large numbers of horses are bred suitable for

both cavalry and mounted rifles, and in each of these localities knowledge of the horse and ability to ride is general. Why should not these localities maintain in time of peace mounted rifle organizations, instead of or in addition to infantry organizations, the general government bearing that portion of the expense due to the mounting of such troops, and in each State providing an officer as instructor in time of peace, who would also command the consolidated organization in time of war—should war occur within the limits of his detail? In this way the officer would have the spur of possible service with the troops he had instructed, and if his work were not satisfactory in time of peace, he could be replaced before the error in his detail had been paid for through disaster in war.

These mounted riflemen should furnish their own horses for drill purposes in peace, and should be paid for their use. In time of war the trained horses being purchased for their permanent mounts.

These organizations could be reasonably trained as mounted riflemen within a year, while it takes a much longer time than that to train a cavalryman.

This suggestion is made with the hope of inaugurating a thorough discussion of the subject to the end that some practicable working plan may be devised to meet an evident need before we are forced by war's alarms to expedients to meet an impending crisis.

Any plan to be successful and efficient, will be expensive, but the expedients adopted after the declaration of war are bound to be much more costly in the end.

MAJOR E. A. GODWIN, TENTH U. S. CAVALRY.

Captain Morgan's article appears to be an argument in favor of the formation of a separate corps of mounted infantry. To justify the organization of such a corps it should appear that there is a field for it distinct from those covered by corps already in the service. What lack in our service would mounted infantry be expected to supply? For many years our cavalry has been trained to fight on foot, and to do all the things expected of mounted infantry. Indeed it has been asserted by those, especially foreign critics, who are wedded to the "cavalry proper" idea, that by dismounting to operate on foot, cavalry loses its right to the name, and becomes, in fact, mounted infantry. According to their view, we have no cavalry, and so far as I know, never had

any. A name signifies but little in this case. For answer, we can point to Sheridan's and Wilson's cavalry corps. What has been, or can be, done by any cavalry, of the proper kind, that was not well done by these splendid corps? At the same time, what could mounted infantry be expected to do that they did not do, and do in the most effective fashion?

The day of mounted troops who can fight mounted only, has passed, if, indeed, there ever was such time outside the realms of sentiment and imagination. The ability to do the work required of mounted troops on horseback, or on foot, as the occasion demands, is the important point. Is there anyone, who was familiar with the condition of our cavalry at the outbreak of the Spanish war, who does not believe that it was the equal in effectiveness of any like number of mounted troops, by whatever name they may have been called? In this view of the case, which is sustained by the record, have we not now, in our cavalry regiments, both cavalry and mounted infantry? Does not their training fit them for the performance of all duties which would devolve upon both of these branches, if we had them separated? Why should we seek to separate them, and thereby complicate the questions of organization, drill, armament and equipment? Let us, rather, labor to bring our cavalry to the same standard of efficiency that existed in the spring of 1898, or higher, if possible. Opportunity is not lacking, nor is there dearth of ability amongst officers and men. It is true, that in case of war the number so trained would be insufficient, but that, in the present state of public opinion, is not avoidable. "Do the best you can with what means you can get," and in the meantime use all legitimate efforts to secure adequate preparation for the war which we hope may never come, and which is best averted by being ready for it. If, unfortunately, it should come, new regiments must be raised and prepared to do their part. Start out with the idea of making them the equals, on horseback and on foot, of those regiments already in service. They could not be made effective mounted infantry at once, and training, either before or during war, should not stop even when that is attained. Let it continue under conditions as they present themselves, until they satisfy our idea of what American cavalry should be. In the earlier stages of their service they would, perhaps, answer more or less well the requirements of mounted infantry; certainly they would do as well as they would if they were called mounted infantry. And let us do these things without caring whether there may be somebody, somewhere, who would deny us the name of

"cavalry proper," because we can do more, and play a more varied role in war, than any mounted troops whose title to that name is gained at the expense of a part of their effectiveness.

CAPTAIN S. D. ROCKENBACH, TWELFTH U. S. CAVALRY.

Whether the designation "mounted infantry" or "mounted rifles" should be given to the makeshifts that necessity sometimes requires, and opportunity allows, depends upon use and armament. When General Miles mounted the Fifth Infantry upon captured Indian ponies, they were "mounted infantry." The Boers were riflemen, not infantry, and those with mounts were "mounted rifles." Pick from infantry the men who can shoot and ride, mount them, and you have a force that the old historical name "mounted rifles" describes. Arm them with the carbine only (they have not the shock action of either cavalry or infantry) and they are neither "mounted infantry" nor cavalry, and the most descriptive historical term would be "carbineers."

Such a force Captain Morgan emphasizes is a costly makeshift, but as the United States, we may assume, will never be properly prepared for a great war, and our small regular force can never do all the fighting required by our country in war, makeshifts will have to be employed. The regulars must train these makeshifts and get the best out of them. The regular officer who does not recognize this and prepare himself so that he can get the best out of the material furnished him will be very limited in his usefulness in times of emergency.

But do not train the regular officer with a makeshift. Give him the best material obtainable, so that our regular force in time of peace will be the best of its kind in the world, a leaven sufficient to take care of the volunteers in time of war. Training with, and an understanding of, accurate instruments is necessary before the simple instruments of the military topographer can be used to make a sketch accurate enough. The professor of music has added to his natural love of music years of toil with the best instruments and studies of the great masters. The mouth-organ and rag-time are not his studies. He will get applause with them when the necessity requires him to use them.

It is the same with the cavalry officer. If he is a horseman from natural love of the horse and long training with good horses, a sharpshooter with his rifle and the car-

bine, a good shot with his revolver, a swordsman, and an educated man, able to grasp quickly the chances and opportunities of emergencies, he will know how to make the best out of makeshifts.

But the cavalryman, the intelligent horseman and trained soldier, on a saddle horse trained for cavalry service, is the ideal to work to, not the makeshift. There is no place in our army in time of peace for "mounted rifles;" we might just as well train the professor of music with a mouth-organ and rag-time. With Captain Morgan, it seems he would have made cavalrymen out of his "mounted rifles," could he have had more time and obtained sabers and pistols. When he got to "mounted rifles," necessity alone seems to have prevented him changing his brand to "cavalry." We believe he got his good results due to his training as a cavalryman, and that the results would not have been so good had he been trained as a mounted rifleman.

The American cavalry should be so much better in its personnel and mounts than the emergency mounted forces of war that the latter would require more than time and armament to make them cavalry.

The conditions which existed prior to '98—and they had much to do with making a cavalryman who knew how to handle makeshifts—are gone. More love and energy in cavalry work is required of our cavalry officers in order to make them cavalrymen. We are given the best equipment, arms and clothing obtainable. Why can we not get the best horses for mounts, and the best educated horsemen for cavalry officers?

One of our general officers recently wrote: "It behooves cavalry officers to interest themselves in these subjects, in order that they may render such assistance to the War Department as is possible in coming to a just and proper conclusion as to the results of the use of experimental equipment." It is not believed that the interest of the War Department is confined to equipment. Can we not interest ourselves in the personnel and mounts, and render the War Department such assistance that a subaltern who is not a horseman cannot obtain the commission of a captain of cavalry, and that the horses we get for mounts will be saddle horses? We have experimented with mongrels long enough. Because cavalry officers have done good work in spite of them is not an argument for their retention. Why can we not get a Saumur for cavalry officers, and a breeding farm for cavalry horses? If we could, a great gulf would be fixed between

"mounted rifles" and the American cavalry that could not be spanned even in imagination.

It will never be decided in our wisdom to abolish cavalry. Wisdom says retain the features that make it American cavalry, and improve the personnel and mounts.

CAPTAIN M. C. BUTLER, SEVENTH U. S. CAVALRY.

If it is probable, as Captain Morgan says, that the mounted rifles must be considered as a part of every civilized army of the future, I say keep it separate and distinct from the cavalry. I think, however, that our cavalry is competent to perform the role that might be assigned to mounted rifles or mounted infantry, if you please, in addition to its many other duties. It is a well known fact that in past wars the cavalry has performed efficiently all duties that so-called mounted rifles might possibly be called upon to perform.

No commander would think of mounting a portion of his infantry except in case of emergency, and the emergency would arise from the fact that there is either no cavalry or an insufficiency at hand to accomplish a certain purpose. The fact that an infantryman is put on horseback with his rifle and is successful in an undertaking, is no argument that the cavalry soldier should be done away with or another designation be given him. I have no fear of the cavalry arm being done away with or the designation being changed. I think, however, Captain Morgan is right to invite discussion. It would be just as sensible to say abolish the infantry because the cavalry can dismount and fight on foot.

I am in favor of the saber for use in the garrison only—the disadvantages from its use in campaigns outweigh its advantages; cavalrymen carefully trained can make the pistol very effective in time of war. Target practice for both pistol and carbine should be had twice a year.

EUGENE A. CARR, BRIGADIER-GENERAL U. S. ARMY (Retired).

In commenting upon the able article of Captain Morgan I must first express agreement with most of his views.

Officers of the Third Cavalry have a strong feeling for the mounted rifles, of which it is the successor by change of designation in 1861, after fifteen years of most distinguished service in Mexico, Oregon, Texas and New Mexico.

In Mexico only two companies served mounted, the horses of the other eight having been lost in the gulf. Their arm was a "Yager," called the Mississippi Rifle, from Jefferson Davis's Mississippi regiment which was armed with it. Sometimes the regiment was called the "Brass Mounted Rifles," from the mountings. It then had a round bullet, and afterwards the minie pointed bullet.

When I joined, in 1851, we had also sabers and the old-fashioned horse or dragoon pistol, a smooth bore carrying a musket (ounce) ball with a swivel ramrod to load on horseback.

The rifle just reached up to the point of my shoulder at order arms. It was stocked up to the muzzle, and the breech was heavy and strong, with a patch box covered with brass, of which metal also were the bands.

It was heavy, but I killed my first buffalo with it and the pistol from horseback. I got as near as I could alongside the animal, a young bull, fired my rifle, then my pistol, lost my hat, got down to load, followed the bull and fired the two shots again, and brought him to a standstill: then I got down again, loaded and fired from the ground and dropped him at eighty yards. Buffalo Bill ran buffalo with a Springfield infantry rifle which he named "Lucrecia."

It is a mistake to say that army marksmanship started at Creedmore. We taught our riflemen very carefully. I and many of my men could hit the size of a dollar at a hundred yards. This was during the latter part of the period when the country marksman shot with the hair trigger and the "double wabble," and could hit a deer in the head at forty rods (not yards) while he was jumping a fence.

My first Indian fight was with these guns in 1854, and we did not dismount; but we had Colt's revolvers then. We carried the sabers during the whole five years of my service with the regiment and never used them once in action. I am on record for dropping the saber a number of years ago, when General Sherman asked for views. I believe that all swords are useless incumbrances. In this, as in many other respects, I have been ahead of the times; but the times in this, as in others, seem to be coming up to me.

The expression "L'Arme Blanche" has, I hope, had its day. To talk of "the shock" now is simply absurd. The only chance for a charge is to catch the enemy suddenly in the flank or when already demoralized by fire. Then the revolver is far better than the sword, from which a man can be protected by a fence, rock, tree, or bush, and use his rifle

on the mounted man with effect, unless the latter has a revolver. For artillerists, swords are awfully in the way: and as for that of the infantry officer, "toads" are not only scarce and harmless, but really useful members of society. General McPherson did not carry a sword in the field. We latterly left our sabers behind when we went on Indian campaigns. No rough rider or scout or cowboy or desperado or peaceable citizen ever thinks of carrying such a thing as a sword. They all carry revolvers for offense or defense. For parade purposes the position of "advance carbine" or "raise pistol" is very good, either in line or "marching past"; and the officer can salute very handsomely from "raise pistol."

Talk of mounted riflemen! All of the army are riflemen now, and the only question is of *mounted* infantry. The artillery guns and even the mortars are rifled.

As Captain Morgan well says, the emergency expense is frightful. And if we attempt in time of peace to create a corps of mounted infantry, it will soon become cavalry. Neither officers nor men will be content to remain in a hybrid state, and they will, as they get a taste of mounted service, not be satisfied till they can feel that they belong to "the rough service of horse." It is a rough and hard service, much more laborious than infantry, turning out in the early dawn to water, feed, groom and clean stables, and guarding and watching all night.

Grazing, care of saddles and equipments, three arms, hauling forage, etc., etc., besides doing most of the scouting and detached service, for the cavalry is always called for when there is urgency.

But there is glamour and excitement about it, and one is hardly ever so tired, with all the work, as the infantryman, after a monotonous march.

With the carbines now furnished and with their future improvements, the cavalry will "fight on foot" to much better advantage than hastily and expensively improvised mounted infantry, and they are cavalry also.

During the Camden River campaign in Arkansas in 1864, I commanded the cavalry of General Steele's army. At the battle of Poison Spring an infantry brigade was ordered to report to me.

My dismounted cavalry with Sharp's carbines was pushing Jo. Shelby, going through woods, pastures and cornfields, over stumps, logs, etc., with their sabers dangling behind them, and I thought that was a place for infantry skirmishers, and put them in.

I rode back to see General Steele, and when I returned I found the cavalry in again, pushing the enemy at a fast walk. Colonel Caldwell, commanding the leading cavalry brigade, said the infantry were too slow and he had relieved them.

As we are improving in the instruction of officers, we should teach them all something about horses, not only in theory but in practice.

When I "joined the cavalry" I knew little about horses, but long and hard experience gave me knowledge so that I marched the whole Sixth Cavalry fifty miles on Christmas day of 1891 and did not drop a horse.

In this connection I must make a plea for veterinary surgeons. They should be commissioned officers. They are highly educated, not only in their specialty but in general medical and surgical practice, and are mostly college graduates; but their pay and position are not such as to command the best men.

I got one in the Sixth soon after I joined, and started him to mess with the officers; but his pay was not sufficient, and he resigned.

The blacksmiths about Tucson laughed at first at the beardless youth; but after a few difficult cases, they said, "That young man knows his business."

A competent veterinary will pay for himself many times over. A horse is a very peculiar creature; in some respects simple, and in others most complex. A private owner will call in a veterinarian, pay him a good fee and treat him like a gentleman; why not the government?

The veterinarians and cavalry officers could teach the student officers a good deal in theory and give them some practical lessons; but nothing can take the place of experience in mounted service; and it is a frightful waste of money, cruelty to dumb animals, and loss of material advantage in war to wait for its declaration to raise mounted infantry. There are plenty of instances in our own army in the knowledge of men now living, but the crowning one of all is that of the British in South Africa. They were confronted by a people raised on the veldt at stock handling, hunting, etc., who slept in their clothes and with their horses.

The English government bought over a hundred thousand horses in this country, besides those it purchased in Australia, Canada and elsewhere. Their men, many of them, did not know how to handle them, feed them, care for them, or use them, and their losses were enormous, besides the cruelty and their failure to bring the war to a speedy close.

Of course it is impracticable for any nation to have a whole army of cavalry, and in fact, it is undesirable, for instances like the Boer War will be exceptional, and great battles will be fought mainly by infantry; but there will always be use for troops who can move rapidly from place to place, and it would not be too great a proportion to have one-fourth of all armies composed of mounted men, who, if the views of Captain Morgan and myself be correct, should be enlisted, furnished with the best arms, have their horses provided, and all drilled and trained in time of peace; then in case of war, they could be used both as cavalry and mounted infantry.

Concerning the carbine, its range would be sufficient, even if not so great as that of the infantry arm, because the mounted men could go closer, take more advantage of cover, get away easier, and, above all, carry more ammunition, and, with lighter guns, fire more rapidly while engaged.

Before closing, I would suggest the removal of the restriction in the size of recruits for cavalry.

We do not want jockeys for cavalry soldiers, and we need some strong, powerful men to tear up railroads, bridges, tear down buildings and obstructions, carry off guns, etc., etc. I have seen big, strong men who carried their horses through a hard campaign better than the lighter ones.

CAPTAIN JOHN BIGELOW, JR., TENTH U. S. CAVALRY.

I do not see the advantage of substituting the name *mounted rifles*, which has to be defined, for that of *mounted infantry*, which defines itself.

The essence of cavalry tactics, *raison d'être* of cavalry, is the mounted charge. Abolish that, and there is no use for cavalry in the proper sense of the term. Without pistols or sabers the mounted arm, whatever it may be called, is mounted infantry. Give to mounted infantry the arms and training that fit them to charge mounted, and call them what you please, you convert them into cavalry. Both cavalry and mounted infantry are qualified to fight on foot. The peculiarity of cavalry is its fitness to charge mounted, and of mounted infantry its unfitness to do so.

By our armament and training we recognize the mounted charge as a possibility. But if I may speak for others than myself, we regard it as a rarity. Our cavalry is like the Texan's pistol, an arm of emergency, with this difference, that when not in use for the purpose for which it is espe-

cially kept, it is not relegated to idleness—a mere burden and expense—but may be used for a purpose for which it is not, but for which mounted infantry is, especially or solely maintained.

The days of cavalry pure and simple, or unfit to fight on foot, are numbered. Nor is it necessary that all the mounted force of an army should be equal to the mounted charge.

Mounted infantry is an adjunct to infantry rather than to cavalry, and should be in numerical proportion to the former rather than to the latter. The cavalry proper should be kept in reasonable proportion to the infantry (mounted and dismounted) or still better to the cavalry of the enemy.

I shall not venture an opinion as to whether we should have mounted infantry in time of peace, or if so, in what number. But I would express my conviction that our cavalry should continue being armed and trained so that it could be converted into mounted infantry by discarding its sabers and pistols, and into infantry by further discarding its horses.

COLONEL WILLIAM P. HALL, ASSISTANT ADJUTANT GENERAL.

We have read with much interest this article entitled "Mounted Rifles," by Captain Morgan, and he has gone into the subject in a way which might be expected from the experience suggested by his long and excellent service in the field.

We agree with him in that an organization of mounted rifles can in no way take the place of cavalry. From a long experience and practice in the use of arms, mounted and dismounted, we believe that the only arm fit for mounted fire is the revolver, and this at comparative short range. There are, of course, exceptional and rare instances where it may be necessary to fire carbines or rifles from horseback, but, as a rule, it is always better to use these weapons on foot.

We think that the mounted rifles should be armed with the rifle or carbine only, preferably with the carbine, as it is shorter and easier to handle on horseback, and is practically as good at long ranges as the rifle, and as before stated, the fighting of this organization should be on foot, using their horses only as a means of transportation. The motion of a horse incident to breathing alone, when standing quiet, is enough to prevent accurate shooting at any considerable distance, and the only mounted fire, even for cavalry, should be

with the revolver, which, if properly taught, is certainly effective. In other words, the cavalry is for the purpose of fighting mounted and dismounted, and the mounted rifles are for the purpose of dismounted fighting alone. Mounted fire to be useful and effective must be well and carefully taught, the men good riders, and the horses thoroughly trained at the same time; it requires more work to impart this instruction than it does to teach accurate dismounted fire, and in all cases officers or non-commissioned officers giving instruction must know how to shoot themselves or they cannot teach it to others.

In this connection we believe the saber and sword as an arm for our troops is a useless incumbrance and should be replaced by the revolver. In order to use the saber effectively the enemy must not be distant more than three and one-half or four feet, while with the revolver an effective blow can be dealt easily at a distance of thirty or forty yards, and much more rapidly; also with the revolver a small, weak man can deal as heavy a blow as a large and powerful one. We think that a respect for ancient traditions alone continues to inflict the sword and saber upon our troops as a weapon.

CAPTAIN J. A. GASTON, REGIMENT U. S. CAVALRY.

I do not agree with all the remarks of the author of "Mounted Rifles." He seems to jump at the conclusion that the cavalry is to be abolished. In my opinion the necessity for good cavalry has been so conclusively proven during and since 1898, that no one seriously thinks of abolishing it.

It takes at least three years to make a good cavalryman, and in many cases much more time. In order to have an efficient army when war breaks out, the cavalry must be kept in time of peace in a much larger proportion to the whole than it would be in war. The mere statement in point, that cavalry officers were discussing the propriety of abolishing cavalry, might mislead civilians into thinking it could be safely done.

In time of peace, mounted rifles would be as expensive as good cavalry, therefore why not have good cavalry? As on account of the expense, our country does not care to keep a large cavalry force in time of peace, it would not have enough when war broke out. It would therefore be necessary to form new mounted regiments. These would naturally be armed and equipped as cavalry and recruits should, if possible, be men who could ride. The efficiency of the

volunteer regiments would then depend partly on the ability, care and efficiency of the officers appointed to them, the length of time the regiments had been in the service, and the care with which recruits and horses had been selected. If such regiments could not be raised, infantry regiments might be mounted, but in every such case efficient cavalry officers should be detailed to report to the colonel to act as instructors for the officers in the various details of a mounted officer's duty.

Infantry should only be mounted when necessity requires it, and dismounted as soon as that necessity ceases to exist.

The most important duty of the cavalry officers of experience in our army to-day is to thoroughly interest the younger officers in the duties and requirements of their profession, and transmit to them the priceless legacy of our past.

If we do our full duty, and show to the world that we are an efficient body of cavalry, we need not fear adverse legislation by Congress.

CAPTAIN E. L. PHILLIPS, THIRTEENTH U. S. CAVALRY.

I have read with much interest Captain Morgan's article entitled "Mounted Infantry." Heretofore, when I have approached this subject, I have always been greatly perplexed because unable to discover just what the various writers understood by "mounted infantry" and "cavalry"; that is, just what distinctive qualities were assigned to each. After reading this article, however, the matter becomes perfectly clear. Mounted infantry is infant cavalry about one month old. If the "infant" lives and thrives and learns it may eventually mature into a state of full strength and efficiency, and then this mature adult will be cavalry.

It seems to me that it requires no further argument to establish what the attitude of the cavalry officer should be—whether he consults the interests of the cavalry alone or the interests of the entire army and the country, for they all, I believe, demand the same thing, viz: that mounted infantry find no place in our peace establishment, at least so long as the government adheres to its cherished policy of maintaining a comparatively insignificant standing army.

Should a great war break out a vast expansion of the military force must at once ensue. In this newly organized army there would be found quite enough partially trained "infant" cavalry to supply every requirement in this line; if not, mounted infantry could be quickly provided.

But it would be a different matter with full-fledged, full grown, mature cavalry, that requires time to create. This is the kind of troops that would tax to the utmost the sources of supply; it is the arm to which we should devote all our energies, and which should receive all of the limited means which the government is willing to provide for the mounted branch of the service.

CAPTAIN JOSEPH S. HERRON, SECOND U. S. CAVALRY.

Mounted infantry, though revived by the South African War, is not new in warfare. As far back as 1537 it is recorded that Francis I. of France, was shown at the camp of Marolles a troop of mounted arquebusiers trained to fight on foot. The dragoon proper or professional mounted infantryman, is said to date from the army of Gustavus Adolphus in the seventeenth century, and was armed with musket and sword.

Mounted infantry, except on a small scale, has always been a war emergency and has no permanent place in army organization. All modern cavalry is armed with the carbine. The mounted infantry question, as shown by the organization of the armies of the world, has been solved by the enlargement of the scope and duties of cavalry, and by narrowing those of mounted infantry.

MAJOR G. H. GALE, NINTH U. S. CAVALRY.

Call it what you will, it is a foregone conclusion that the mounted contingent of our army will, in the emergency of sudden war, be called upon to perform either mounted or dismounted duty, as circumstances dictate, and it is incumbent on its officers to be familiar with both. Our experience in Cuba and also in the Philippines promptly demonstrated that if we want good infantry in excess of the organized force available, we can instantly get it by dismounting the cavalry.

Every one knows that it is much easier and cheaper to organize and train foot than mounted troops, and the problem, in case of a sudden expansion of the army, seems to be how to get the desired force, armed and equipped and instructed, with the least possible delay and at the lowest figure, and it would seem reasonable that a reversal of the process followed in the Spanish War might be accomplished with gratifying results. Given a good infantry regiment, well instructed, with officers who have a full knowledge of their

duties as leaders and administrators, it seems to go without saying that it can be transformed into a good cavalry force in much less time and with less expense than if we have to start with the raw material. As regards the rifle, it is merely a matter of an interchange of invoices, and for the pistol and saber we may be sure that the men will be equally zealous, with their newly enrolled comrades, in learning their efficiency.

A great many of our infantry officers just now, are familiar with mounted duty. It does not seem necessary that they should forget it or that they should not acquire further experience.

One time, on receiving a troop herd when changing station, I found that the animals had been turned over to the care of an infantry officer, who was chosen because he had served as an enlisted man of cavalry some twenty-five or thirty years before, and was therefore familiar with the care and management of horses.

It would not seem absurd to detail a limited number of infantry lieutenants, or even captains, for tours of duty with mounted troops, just as artillery lieutenants were formerly detailed to the light batteries. There is little doubt but details of this character would not go a-begging, and would, with little expense, assure a reasonable knowledge of mounted duty in every regiment of infantry, and thus facilitate its transformation into a mounted force if desired. I am a firm believer that the principle which recognizes the superior value of the "partly manufactured" over the raw material in our tariff schedule can be more widely applied.

There seems little fear that we will lose our pistol, but, rather, in view of Balingiga and similar lesser experiences, that its issue will be more generally extended to the infantry. This becomes the more probable as the new rifle has a non-detachable rod bayonet.

Regarding the saber there are many minds. I believe it would have more advocates if our soldiers had a better weapon, perhaps, on the model recently adopted for officers, which is a neat, well balanced sword, capable of doing execution, while the present enlisted man's saber is clumsy and ill balanced. A more general education of both officers and men in the use of the saber would probably gain it many converts.

To those who affirm that the saber has outlived its usefulness, I would say that I have it on pretty good authority that a general bolo attack on General Schwan's cavalry dur-

ing his raid in Cavite and Batangas, in January of 1900, was planned and promptly abandoned when it was learned that the cavalry were carrying their sabers. This was beyond doubt a fortunate decision for the insurrectos, but who will affirm that the sabers would have been the weapons used had the attack been made?

Notwithstanding the old joke, I can see nothing the matter with the good old designation of dragoon.

CAPTAIN E. M. SUPPLEE, FOURTEENTH U. S. CAVALRY.

It is almost inconceivable that a cavalryman should start a rumor or a discussion as to the substitution of "mounted rifles" for our cavalry, but I can conceive, "as a result of recent wars," of not only cavalymen, but all military thinkers, as being in favor of mounted rifles as a superior article to infantry.

I have heard no rumors of any "enthusiastic theorists" of note relegating the cavalry to a niche as a relic, but I have heard of some "relics in the recent wars," who, after repeated refusals to receive cavalry in their commands, to finally come out of their niche, ask for it, get it, and in three months thereafter utterly destroy all organized form of the enemy's army.

We are apt to produce that which we make prominent by discussion. If we turn the drift of military thought in the direction of converting cavalry into mounted rifles we are liable to produce such a calamity. Such discussions should not be originated by any loyal, true hearted cavalryman.

Let us see what we would gain by this conversion. The prime reason for desiring this change is, no doubt, made on the grounds of economy. Is it possible that the "abolishing of the revolver and saber" appeals to any one as a great reduction in the expense of our cavalry arm? Does anyone for a moment believe that the preponderance of cost of maintenance of cavalry over that of infantry, either mounted or dismounted, is due to the fact that cavalry are supplied with the saber and pistol?

Mounted rifles must have horses and all the equipments of the cavalry, except the revolver and saber. The service now is well supplied with revolvers and sabers and have some 10,000 of each in excess, enough to supply losses for the next generation to come. We might, therefore, place the economy on arms, as, say, NIL.

Mounted infantry, like volunteer cavalry, are notorious for their sore-back, broken-down horses, requiring twenty-

five per cent. more remounts in a year than the regular cavalry. We might, therefore, place the economy on horses as, say, minus \$25,000 per annum, based on 15,000 mounted rifles.

We can produce in three years time, with systematic instruction eight hours per day, (relics of the niches to the contrary notwithstanding), an expert cavalryman who knows how to care for a horse, who can fight dismounted as well as an infantryman, and who can do all that cavalry has ever been called upon to do, in peace or in war, ready at all times to fight mounted and reap the fruits of victory after the successful battle.

The thought arises, why expend even the same amount of money to produce such an inferior article as "mounted rifles?" If it is desired to try the experiment of mounted rifles, I would like to suggest mounting five regiments of infantry or one battalion of each regiment, arming them with the carbine only, calling them "carbineers" and let a five year test be made as to their efficiency and economy. How long would it be before the "carbineers" would be clamoring for a revolver for individual defense?

Had the Ninth Infantry, in Samar, been armed with the revolver, as all troops in the Philippines should, that world-shocking massacre could never have happened. In contemplating this let us comfort ourselves, if we can, with the thought that we were economizing on revolvers.

Cavalrymen need have no fears of abolition as long as we avoid discussions on mounted rifles and devote our time to making ourselves a most urgent necessity to the general in the field by keeping the efficiency of the cavalry arm at the highest point and constantly on the improvement in times of peace by the energy, zeal and hard work of each individual officer.

COLONEL A. L. WAGNER, ASSISTANT ADJUTANT GENERAL.

I think that mounted infantry is all nonsense; I think that cavalry of the old style is an equal absurdity; I believe that the American cavalry of to-day is the best cavalry on earth for the purposes of modern war, and that if we throw away the useless saber, arm our men with a heavy caliber short range revolver for use in the *mille*, and give them the best carbine that can possibly be devised, and teach them to shoot it with the greatest possible accuracy, the whole problem will have been solved.

LIEUTENANT-COLONEL E. D. DIMMICK, SECOND U. S. CAVALRY.

If it shall be proposed that a new arm "mounted rifles" must be added to those already provided, I would most emphatically say no. Mounted infantry may have served its purpose in emergency cases in the Philippines, but I venture to say that it was at a great loss of horses, the interchangeability of infantry duties and cavalry duties for members of those arms, as emergencies may arise would naturally have to be considered under this subject, though it can hardly be taken up for discussion at this time under this review. But let us suppose the "mounted rifles" an accomplished fact, what assurance could we have that the new arm would not become the foot ball of circumstance, equally with existing arms of the service? The necessity for mounted infantry is not pressing when we have sufficient force of cavalry at hand, neither is dismounted cavalry required if there is sufficient force of infantry that can be put into emergency action: these are emergency cases requiring an interchange of the different arms of the service.

The question then would seem to be, do we need a third arm which has not shown its superiority over the two existing arms of the service and which has no distinctive characteristic? I think not. Our cavalry has made a record under almost every condition that is liable to present itself, a record that we can look back upon with pride and satisfaction: even with the wonderful achievement that our cavalry performed during the Civil War, against Indians on the plains, in Cuba, the Philippines, and China, it will not do to feel that we are safe in our position and can rest on our laurels, or we will soon find that we are making progress backwards, and nothing but good, hard, systematic honest work will suffice to maintain our past and present efficiency, and keep up a high standard of discipline. If we bear this well in mind and work together, I don't think we need have any fear of legislation that will have a tendency toward the abolition of our true American cavalry.

COLONEL S. Y. F. BLAKE.

In a letter to the editor of the JOURNAL, S. Y. F. Blake, late commander of the Irish Brigade in South Africa, writes enthusiastically of the work performed by the cavalry in the war in South Africa. We make the following extract from the letter:

"The old and enthusiastic interest that I took in the cavalry in times long gone by is as great as ever. In fact, my

whole heart is now for the cavalry. This long, bloody struggle in South Africa has convinced me that it is cavalry alone that must decide in the great wars to come. I think I can prove that now. I have passed through a war that is unparalleled in history, and I feel that I have not failed to grasp the practical lessons it has taught. * * * The cavalry I love, for the cavalry I will stand, and as a cavalryman I will die, because he is the man that will decide in all great battles. I do not speak thus because I was once in the cavalry service, but because I have passed through a terrible war in which all branches of the service has been hotly tried and the Boer army, all cavalry, has played with the British artillery and destroyed British prestige, and all this too, in open beautiful country especially adapted to infantry and artillery service."

LIEUTENANT-COLONEL W. S. EDGERLY, SEVENTH U. S. CAVALRY.

If I were called upon to correct Captain Morgan's article, I would make the last paragraph read: "The abolition of true American cavalry is *not* likely to be accomplished through our own lack of experience, laziness or ignorance, *nor* by legislation," for I have a high opinion of the American people and their representatives, and do not believe they can be induced to dispense with cavalry until the time comes when there are no "wars or rumors of wars." The cavalry is everything that is claimed for the mounted rifles and more. The "more" is what the theorists want to get rid of.

Because the Boers, who were raised on horseback, with rifles in their hands, did magnificent work at times, is no more a reason why we should adopt their methods than the fact that Geronimo's men, fleet of foot and strong of lung, ran all around our horsemen and did perfectly brilliant work, should make us dismount and use Apache tactics. The U. S. cavalry is not on the defensive. It has been tried in every kind of fighting; its officers have been called upon to perform duties almost infinite in variety, and the results are such that to-day every American cavalryman has reason to be proud of his regiment and arm of the service.

Cavalry charges with drawn sabers are now out of date, excepting in peculiar emergencies, but there are times when a mounted command must come in touch with the enemy.

The number of shots in any pistol is limited, and comparatively few men are sufficiently expert to reload during the *mêlée*. When the pistol has been emptied after contact with the enemy, is the time that the trusty blade, "always

loaded," comes into play and gives the soldier the confidence he could never feel with only an empty gun.

I believe that what we of the cavalry have to do to insure our existence as cavalry is to prove by good work, at all times, that we are worthy of the reputation the U. S. cavalry has already gained, and I have perfect confidence that with the officers we now have, the standard of excellence will not be lowered.

THE RIFLES.*

The Rifles are my soul's delight,
They talk so sweet and smile so bright;
It seems like sunny noon at night—
When I am with the Rifles.

They used to come 'most every day,
Sometimes to talk, sometimes to play;
How rapidly Time flew away—
When I was with the Rifles.

I used to to my window creep
When reveille roused me from my sleep,
And shyly through the curtain peep,
To see the darling Rifles.

And when the morning roll call o'er,
Each disappeared within his door,
I hopped in bed to dream once more
That I was with the Rifles.

*These verses are contributed by Captain B. W. Atkinson, Sixth Infantry. They were written in 1846 by Captain J. R. B. Gardener, First Infantry, a graduate of 1822, and dedicated to Miss Annie M. Walker, daughter of the late Major and Paymaster Benjamin Walker, U. S. Army, who was one of "the earliest inhabitants" of Fort Leavenworth. The "Rifles" are now the Third Cavalry. The verses were sung to the then old familiar air, "Oh, Mary, When the Wild Wind Blows."

THE FORT RILEY MANEUVERS, 1902.

EXTRACTS FROM THE REPORT* OF COLONEL A. L. WAGNER, ASSISTANT
ADJUTANT-GENERAL, CHIEF UMPIRE.

THE following named officers were directed to report to me as assistants:

Colonel J. A. Augur, Tenth Cavalry.

Lieutenant Colonel S. C. Mills, Inspector General U. S. Army,

Major John G. D. Knight, Corps of Engineers.

Major H. M. Andrews, Artillery Corps.

Major M. M. Macomb, Artillery Corps.

Major W. D. Beach, Tenth Cavalry.

Captain D. Du B. Gaillard, Corps of Engineers.

Captain A. S. Rowan, Nineteenth Infantry.

Captain B. Alvord, Twentieth Infantry.

Captain H. C. Hale, Twentieth Infantry.

Captain W. M. Wright, Second Infantry, A. D. C.,

Captain H. G. Learnard, Adjutant, Fourteenth Infantry.

Captain M. H. Barnum, Eighth Cavalry.

Captain L. M. Fuller, Ordnance Department.

Captain W. Chamberlaine, Artillery Corps.

I desire here to express my obligation to all of these gentlemen for the able, energetic and valuable assistance which they rendered me, and which contributed greatly to the success of the maneuvers.†

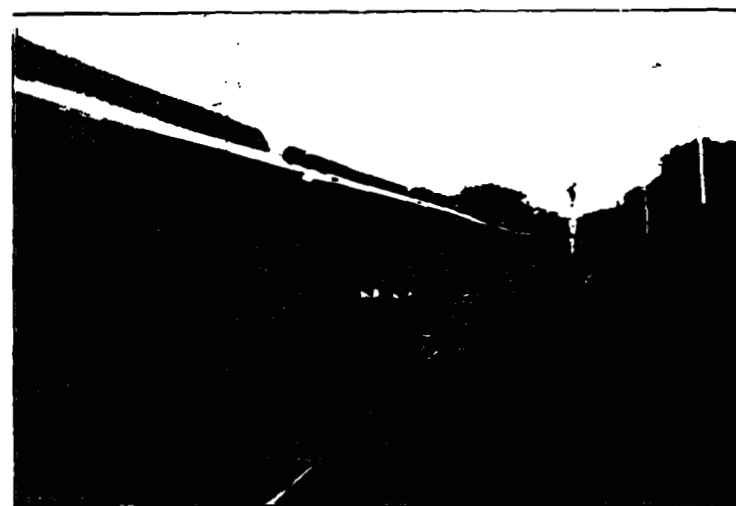
*It is found impracticable to publish the report in full, on account of lack of space. The extracts are limited almost entirely to the portions of the report relating to the movements of the cavalry, and do not embrace the whole scope of the problems or of the comments thereon, or the most interesting parts. It is unfortunate that there is not enough space available in the JOURNAL to print the entire report, for it is concise, complete, interesting and instructive throughout.—[Editor.]

†Here follows more at length a description of the assignment of umpires and their work.—[Editor.]

FORT RILEY MANEUVERS.

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A meeting of the umpires was held on the evening preceding each exercise, when the plan of the problem was discussed, arrangements were made for proper supervision, and final instructions were given for the following day. The rules governing the exercises and prescribing the duties of the umpires were furnished each umpire, as well as the orders subsequently issued supplementing or emphasizing the general rules already prepared. The original rules were compiled from those formerly used at the U. S. Infantry and Cavalry School at Fort Leavenworth, and at the Cavalry and



ARRIVAL AT FORT RILEY.

Light Artillery School at Fort Riley. In the main they were found to be very satisfactory. Some slight amendment will, however, be necessary, as is noted in another portion of this report. Immediately after the conclusion of each exercise the chief umpire and the two senior umpires met on the field for consultation, being joined by such other umpires as were available. The extent of the ground covered by the maneuvers did not render it practicable in every case to assemble on the field all the umpires, but each submitted a written report to the senior umpire of the forces with which he was

operating, who in turn rendered a similar report to the chief umpire, who submitted a report, accompanied by those of the senior umpires, to the adjutant general of the division. As soon as it was practicable for the division commander to assemble the officers for discussion, they were assembled in the large tent used for the general mess and assembly purposes, where the reports of the commanding officers of the opposing forces (which were submitted to the adjutant general of the division) and that of the chief umpire were read. An opportunity was then given to each officer present who had participated in the exercise to make such explanatory statements as he might desire to offer, and a discussion of professional matters brought into prominence in the course of the maneuvers was invited. The decision of any umpire at any of the maneuvers was not allowed to be questioned on the field, but any officer dissatisfied with such a decision was authorized to submit a dissenting statement, with full assurance that it would receive careful and respectful consideration. It is gratifying to be able to say that the expressions of dissent were very few, and in no case relative to any important point. It may be pertinent here to remark that the cordial good will, earnestness, sense of soldierly duty and spirit of hearty cooperation shown by all the officers connected with the field exercises constituted one of the most striking and gratifying features of the entire encampment.*

The exercises were conducted in detail as follows, the description of the conduct of the maneuvers and the comments thereon being essentially the same as in the report submitted by me after each exercise:

PROBLEM NO. 1.—SEPTEMBER 24, 1902.

GENERAL SITUATION.

An army corps (Blue) consisting of two divisions moving north, via Emporia and Junction City has arrived at Fort Riley.

*Here follows a description of the call for assembly of umpires and the signal announcing the termination of an exercise.—[EDITOR.]

An opposing force (Brown) consisting of two corps is moving south on "parallel" roads through Clay Center and Garrison.

The opposing forces are as follows:

Blue, real, three regiments (including one battalion engineers) infantry, one squadron and three batteries. The rest of the corps is imaginary.

Brown, real, one battalion, two squadrons, two batteries. The rest of the Brown force is imaginary.

The Brown is assumed to have a preponderating force of cavalry, so that the cavalry force of the Blue is restricted to patrolling, and is not able to make any aggressive reconnaissances to the front.

SPECIAL SITUATION.

Blue.

The corps commander learns, through reconnaissance, of the near approach of the Brown force, consisting of two army corps, one of which is reported approaching via Riley Center and the Governor Harvey Road, toward Vinton; the other via Keats upon Ogden or the Milk Ranch, or both.

The commander of the Blue gives the following order:

HEADQUARTERS BLUE ARMY.

FIELD ORDERS, FORT RILEY, KANSAS, Sept. 24, 1902.
No. 1.

I. The enemy is advancing from the north. His force consists of two army corps, and is apparently converging upon Fort Riley for attack. Their scouts have been seen on the Governor Harvey Road and upon the Keats-Ogden Road. It is probable that one corps is advancing toward Vinton and the other upon Ogden or the Milk Ranch, or both.

II. This command will assume a defensive position with a view to protecting Fort Riley and awaiting further developments.

III. The defensive position will, unless orders be given to the contrary, be on the line of defense of the outpost.

IV. The outpost will be strengthened and will be established with its line of defense extending through Morrit Hill to such points on the right and left as will enable it to guard the Governor Harvey, Milk Ranch and Ogden Roads.

V. The outpost will be under the command of Colonel Miner, and will consist of:

Sixth Infantry,
Eighteenth Infantry,
First and Second Battalions, Twenty-second Infantry,
First Battalion, Engineers,
Second Squadron, Fourth Cavalry,
Nineteenth, Twentieth and Twenty-eighth Batteries, Field Artillery.

By command of Major General Blue:

JAMES GREENE,
Assistant Adjutant-General.

Memorandum for the Commander of the Blue:

The outpost will be expected to be completely established by 12 M.

SPECIAL SITUATION.

Brown.

The Brown commander learns of the presence of the Blue at Fort Riley. The strength of the Blue has been variously reported; the lowest estimate being one, and the highest three divisions. The position of the Blue has not been definitely ascertained, further than that it is at Fort Riley. Instructions are given by the commander of the Brown for the First Corps to move by the Governor Harvey Road upon Vinton, and the Second Corps via Keats upon Ogden and the Milk Ranch. As a preliminary, the following order is given for a reconnaissance in force:

HEADQUARTERS BROWN ARMY,
STOCKDALE, KANSAS, September 24, 1902.

FIELD ORDERS, }
No. 1. }

I. The enemy is reliably reported to be at Fort Riley, in strength not less than one nor more than three divisions.

II. A reconnaissance in force will be made on the Governor Harvey Road from Riley Center and on the Ogden and Milk Ranch Roads from Keats to develop the enemy's position.

III. The force from Riley Center will consist of the Third Battalion Twenty-second Infantry, First Squadron

Fourth Cavalry, and the Seventh Battery Field Artillery, and will be under the command of Lieutenant-Colonel Stedman, Fourth Cavalry.

The force from Keats will consist of the First Squadron Eighth Cavalry, and the Sixth Battery Field Artillery, and will be under the command of Major Stanton, Eighth Cavalry.

The two reconnoitering forces will unite near Fort Riley for their demonstration against the enemy's position.

By command of Major-General Brown.

B. E. WHITE,
Assistant Adjutant-General.

Memorandum for the Commander of the Brown:

The forces designated for the reconnaissance will move out beyond the reservation line as soon as practicable after daylight. The force supposed to come from Riley Center will be on the Governor Harvey Road, and the one supposed to come from Keats will be distributed on the Milk Ranch and Ogden Roads. The attack upon the outpost will begin at 1 P. M.*

* * * * *

COMMENTS.

The cavalry organizations were, in general, well handled by the troop commanders. The mistake of not being pushed well in to develop the Blue position is one for which the commanders of the different troops were not responsible.

PROBLEM NO. 2.—SEPTEMBER 25, 1902.

Advance Guard and Rear Guard.

For the Blue:

The Sixth Infantry will march from the point where the One Mile Creek is crossed by the Ogden Road, along the said road to Three Mile Creek, and thence to Wilson's Ranch.

The Eighteenth Infantry will march from the Pumping Station, along the Republican River bottom, to the Governor Harvey Road, and thence north to Estes' Gate.

*Here follows a full report of the movements of all the organizations in minute detail and comments thereon, from which only a short extract is given.
—[EDITOR.]

The Twenty-Second Infantry will march from Fort Riley (at the Hay Sheds) through Pump House Cañon to Morris Hill.

The march will be assumed to be in a hostile country, and all precautions will be taken accordingly. The march of each column from its designated station will begin at 9 A. M.

Upon reaching its objective, each column will halt one hour for luncheon and will then take up its march to Fort Riley. The return march will be assumed to be a retreat in a hostile country and the formation will be made accordingly.

The operations of each regiment will be totally distinct.

For the Brown:

Troop A, Fourth Cavalry, will proceed to Wilson's Ranch, and will move therefrom to harass and delay the march of a Blue column reported to be moving from Fort Riley via the Ogden Road to Wilson's Ranch.

Troop B, Fourth Cavalry, will proceed to Estes' Gate, and will move thence along the Governor Harvey Road to harass the advance of the Blue column reported to be marching to Estes' Gate from Fort Riley.

Troop C, Fourth Cavalry, will proceed to the vicinity of Morris Hill and will move therefrom to harass the advance of a column reported to be marching from Fort Riley via Pump House Cañon in the direction of Morris Hill.

The Brown troops will not begin their movement against the Blue forces earlier than 9:30 nor later than 9:45 A. M.

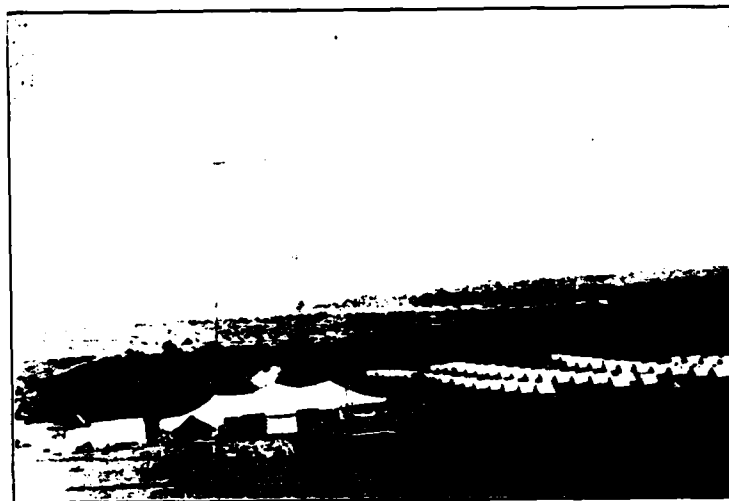
After the halt of the Blue columns for luncheon and the resumption of their march in retreat to Fort Riley, the troops of cavalry will, in each case, endeavor to harass and cut off the rear guard. This operation on the part of the Brown will not begin until after the Blue column, in each case, including the rear guard, has fully begun its march. During the halt of the Blue columns, the Brown detachments will withdraw out of sight for a similar halt.

The operations of these troops will be distinct, each one being concerned only with the problem specifically assigned it above.

Memorandum:

The Brown troops are not to hurry along the route to seize a position, but are to take from the beginning all the precautions that would be taken in a march in a hostile country against a force whose whereabouts is unknown further than that it is marching on a certain road.

This field exercise consisted of the simultaneous march of three columns each consisting of one regiment of infantry.



HEADQUARTERS CAMP.

the march being assumed to be in a hostile country, and the advance being opposed in each case by one troop of cavalry.

The Sixth Infantry left One Mile Creek at 9 A. M., with an advance guard of two companies and a rear guard of one company, and reached the junction of the Ogden and Wilson's Ranch Roads at Three Mile Creek at 9:45 A. M. At about 400 yards beyond this junction, the point, which had reached the crest of a hill, was fired on from the front. The commander of the advance guard went to the point and deployed his advance guard 150 yards below the crest. But two shots were fired at the point. The deployed line then advanced and was fired on about five minutes later by a Brown troop

at a range of about 800 yards. It replied by squad and company volleys, and continued the advance. Twenty-two men of the Brown, mounted, then appeared in plain view on a slope within a range of 800 yards; they were withdrawing rapidly, but were fired upon by both companies for one minute. At the same time a squad of Brown, on the Brown right, fired at the Blue left at the same range or less. The Brown now disappeared from the front and the march was resumed and continued until 10:55 A. M., when the signal for the suspension of the exercises was sounded, the ammunition of the advance guard having been exhausted, and it being evident that under conditions of actual warfare the Brown troop would have suffered so severely as to be unable to continue further operations against the advancing column.

The following comments on this portion of the exercise are made: The commander of the advance guard withdrew the point and deployed his entire advance guard some distance below the crest. It would have been better, under the circumstances, to have reinforced the point where it was and deployed just below the crest. No other comment is made on the handling of the advance guard, except that it should have made more rapid progress. The column marched only a mile and a quarter in an hour's time. The Blue column was adjudged to have lost twelve men and the Brown to have lost twenty-two.

The manner in which the commander of the Brown cavalry troop handled his men is deserving of the highest praise. It was to be expected that so small a force opposed to so large a column would in the course of its operations be practically used up, but the manner in which he disposed of his small troop, consisting of only thirty-two men, was admirable, and gave a fine illustration of the ubiquity of well mounted, well trained cavalry. This troop appeared in squads at different points at different times in such a manner as to give the impression that it was very much larger than it really was.*

*Here follows a description of the second part of the exercise and the general comment on the day's problem.—[EDITOR.]

PROBLEM NO. 3.—SEPTEMBER 26, 1902.

*Advance Guard and Rear Guard.**

The patrol work of the cavalry on both sides was, in this exercise, most efficient.

The moving of a Brown troop of cavalry by the flank and in column under a heavy fire of artillery and infantry was altogether wrong.

The massing of two troops of Brown cavalry in a draw under fire at about 600 yards from a Blue battalion of infantry was an error. The cavalry force and the light battery, with above exceptions, were, however, admirably handled.

The small size of the cavalry troops was on this occasion, as on the day before, a matter of much disappointment. A cavalry troop numbering less than forty is too small a force to accomplish much by itself, and it is to be regretted that on the occasion of such exercises as these the troops cannot be raised to their full war strength, even though it might cause the temporary detachment of troopers from organizations at other posts.

PROBLEM NO. 4.—SEPTEMBER 27, 1902.

Advance Guard of a Division and Deployment of a Division for Battle.†

Defects were noted in the transmission of orders, and the lack of a staff of suitable size and a sufficient number of orderlies undoubtedly hampered both commanders severely in their operations. It is recommended that in future commanding officers of the different forces be provided with an

*Here follows the problem, which is on a large and more extended scale than the preceding problem. The discussion is also omitted, and of the comments only the following ones relating exclusively to cavalry are taken.—[EDITOR.]

†Here follows a very interesting problem discussed at length. Of the comments only those relating to mounted orderlies are given here.—[EDITOR.]

ample staff and sufficient orderlies to enable them to transmit their orders without difficulty.

PROBLEM NO. 5.—SEPTEMBER 29, 1902.

*Contact of Opposing Forces.**

It was repeatedly noticed in this exercise that there was inefficient service on the part of orderlies in delivering messages. The orderlies did not seem to understand in every case to whom the message was to be delivered, or where the officer for whom it was intended was to be found. A marked instance occurred when a message for the commander of the Blue was delivered to the chief umpire. When informed by him that it should be delivered to the Blue commander, who was mentioned by rank and name, the orderly started back to the point whence he came, and there is good reason to believe that the message was never delivered.

PROBLEM NO. 6.—OCTOBER 1, 1902.

Attack and Defense of a Convoy.

GENERAL SITUATION.

An army (Blue) operating southwest from Salina, Kansas, with headquarters at that point, receives its supplies from Topeka as a base. The railroads are assumed to be broken up and supply by wagon train is supposed to be necessary. One of the trains conducting supplies from Topeka to the army has encamped at Ogden.

A raiding force (Brown) has circled around the front of the Blue army and has appeared in the vicinity of Westgate Postoffice, where its commander learns that the train, with its escort, has camped at Ogden. He makes his preparations to attack this train at some point on the Fort Riley reservation, with a view to inflicting upon it as much damage as possible.

*Here follows a problem given in full with thorough discussion and comments, of which only the following can be inserted.

SPECIAL SITUATION.

Blue.

An army (Blue) operating southwest from Salina, Kansas, with headquarters at that point, receives its supplies from Topeka as a base. The railroads are assumed to be broken up and supply by wagon train is rendered necessary. One of the trains conducting supplies from Topeka to the army is encamped at Ogden, where the commanding officer of the escort learns that there is a large hostile raiding force at some point south of the Kansas River, not many miles away, the exact location unknown. He makes the ordinary preparations for guarding his train in its progress. He finds that the direct road to Fort Riley, after crossing Three Mile Creek, is in an impassable condition: he accordingly proceeds along the Ridge Road.

The Blue force is as follows:

Sixth Infantry.

Twenty-second Infantry.

Seventh Battery, Field Artillery.

Troops A and B, Fourth Cavalry.

The Blue force is at the point where the Ogden road crosses Three Mile Creek; the time of starting, 9 A. M.

The wagon train is supposed to consist of 180 wagons, moving in single column, the line of wagons being two miles long. In reality, it consists of all the wagons available at Fort Riley, as well as the caissons of the batteries not employed in the exercises.

The commanding officer of the escort has orders to arrive at his destination with the least possible delay, as the stores are much needed by the troops at the front.

SPECIAL SITUATION.

Brown.

An army (Blue) operating southwest from Salina, Kansas, with headquarters at that point, receives its supplies from Topeka as a base. The railroads are assumed to be broken up and supply by wagon train is rendered necessary. One of the trains conducting supplies from Topeka to the army is encamped at Ogden.

A raiding force (Brown) has circled around the front of the Blue army and has appeared in the vicinity of Westgate Postoffice, where its commander receives information of the presence of a Blue convoy at Ogden. He accordingly makes preparation for attacking it at some point on the Fort Riley reservation. He has ascertained from his scouts that the direct road from Ogden to Fort Riley is impassable between the Three Mile Creek and the immediate vicinity of Fort Riley, and that the train cannot take that road.

The Brown force consists of:

Troops C, D, E, F, G and H, Fourth Cavalry.

First Squadron, Eighth Cavalry.

One platoon Sixth Battery, Field Artillery.

The actual starting point of the Brown force is the Pump House, Republican River flat. The time of beginning the movement, 9 A. M.

The Blue convoy left its designated station at the crossing of Three Mile Creek and the Ogden Road promptly at 9 A. M. The train was divided into two divisions of four sections each, thirty-eight wagons in the first division and forty-nine in the second division. Each division was divided as nearly as practicable into sections of ten wagons each, the last sections alone containing less than this number. A pack train consisting of eight men, mounted, and twenty-one pack mules, was also in the second division. The disposition of the convoy was as follows:

Advance Cavalry:

Troops A and B, Fourth Cavalry.

Advance Guard:

First Battalion Sixth Infantry.

Flank Guard:

One battalion Sixth Infantry, two companies being on each flank of the first division of the train.

First Division of Train:

Reserve:

One battalion Sixth Infantry.

Seventh Battery Field Artillery.

First Battalion Twenty-second Infantry.

Second Division of Train:

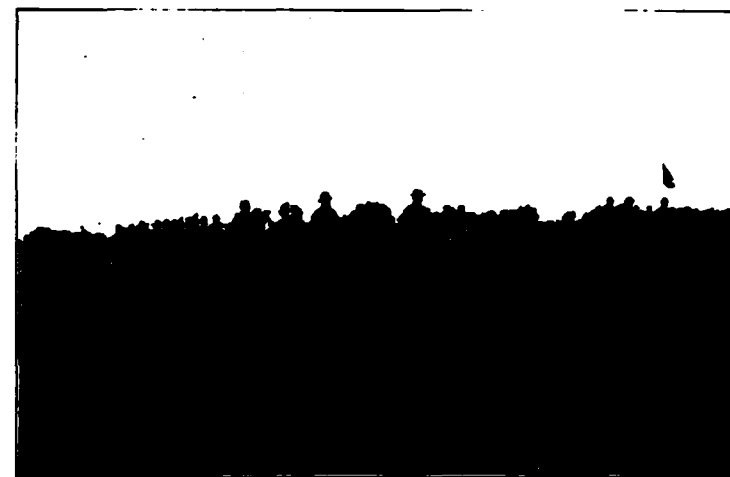
Flank Guard:

One battalion Twenty-second Infantry, two companies on each flank.

Rear Guard:

One battalion Twenty-second Infantry.

In the advance cavalry, one troop, throwing out advanced guard, flankers and supports, moved up Forsyth Cañon, followed by a platoon of infantry, while the second troop moved up the Ridge Road well preceded and covered by its advance



LIGHT BATTERY READY TO START.

guard and flankers. The advance of this cavalry continued rapidly, the first troop working to the high ground of Forsyth Cañon, while the second covered the ridge to the front and left, the orders of the advance guard being to pay no particular attention to the right and right front.

The Brown commander had assembled his forces at the designated rendezvous, and moved from the Pump House Station at 9 A. M. Of his ten troops of cavalry, two (C and D, Eighth Cavalry), were assigned to the right flank at the beginning of the movement. Two troops (C and D, Fourth Cavalry), after getting out of the cañon, were to move to the

left front, and a platoon of artillery, preceded by one troop, was to continue up the draw followed by the rest of the command. At 9:40, 9:41 and 9:45 the Brown commander received reports from three patrols on the right flank to the effect that the wagon train had taken the Ridge Road. The command moved forward and first drew the fire of the Blue artillery at 9:43. At this time the Blue advance guard had opened fire on cavalry at Morris Hill. The Brown commander had given general directions for the artillery position, and had ordered four troops to gain the ridge in front of the Ridge Road, concealing themselves and endeavoring to get on the flank of the convoy.

The Blue artillery, as already mentioned, went into action at 9:43. Its position was about 500 yards east of Saddle Back. The fire is reported at different objectives: at 1,100 yards across Forsyth Drive at skirmishers, and then at two guns at 2,000 yards range to southwest on ridges north of Morris Hill; at 1,300 yards range upon Brown cavalry, mounted, and moving by flank to the left and rear of the head of the train, and again upon cavalry in column taken in flank at 2,000 yards.

The Brown artillery came into action at 9:55, it having taken up a position on the reverse slope of Morris Hill, from which point it opened fire upon the head of the train with percussion shrapnel. The train here presented a fine target at 2,100 yards, this range being determined by range finder. Fire was continued for twelve minutes, when the target was changed to the Blue battery, which had opened fire as already mentioned. The Blue train at this point presented a distinct target, and under conditions of actual warfare would have suffered very severely. Instead of pushing on rapidly or turning to the right to gain the shelter of the hill, it remained halted, as if inviting the enemy's fire. The people about the train seemed at a loss to know what to do; and urgent and anxious inquiries were made for the quartermaster, as though under actual fire any particular person would be sought to extricate the train from such a dilemma. As a result of this fire, three out of the four sections of the first division of the train were ruled out.

The Blue battery on this occasion took up a position where its fire was masked by the wagon train standing in the road. It was thus prevented from firing, and in the meantime it was in a position where it must have caught all the projectiles that passed through the train. An opportunity was presented here, the moment the Brown artillery was sighted, for the Blue battery to take a position on the Saddle Back to the left and front of the train, from which a fire could have been opened with six guns upon the two guns of the Brown, which must then have been speedily put out of action. As it was, they were allowed for some time to work their unmolested will upon the train. The train was finally directed to move to the right and take shelter of the hills, and after this unfortunate incident there was no more unnecessary exposure.

The Blue battery fired for four minutes on the Brown artillery (10:11-10:15). At 10:19 it opened at a range of 800 yards on the right flank of the Brown cavalry. At 10:23 it fired on mounted cavalry coming down the road from the north at about 600 yards, and at 10:30 against dismounted cavalry advancing in line of skirmishers about 200 yards to the west. At 10:31 it fired four shots at 800 yards, against a cavalry column of thirty men. At 10:39 the battery moved northwest about 800 yards, and took position facing nearly west. At 11:04 it fired eighteen rounds of shrapnel on cavalry, mounted, moving on a ridge to the west at 2,950 yards. At 11:09 it fired ten rounds on dismounted cavalry, coming over the hill to the west at 2,000 to 2,200 yards. At 11:12 it took position by moving west 800 yards, and opened on Brown—two guns—which got in three shots on the Blue battery. While taking this position at a range of 2,100 yards (at 11:15) the Blue artillery ceased firing, but almost immediately resumed it at a cavalry skirmish line. At 11:30 the battery moved west along the ridge, but fired no more. The total loss to the Blue artillery was decided to be one gun, and one caisson unfit to move from casualties to men and animals.

In the meantime the action of the Blue cavalry was as follows: At 10 A. M. the Blue troop on the right, neglecting an

excellent opportunity to use dismounted fire against a mounted Brown squadron, near Hay Camp Spring, at 500 yards range, withdrew to its horses at a run, mounted and moved down and across Forsyth Cañon. Having crossed the cañon, it dismounted and (at 10:12) fired six volleys at a Brown squadron at 600 yards, while the latter was moving north at a trot. The one flanking patrol of the Brown at this point was not over 150 yards from the column, yet seemed unaware that it was under fire. This squadron, eight minutes later, crossed the Blue front, turned east, and detaching one troop (G, Fourth Cavalry), charged it, mounted, against the two troops of the Blue which had united and were now dismounted and deployed. The latter, dismounted and in position, opened a rapid and effective fire upon the mounted cavalry, and the Brown troop was ruled out. At 10:22 a second Brown troop (F, Fourth Cavalry), was detached from the squadron, and while mounted was caught by the fire of dismounted cavalry at 300 yards, and lost ten men. Eight minutes later the rest of the troop was caught on the bluff west of White's Ranch Road under fire of two companies of Blue infantry and the advance guard at 400 yards range, and all of the troop was then ruled out. At 10:35 two companies of infantry of the advance guard having moved directly west on the road were charged home in front by a third troop of the Brown squadron with sabers. The Brown cavalry was received with a heavy fire, and the Blue infantry fixed bayonets. In this case the troops came into actual contact, but without any accident resulting therefrom. The Brown troop was ruled out. This charge was immediately followed by that of another troop, echeloned on the first, against a company of Blue infantry deployed on the left of the ones above mentioned. This troop was also ruled out. The forward movement of the Blue now continued.

The disposition of the Brown forces at the beginning of the engagement has already been noted. The action of the different portions of the command is reported in detail as follows:

The two troops composing the left flanking party moved up the west branch of the Pump House Cañon. At 9:32 a troop of Blue cavalry was sighted moving east at 2,000 yards

range. One troop of the Brown was pushed up to about 700 yards north of Morris Hill, where it was dismounted to fight on foot. The other troop was thrown out to the west to engage the Blue scouts reported in that vicinity. The troop north of Morris Hill remained in this position until 10 A. M., when it moved up to a more advanced position, where it was combined with a troop of the Second Squadron, Fourth Cavalry, which was now on its right. At about 10:30 the troop (D) was withdrawn under cover and united with Troop C.



LIGHT BATTERY UNDER COVER.

which had been on the extreme left. The two troops were moved up to the most advanced position held by the Brown, reaching there just as the signal was given to suspend the exercise.

At 9:50 A. M. the Second Squadron, Fourth Cavalry, diverged to the left from the main body. The squadron commander expected to have his left flank protected by the two troops that he had already sent out, and in case they should come together he was authorized to include those troops in his command. He moved forward rapidly, taking advantage of the cover afforded, using patrols on his left and front. At 10 A. M. the column was in a draw about 250 yards

from the crest of the slopes on the left, when his patrols were fired upon and driven in by Blue forces. At 10:03 he dismounted and deployed three troops and opened fire upon Blue patrols, causing them to retire. At 10:05 he withdrew the three troops and mounted, proceeding rapidly in a northerly direction. At 10:14 his scouts reported Blue forces about 800 yards to the right. At 10:15 two troops of Blue cavalry were seen about the same place, but immediately retired. Taking advantage of this, the commander of the Brown squadron moved forward rapidly, got into a draw and turned to the east, and shortly after was fired upon by an unseen enemy at short range. He mounted one troop to the right and formed rapidly. His subsequent action in charging dismounted Blue forces has already been noted in connection with the operation of the Blue. At 10:50 the commander of the Brown squadron placed a platoon of one of the left troops in position, dismounted, and delivered a reverse fire upon a mounted deployed force of Blues going north at about 900 yards range. The Blue force should have been ruled out, but it continued moving slowly toward the north. The remaining cavalry continued to operate on the left flank, and soon came in contact with an opposing force of Blues. An engagement continued for some time, but before a decision was reached the signal for the cessation of the exercise was sounded.

The movements of the right flanking column, consisting of the two troops, were as follows:

The advance guard was deployed at once. At 9:17 a messenger came up to the detachment commander with verbal orders, but did not know the name of the officer who sent him. At 9:21 two patrols were sent out, one to the left along Sheridan Heights and the other to the front. The enemy was first sighted at 9:34. At 9:30 the two troops of the right flanking party separated. At 9:41 the right troop (D, Eighth Cavalry) dismounted and fired volleys at the head of the convoy, and later at the Blue battery. Its fire undoubtedly would have had considerable effect, as it had a commanding position and was within about a thousand yards of the Blue battery and the advanced wagons. The com-

mander of this troop reports that he was not fired upon for about three quarters of an hour, during which time he moved about 300 yards closer and could, undoubtedly, have caused the convoy much loss. A company of infantry was finally sent against him, but he remained in this position until the signal for the cessation of the exercises was sounded. During most of the time there was no umpire with this troop. The left troop (C, Eighth Cavalry) dismounted at 9:46 and fired on the Blue infantry and artillery, which had come into action, their limbers and caissons being in plain view. This troop continued to move to the left, dismounting and firing from ridges from time to time. At 10:20 volleys were fired at dismounted infantry. At 10:26 a Blue patrol, consisting of a corporal and three men, was captured by the Brown. From 10:30 to 10:45 the troop still remained dismounted. At 10:50 it was under fire from infantry at 800 yards, and lost two men. At 11:03 the troop was under fire from artillery, and lost three men. At 11:06 the troop dismounted and fired volleys into a Blue troop, mounted, at about 600 yards, and would have inflicted considerable loss. The troop had now moved to the left until it came under the immediate command of the Brown commander, who (with Troops A and B, Eighth Cavalry) was with the artillery platoon. The signal for the cessation of the exercise was now sounded.

The senior umpire with the Brown comments as follows:

"The disposition of the Brown forces was considered proper, but the case was forcibly presented of the operations of separated commands resolving themselves into a series of combats by the subordinate commanders, according to the varying phases of the action. The flank movement of the detached Brown was rapid, but without the ordinary precautions to discover what was on its flank and to the front; and, violating this principle, it unexpectedly ran into a superior force of infantry and dismounted cavalry and was put out of action, thereby nullifying its intended operations. It is believed that with proper precautions this force could have withdrawn without serious loss and resumed its harassing movement on the left flank. Entire touch with the left flanking column was lost. It is believed that the left flanking column should have given proper support and extended its movements to correspond with that column."

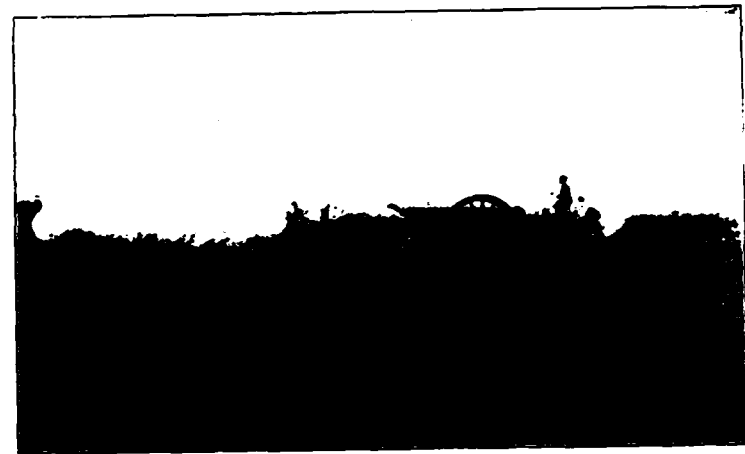
On the whole the dispositions of the Blue forces were good, the only serious mistake being the movement of the train over a high ridge within effective range of the enemy's artillery. This could and should have been avoided. Knowing that the enemy was reported in the vicinity of the train, and that he was naturally to be expected in the direction from which he actually came, the train should have been kept as well concealed as possible behind the hills. If necessary to move out along the ridge it would have been practicable to send forward to ascertain whether there was any force of the enemy within sight and within range. If, as seems probable, this could have been ascertained by mere view, the artillery should have been ready to go into action at this point to protect the train.*

* * * * *

The error of the Brown squadron moving past the Blue front without having flankers well out, has already been noted. The action of the cavalry on four occasions in charging, mounted, upon unshaken infantry or dismounted cavalry, deployed to receive it with heavy fire, cannot be too severely condemned. There are only three cases where cavalry is justified in making a frontal charge upon intact infantry: 1. When the infantry is out of ammunition; 2. When it is necessary at all hazards to check the advance of infantry, and the cavalry is thrown in as a deliberate sacrifice for the protection of the rest of the troops; 3. When the infantry is known to be composed of raw troops, and it can reasonably be expected that the moral effect of the charge will be so nerve-shaking and disconcerting to them as to render their fire ineffective and to cause them to break before they can do much damage to the charging force. In all other cases the cavalry should endeavor by its superior mobility to get into a position where it can surprise the infantry and charge it in flank, or where, taking advantage of cover and having its horses well concealed and protected, it can open fire upon the infantry and withdraw rapidly, if unable to cope with the opposing force.

*Here follow some comments on the management of the vehicles in the train.—[Editor.]

The instructions given to the Blue commander were to push on as rapidly as possible, as the stores were much needed by the army in front. The train seems to have been unnecessarily delayed, and in about three hours it advanced only about two-and-a-half miles. The decision of the chief umpire is that the Blue force lost thirty-five wagons or about forty per cent. of the entire train. In addition to this, the horses of a gun and caisson were put out of the fight. This would have necessitated the detaching of a team from at



LIGHT BATTERY IN ACTION.

least one wagon for the purpose of hauling off the gun and caisson. Under the conditions of the problem, all the wagons were loaded, and the stores in wagons lost through damage to themselves or their teams would have had to be destroyed as the only alternative to their falling into the hands of the enemy. The army supplied by the convoy would thus have lost the contents of thirty-six wagons in addition to the loss of the teams and wagons. In case the contents of some of the damaged wagons were more of value or more urgently needed than the contents of others which remained intact, a delay would have been necessary for the transfer of the loads.

On the part of the raiding force its losses were so heavy and it had been so badly punished that it would have been

compelled to withdraw, and the Blue column could have continued its march with the remaining wagons without further molestation.

There is occasion again to comment upon the careless manner in which messages have been delivered at different times by orderlies. It is very rarely that a case is so extremely urgent that an officer cannot spare the time to ask the question, "Do you know the officer to whom you are to deliver this message?" "Do you know where you will probably find him?" If the messenger cannot answer these questions, he should be informed of the name, rank, location and appearance of the officer as nearly as the officer sending the message can inform him. He should then be required to repeat the message. The few moments of time required by this would in general be very well spent: for an incorrect message delivered to the person for whom it is intended, and a correct message delivered to a person for whom it is not intended, are both likely to be misleading and may produce calamitous results.*

* * * * *

PROBLEM NO. 7.—OCTOBER 2, 1902.

Outpost Exercises, Regulars and National Guard.

This will consist of three separate exercises, each embracing the employment of a regiment as an outpost for an imaginary larger command. A regiment of regulars will, in each case, establish the outpost, the officers of the National Guard accompanying the commander as spectators. Each outpost will, as soon as it is completely established, be relieved by a National Guard regiment. When the National Guard outposts have been established, an outlined enemy, consisting of a small force of regular troops, will simulate an attack, and the outposts will make the necessary preparations for defense.†

*Here follow some comments on the use of flags with batteries and the use of whistles for giving signals. Also some remarks on the giving out of "diagnosis tags."—[Editor.]

†Here follow the description of the exercise, the discussion and the comment on the same.—[Editor.]

PROBLEM NO. 8.—OCTOBER 6, 1902.

Attack and Defense of a Position.

GENERAL SITUATION.

A Western force (Blue) is operating against an Eastern force (Brown) to the northeast of St. Mary's, Kansas. The Western force relies upon the Union Pacific Railroad for supplies. The main Blue force beyond St. Mary's has met with a serious reverse and has been temporarily thrust off its line of direct communication with Fort Riley.

SPECIAL SITUATION.

Blue.

Major Leach is guarding the important depot of supplies at Fort Riley. Owing to the serious check of the main Blue force beyond St. Mary's, assistance from other detachments cannot be counted on. A strong force of Browns composed of all arms is reported to be advancing via Stockdale upon Fort Riley. The force at Fort Riley is as follows:

Sixth Infantry.

First Battalion of Engineers (acting as infantry).

Troop A, Eighth Cavalry.

Sixth and Twenty-eighth Batteries, Field Artillery.

The commanding officer strengthens his position with hasty intrenchments. One Mile Creek is supposed to be an impassable river, and the ground east of the creek, as far north as the reservation line, to be rugged and impracticable for the operation of troops. The Blue will be in position at 7 A. M.

SPECIAL SITUATION.

Brown.

A force of Blues which relies upon the Union Pacific Railroad for supplies has met with a serious reverse near St. Mary's, and has been temporarily thrust off its direct line of communication with Fort Riley. Availing himself of this situation the commanding officer of the Brown determines to send a force to seize the important depot at Fort Riley. One Mile Creek is supposed to be an impassable river, and the

ground east of the creek, as far north as the reservation line, to be rugged and impracticable for the operation of troops.

FIELD ORDERS,
No. 1.

Distribution of troops:

Eighteenth Infantry,
Twenty-second Infantry,
First Kansas N. G.,
Second Kansas N. G.,
Colorado Battalion,
First and Second Squadrons, Fourth
Cavalry,
Troops B, C and D, Eighth Cavalry,
Seventh, Nineteenth and Twentieth
Batteries, Field Artillery.

By command of Major-General Brown.

HEADQUARTERS BROWN FORCES,
AVOCA, KANSAS, October 2, 1902.

I. The important depot at Fort Riley, Kansas, and the communications of the enemy between Republican River bridge near Junction City and Ogden appear to be weakly guarded.

II. General Kobbé will seize Fort Riley, destroy the stores at that point and disable the Union Pacific Railroad sufficiently to prevent trains passing for several days.

B. E. WHITE,
Adjutant-General.

Memorandum:

The Brown force executing the above order is assumed to have arrived at the Milk Ranch on the evening of October 5th. The march in carrying out the problem will actually begin from that point at 9 A. M., October 6th.

If, as is probable, the Kansas regiments be not available on Monday, the 6th instant, for this exercise, the attacking force will be assumed to be stronger by two full regiments than it really is. This assumption is made in order to obviate a possible misconception as to the practicability of attacking a force in a selected and prepared position without a great superiority of troops. Even with this assumption the attacking force is far from being too large.

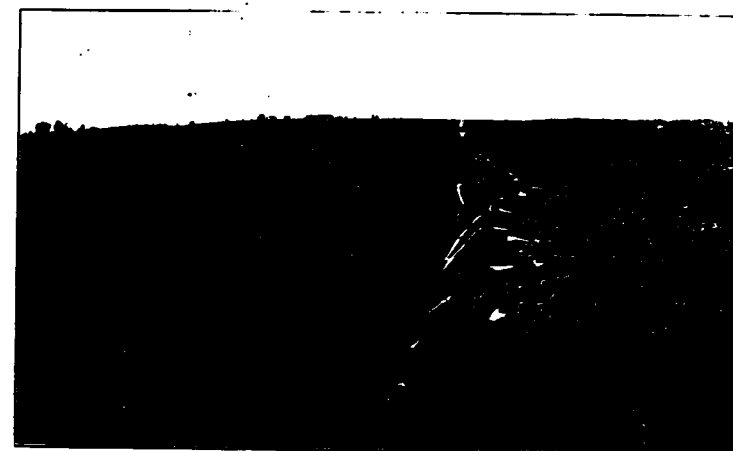
The Blue force occupied a defensive position on the reservoir ridge and in the gorge of the Republican River bottom, the right resting on One Mile Creek, about a mile above its mouth (the creek being a supposedly impassable river), the left resting on the Republican River near the trolley bridge. The command was divided into a center and two wings. The right wing extended from One Mile Creek to and across the Milk Ranch Road, and consisted, in order from right to left, of a company of Engineers, two guns of the mountain battery, and the Third Battalion, Sixth Infantry. Two guns of the Sixth Battery, Field Artillery, were stationed in a com-

manding position about half a mile in rear of the left of the right wing. The center occupied the heights to the left, and overlooking the eastern branch of Pump House Cañon, and was composed, in order from right to left, of one company of Engineers, and two companies Sixth Infantry, with four guns of the mountain battery so posted as to give a fire to the front and to the left, and to sweep the Republican River bottom. The left wing was stationed in the gorge of the Republican River bottom, and consisted, in order from right to left, of one company of Engineers and two companies of the Sixth Infantry. Its line was well posted on the outer edge of the woods. All the troops of the Blue force were in kneeling trenches, the fresh earth thrown to the front being well covered with cut grass, and grass being placed in the bottom of the trenches so as to enable the men to lie down under shelter when not actively engaged. The trenches were echeloned back from right to left and were each about fifty yards long, except one of twice that length to the west of Morris Hill Road, and were in the form of an arc, of large radius, convex to the enemy's view. The intrenchments were well constructed so as to permit a fire either to the right, front or left, the conformation of the trench being such that if the enemy should gain a position so as to enfilade one flank of it he could be opposed directly in front by troops occupying the other half. With this object in view, each trench was twice the length necessary to shelter the troops occupying it. Additional gun pits were constructed on the right side so as to admit of shelter for guns that might be sent up to reinforce the guns already stationed there. The reserve, consisting of the Third Battalion, Sixth Infantry, one company of Engineers and four guns of the Sixth Battery, Field Artillery, was stationed in a sheltered position to the rear and right of the gun pits occupied by the two field guns as already mentioned. The reserve was well located in a position from which it could be readily moved to any point of the line as circumstances might demand. All salient points of the lines and one far in advance were well connected by telegraph lines.

On the part of the Brown, the disposition was as follows.

from right to left: Right wing, Troops B, C and D, Eighth Cavalry, Troop B being deployed in patrols covering the front of the right wing; Third Battalion, Eighteenth Infantry, deployed with firing line and company supports, with Second Battalion, Eighteenth Infantry, deployed as supports in line of squads. Center, Colorado Battalion deployed, with Third Battalion, Eighteenth Infantry, in line of squads as support and reserve; the Nineteenth, Twentieth and Seventh Batteries in line. Left wing: Third Battalion, Twenty-second Infantry, deployed, with firing line and company supports, the other two battalions of the same regiment being in reserve in line of companies in columns of fours. The First and Second Squadrons, Fourth Cavalry, were on the left flank, the extreme left being covered by Troops C and D, one deployed in line of squads and covering about a mile of front from the line of flags marking forbidden territory; the other troop being held in reserve at a distance of about 800 yards. The right of this force was kept in touch with the cavalry on its right; all the cavalry being pushed well to the front and the advance being well covered with patrols. The patrols of the Blue and Brown, in reconnoitering, came into contact shortly after 10 o'clock. There was desultory skirmishing by these patrols, but nothing of a nature worthy of report. The action practically began with Brown artillery at 10:40 at a range of 2,450 yards from the center of the Blue right. The Brown batteries had left the vicinity of Estes Gate about 9 A. M., maneuvered for position and halted under shelter from time to time until a definite target could be decided upon. At 10:35 the batteries came into action, going up the slope and taking position with the Seventh Battery east of Morris Hill, the Twentieth Battery at the summit and the Nineteenth to the right. This was a fine, strong position, and was taken up without showing the movement. The umpires at this point gave the range at from 2,650 to 2,375 yards, which differs somewhat from the observation made from the Blue position. It was the opinion of the senior umpire with the Blue and myself that this fire on the part of the Brown had been opened for the purpose of developing the position, and that the location of the Blue batteries

was unknown until they opened fire. I learned subsequently that this was not the case, the commander of the Brown artillery having discovered an intrenched position to the northeast of the reservoir, which he correctly believed to contain a battery, and the position of the two field guns being also located. These guns would have been speedily crushed by the superior fire of the Brown artillery. They continued in action for a very considerable time afterwards, in fact until I could learn the condition of affairs from the Brown side. I have regarded them as being out of the fight



HASTY INTRENCHMENT.

within a very short time after the Brown batteries opened. The position of the two field guns was observed by the commander of the Seventh Battery (Brown) seventeen minutes after fire had been opened on the guns of the mountain battery, and fire was at once directed upon them. Under cover of its artillery fire the Brown infantry advanced. Shortly after the forward movement of the left wing, the company supports reinforced the firing line, and one company from each of the reserves was brought forward and deployed as a support to the right and left of the line. At 10:45 the infantry, under cover of the artillery fire, began making rushes

by companies. At 11 A. M. four companies occupied the crest northeast of the reservoir hill, and delivered several volleys, at 1,500 yards, at the trenches on the extreme right of the Blue line. In order to move to the front with as little exposure as possible, the command moved by the flank at 11:10, and while thus moving and not firing, it was caught completely exposed, under a heavy infantry fire from the intrenched Blue infantry. It was subjected to this fire for fully five minutes at 800 yards, and under the conditions of actual battle would have suffered so severely as to be unfit for further action. This came under my personal observation, and I rode over and directed the senior umpire with the Browns to rule out the battalion. Two companies relieved the ruled out battalion at 11:30 A. M. and moved forward to a crest about 900 yards from the Blue line. At 11:45 the reserves were brought up and the Brown line here came under fire of the Blue trenches.

At 11:10 the Brown batteries were withdrawn from the strong position they held at Morris Hill, and coming to the front over the military crest of the hill, were in plain sight and under the fire of the Blue infantry. The batteries then took position on the Morris Hill Reservoir ridge, the Seventh Battery thrown forward, the Twentieth in the center and the Nineteenth on the right. At 11:25 the Nineteenth and Twentieth Batteries moved up on the right of the Seventh, and all three batteries opened upon the Blue artillery 2,100 yards to the southeast. Under the conditions of actual battle the Blue artillery in this position would probably have been in a completely disabled condition before this, and the Brown batteries would have been firing upon infantry. At 11:26 the Seventh Battery turned its fire upon a line of Blue infantry, at not over 1,000 yards range, lying in front of the Blue batteries. The infantry was, however, intrenched and firing, and it is very questionable whether the Brown artillery could have come into action at this point. At 11:35 the commander of the Seventh Battery was ordered to the front, to a new position, in spite of his knowledge that he should then be exposed to infantry fire. As he expected, this movement drew upon him a fire from unshaken infantry in trenches

hitherto undiscovered by the Brown, and about 700 yards distant. For six minutes, while the battery was moving, unlimbering and going into action, it was in plain view and subjected to a furious fire from the infantry, and it was accordingly ruled out. The Nineteenth and Twentieth Batteries had been under unanswered infantry fire for about fifteen minutes within 1,000 yards range. This also was under my personal observation, and I sent word to the Brown umpire at that point to award damage accordingly. One platoon was ruled out of action in each battery. This was certainly not too large an estimate of losses. These two batteries had, however, unlimbered down the slope and run into action "by hand to the front." I do not believe that, under the conditions of actual battle, these batteries would have been fit for further action. The captain of one of these batteries had personally advanced fifty feet beyond the designated line of guns before he could positively make out the line of infantry intrenchments. This the umpires verified, and it was, therefore, naturally assumed that the guns could not have been seen from the trenches, which is the reason for his not having fired on the infantry at this time. His guns when ruled out were moved up under the crest and then unlimbered out of view. This precaution was not taken by the commanding officer of the Twentieth Battery. The changes of position referred to were skillfully made by the captains, and their batteries were well handled; but the abandonment of the position on Morris Hill was ill-advised, and the pushing of these batteries in close proximity to intrenched infantry was the cause of great unnecessary loss to them without corresponding damage being inflicted upon the enemy, these batteries not being assisted by infantry fire in front of them, and in fact taking a position which properly belonged to the infantry. The Brown artillery had begun its work well in firing shrapnel upon the Blue batteries, smothering their fire and preparing the way for the infantry advance; and it should have continued these tactics until the Blue position was more fully developed by the advance of the Brown line. While at Morris Hill it was within effective range, and in a position from which it could easily have continued to fire over its

advancing infantry. While artillery must always support its advancing infantry, and while a certain degree of moral support is undoubtedly given to the infantry by the advancing batteries, the battery should not subject itself to loss and deprive the infantry of its effective support while limbering, moving forward and unlimbering, when it can continue to do as great (if not greater) damage from the position which it occupies.

The action of the Blue has been generally indicated in the foregoing description of the action of the Brown. In detail the action of the Blue forces during this time is described as follows by the senior umpire with the Blue:

"At 10:56 two Blue guns about 300 yards north of the reservoir opened fire and were reinforced by two more in eight minutes, all firing at infantry. While six guns were there, but four were in action, the other two being held in reserve. At 11:01 a Blue infantry company fired two volleys at Brown infantry on crest about 1,500 yards distant. Very soon after eight volleys were fired at same target at 800 yards. At 11:07 the four guns near reservoir changed their target from infantry and fired at the Brown battery, changing its position 2,500 yards distant. One minute later two Brown guns opened fire to left, range and target unknown. At 11:14 fired at Brown artillery coming into position, range 1,800 yards; and two minutes later the two reserve guns were brought up. At 11:17 the battery fired at Brown artillery 1,000 yards distant, which artillery at 11:12 was exposed to volleys from Blue infantry to the right. At 11:38 two guns ceased firing, and some small losses were adjudged; 11:45 the limbers of the battery were exposed to and withdrawn under fire at 900 yards range, and the two left guns opened on advancing infantry at 800 yards range. At 11:10 Brown infantry in front of the Blue right fired at least two volleys at about 600 yards. At 11:13 the two mountain guns were ruled out on account of long exposure to infantry fire. They had but six or eight shells left, and before being ruled out their commander stated that it was not his intention to send back for more."

In regard to the above, I would merely remark that as already stated, all the Blue artillery at this point must, practically, be regarded as placed *hors de combat*. At 11:33 there were seven companies in the trenches firing volleys at badly

exposed artillery. At this period the senior umpire with the Blue ruled out one-third of one company in the trench and one-fourth of another company, the men being directed to lay their guns in the rear of the trenches, but to remain where they were. At 11:48, as reported by the chief umpire with the Blues, the Blue infantry fired on the Brown artillery with destructive effect, as already mentioned. As a result of the infantry and artillery fire, to which the Blue infantry had been exposed, the senior umpire with the Blue now awarded losses aggregating half a company, making about one company in all.

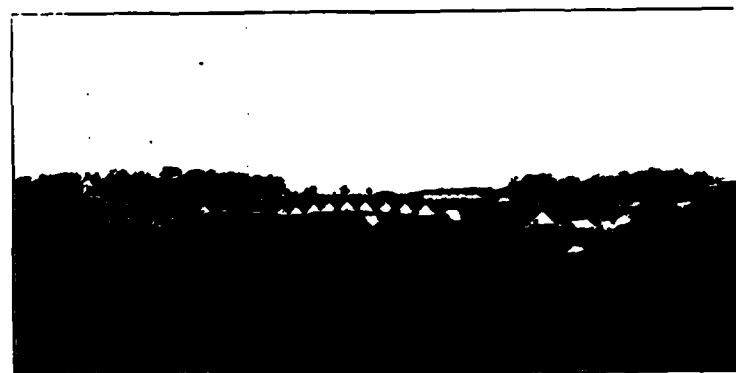
On the side of the Brown, the First Battalion, Eighteenth Infantry, had begun moving forward as already described, supported by the Second Battalion of the same regiment. After the forward movement and a general flank movement to the right, the battalion took up a position in extension of the line of the batteries and the Colorado battalion at 10:40. At this time the supports of the battalion were about 100 yards in rear and deployed in line. At 10:55 the line moved south about 1,000 yards, keeping well under cover. The battery on the left opened at 11:03. At 11:12 the advance was moved 300 yards further south, still under excellent cover. At 11:30 the battalions of the Eighteenth Infantry forming the right wing, moved still further south under the cover of a hill or slope forming the east side of Pump House Cañon, and at 11:40 opened fire from the crest of this elevation on the trenches in their front. After firing a few volleys, the Brown infantry advanced down the hill towards the trenches, completely exposed and in full view, while the opposing infantry, intrenched, poured into it a fierce fire for several minutes. As the Brown artillery had practically been put out of the fight, and there was nothing to keep down the fire of the Blue infantry upon the Brown in this exposed condition, the latter would undoubtedly have been repulsed at this point with great loss. As the lines were now closely approaching each other, the signal for the suspension of the exercise was given. The following comments are made by the Brown umpire with the Colorado battalion:

"When the advance was first begun, the intervals were not well kept, there being some tendency to bunch in spite of the earnest cautions of the Colonel commanding. There was decided improvement in this respect as the advance continued. When the command halt was given the men were not always prompt in lying down, until cautioned by their officers. This would have resulted in undue loss on the left, which was generally not more than forty yards from the right of the Brown artillery, against which the Blue artillery was firing. When the Seventh Field Battery (at 11:40) took position in rear of the left of the battalion, the men in front of the position fell back to the immediate rear of the battery and remained there standing for over a minute before moving to the right. They would thus have caught much of the enemy's artillery fire intended for the Seventh Battery. With these exceptions the movements by this battalion were well executed."

The action of the Colorado battalion was, in the main, highly creditable.

In the meantime the cavalry, consisting of two troops, C and D, Fourth Cavalry, which had been sent forward to cover the extreme left flank of the Brown, had advanced in the formation already noted, namely, one troop deployed in a line of squads and covering about a mile of front from the line of flags marking the supposedly impracticable ground, the other troop being held about 800 yards in reserve, and the right being kept in touch with a similar cavalry force on its right which was covering about an equal arc of front. Patrols of Blue cavalry were soon seen falling back before the Brown center and (at 9:40) a Blue troop was seen withdrawing from the front. At 10:03 the two troops on the left occupied Morris Hill, dismounted, moved forward and occupied the military crest until the artillery came up and went into battery. These troops then withdrew, joined the other troops of the Fourth Cavalry, and the command, now consisting of eight troops, moved by the way of the draw leading into the One Mile Creek. At 11:16 the extended line of flags marking the limits of forbidden ground was crossed. The umpire called attention to this fact, but as the main body of the cavalry force was still within proper territory no further action was taken. The cavalry continued to follow down One

Mile Creek, hidden by the thick growth of small trees and underbrush. At 11:28 the head of the column debouched from One Mile Creek, well to the rear of the right flank of the Blue intrenched position, and in a few moments three dismounted troops were well in position under the cover of the exposed rock, and at 11:29 opened fire on the rear of the artillery, artillery caissons, and the right flank of the Blue line generally. The Brown cavalry imagined that it had gained this position unseen; but while marching by the flank, it had really been in plain view of the Blue infantry in the trenches, whose fire upon it at short range would have



CAMP—MOUNTAIN BATTERY.

been very apparent had bullets instead of blank cartridges been used. This was observed by both the chief umpire and the senior umpire with the Blue, and the former ordered the withdrawal of the cavalry with a loss of one-third of its strength. The cavalry withdrew to a sheltered position, re-formed, and soon after opened fire on the Blue in several positions. Four minutes after the Brown cavalry renewed action at this part of the field, a small force of Blue infantry from the reserve rushed forward, occupied an abandoned stone quarry, and opened fire against the Brown cavalry, which was behind a natural wall of rock. Both forces were in good position, but the Blue would doubtless have suffered considerable loss in its movement forward to the quarry. The

suspension signal having sounded, further operations at this part of the line were now stopped. One Mile Creek being, by the conditions of the problem, supposed to be an impassable stream, there has been some inclination to challenge the authority of the Brown cavalry to use the ravine in this movement. Such movement was, however, perfectly proper so long as the stream was not crossed—as, in fact, it was not—but it should be observed that, under the assumed conditions, the cavalry was making a march along the hostile front, with one flank toward the enemy and an impassable stream on the other. Such a march would depend for success upon its absolute concealment; and as the column was discovered and fired upon effectively at close range, the movement failed.

The action of the Brown cavalry on the right, in the course of the engagement, was as follows:

At 10:02 the right troop (D) moved to the right and somewhat to the rear, proceeded to the west of the Governor Harvey Road and then advanced, screened by scouts, the troop keeping well under cover. At 10:30 a patrol of the enemy having been reported, the troop dismounted, advanced, and soon after fired on a Blue patrol of sixteen men, mounted, as it was retiring, range 500 yards. The troop descended from the hills to the Republican River flat and advanced in the direction of the enemy, being fired upon at 11:02, just before it reached the Pump House, by dismounted men under cover. Troop C, which had been working to the right, joined Troop D at this point and both dismounted. Troop B, which had been covering the front, now operated on the right of the infantry and connected the latter with the cavalry troops operating in the valley. After dismounting, Troops C and D advanced under a heavy fire against the enemy, who was well intrenched near the race track. Disregarding the fact that they were under a fierce and sustained fire from three companies of infantry under cover, the two dismounted troops continued to advance until within 150 yards of the enemy, when the attack was stopped by the umpires with an adjudged loss of all the assailants, except the horse holders—a heavy loss, but none too large when

the circumstances of the case are considered. The remnant of the Brown cavalry essayed to push forward and around the flank, but further movements were ended by the signal for the suspension of the exercise.

The attempt of the commander of the Brown cavalry at this point to advance with the dismounted part of two troops of cavalry in an open assault against three companies of infantry under cover, would have been impossible under the conditions of actual war. From the volleys coming in from different directions and the intensity of these volleys, he should have been able to see that he could neither drive the enemy back nor force a way through the hostile line. In brief, his attack would have been suicidal. I have no sympathy with those who would undertake to "umpire cavalry out of existence;" on the contrary, I claim that our American cavalry is, for the purposes of modern war, the best in the world. It cannot only render excellent service on horseback, but on foot it can practically do all that the same number of infantry can do. But it is absurd to suppose that dismounted cavalry can perform what would be impossible for the same number of foot troops, and a frontal attack by infantry upon a superior force of the same arm, intrenched, unshaken by losses and in excellent morale, would simply be to attempt the impossible, and fly into the face of all experience of recent wars.

"I wish here to speak of the flashes of sunlight that came from the swords and scabbards of officers with infantry regiments. The sunlight coming from the direction of the enemy, these flashes must have been visible to them." In point of fact, they were visible from the Blue position, and the first member of the Brown force whom I personally saw was a man, the flash of whose saber attracted my attention.

It is also noted by the senior umpire with the Brown that one line of trenches was discovered by the men therein exposing their heads above cover. Similar occurrences were noted in the campaign in Cuba, where rifle-pits were, in more than one instance, discovered by the hats of the Spanish soldiers appearing above the trenches. It would seem to be a wise precaution, while awaiting attack, to have the men lie

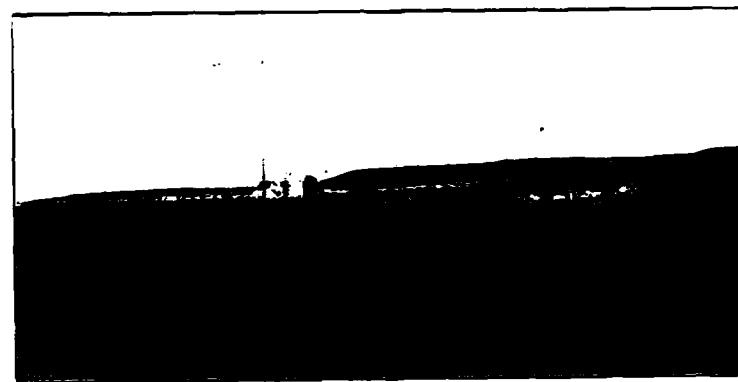
down in the trenches, if possible, and not expose themselves until the time for firing.

The advance of the Brown was over a difficult ground, which furnished an excellent study of the influence of the terrain on tactical operations. To the force moving to the front it appeared frequently as though it were under cover, when in fact it was in plain sight and under an effective fire. The attack in some places was over a succession of swales, such that complete exposure was incurred in moving from one shelter to another.

The work of the Signal Corps was, on this occasion, marked by the energy and efficiency which every one who has served in Cuba or the Philippines recognizes as characteristic of that corps. With the Brown forces one officer and three parties, of two men each, maintained visual communication as desired by the commanders of the forces to which they were attached. With the Blue, a detachment consisting of two officers and sixteen men, provided with two wagons, established and maintained buzzer lines and eight stations. Two of these stations were at the reserve, five were distributed along the front of the defense, and one was established by a sergeant and a private two miles to the front, the wire being completely concealed. These two men hid themselves close to Morris Hill, the headquarters of the Brown forces, and from there reported the movements of the enemy. The enemy's lines, in moving to the front, passed over them without discovering them. This piece of work is regarded as remarkable and worthy of commendation. The field buzzers, as usual, gave good satisfaction. The senior umpire with the Blue notes that the telephone communication to the extremity of the Blue lines was of marked benefit. Just before the suspension signal sounded, information of a strong force of Brown infantry approaching the valley was received and communicated to each organization, and preparations were made to meet the advance. Although the use of the telephone was in general most satisfactory, I regret to say that its employment was in one case not attended with such happy results as in the instance cited. When the Blue was taking up its position, I notified the Blue commander that

the Colorado battalion, which formed a part of the Brown force, was attired in Blue, not having Khaki uniform with it, and that this should be known by his subordinates in order that the battalion in question might not be mistaken for a part of the Blue force. This information was transmitted by him to the different commanders, being sent by telephone to the commander of the left wing. The form in which it reached the latter was that the Colorado battalion would soon report to him!

The work of the Medical Corps on this occasion was also very satisfactory. Two officers of the Corps were detailed



MOUNTAIN BATTERY READY TO START.

as chief surgeons with the Blue and the Brown, respectively. With the Blue force there were two regimental hospitals for the Sixth Infantry and the Engineers: a medical officer, with a pack mule and detachment and reserve dressing chests, with the cavalry and reserve. One section of Ambulance Company No. 3 was also with the Blue. With the Brown force there were seven regimental hospitals and the second and third sections of Ambulance Company No. 3. Hospitals and dressing stations were promptly and conveniently located. Whenever practicable, diagnosis tags were given to men ruled out; but it was again found that the attention of umpires was too completely taken up with watching the tactical

features of the exercise to admit of any extended use of these tags. Where such tags were given, the presumably disabled men were promptly cared for by the Hospital Corps.

The Blue commander, in the instructions which he gave to his subordinates, instead of informing them that the main army had been defeated and thrust off its line of communication, stated, "The Commanding General has exposed his base temporarily to draw the enemy further in. The enemy had detached a force, said to consist of all arms and in considerable strength, to march on Fort Riley via Stockdale." This action in concealing from his command the fact that a defeat had been incurred by the main body was well calculated to prevent a certain degree of demoralization, which a knowledge of the true situation would have caused.

In conclusion, the Brown force lost one battalion and eight guns, besides having the rest of its artillery so crippled that it is doubtful whether it would have been of any further service. The movement of the cavalry on each flank was checked by infantry fire, which it could not overcome. On the other hand, the Blue force had lost six guns and an aggregate of two companies of infantry. Though the assault had been checked, it is to be observed that the conditions of the problem gave the commander of the Brown an additional force of two regiments. Whether he might still have succeeded in pushing home a successful attack is open to question. The action had assumed a phase where nothing but the use of bullets could have given an unchallenged decision.

One of the most striking lessons of the entire exercise was found in the invisibility of intrenched infantry. In several cases the Brown forces were under a heavy fire before they were aware of it. It may be said that in actual battle they would speedily be aware of this fact; but, on the other hand, it should be noted that in actual battle the first information received of the dangerous proximity of the intrenched enemy might be in the form of ruinously destructive losses. The great advantages accruing to the defensive by the introduction of smokeless powder were strongly exemplified in the exercises of this day. I am more firmly convinced than ever that an attack upon a force of good troops in a deliberately

occupied and intrenched position will require enormous odds on the part of the attacking party. Indeed, this conclusion is well borne out by our own experience in the Santiago campaign and by that of the British in South Africa. It is to be observed, however, that this applies to an attack upon a position deliberately taken up, well intrenched and held by disciplined troops of unshaken morale. But should armies meet when the morale and confidence of each are such that it has no intention of assuming the defensive, the role of attacker and defender will depend upon the course of the action; and the advantage of the accidental and unprepared defensive will be vastly less than in the case of the one under consideration. As to an attack upon an intrenched position, if the forces are at all equal in number and quality, it seems very probable that the action will necessarily partake somewhat of the nature of a siege; the attacking force intrenching itself, and pushing forward at night to a new position in which it can construct intrenchments, thus making the action a very prolonged one. Indeed, we had an illustration of this when armies were much inferior in their arms and destructive power to those of the present day. The final operations of Grant and Lee partook of the nature of a battle between intrenched armies at close range, and enduring for months. The same is true, in a lesser degree, of the Russian operations at Plevna in 1877. To be sure, a night attack may reduce greatly the advantages of the defenders, but such attacks, as is well known, are generally attended with such doubt and confusion on the part of the assailants as to be very uncertain in their results. It seems probable that the results of the present conditions will be to make the seizure of a well-defended intrenched position by a *coup de main* practically an impossibility, unless the assailants have an enormous preponderance of force; and the proportion of ten to one in favor of the attacking force is not one whit too much if the position is to be carried by sudden assault.*

*Here follows at length Problem No. 6, the last of the series, held on October 7, 1902.

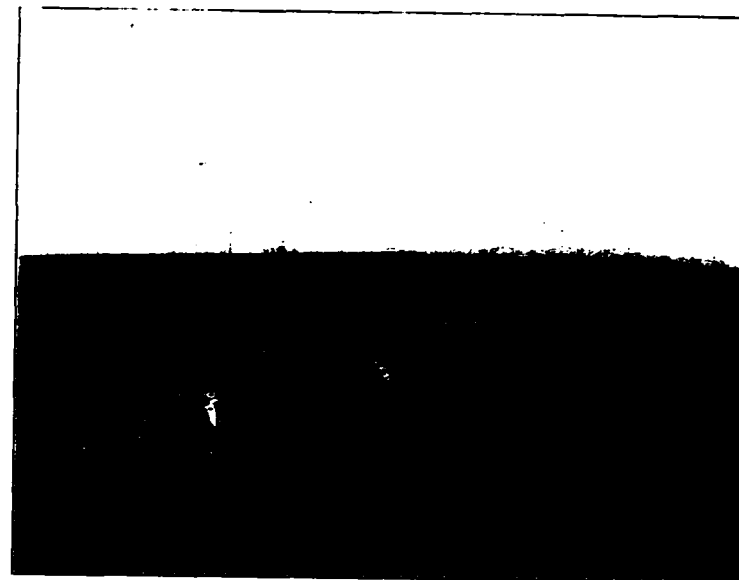
GENERAL COMMENTS ON THE MANEUVERS.

As the field maneuvers at Fort Riley this year were the first of any magnitude ever held in the United States, it is well that we should examine their results for the purpose of seeing how far the original idea was carried out, and with a view to ascertaining how far precedents were established that could be well followed in the future, and what features have been tried and found wanting.

As the board appointed for the purpose of drawing up the scheme for the maneuvers remarked in its report, the most desirable form of field exercises is to be found in such as are carried out in the autumn maneuvers in Continental Europe. Such maneuvers partake of the nature of a strategical problem in which two large forces, each operating from a definite base, move against each other in the furtherance of some prepared plan. In such a case the maneuvers are of the greatest practical value to all the participants, from the commanding general down to the newest recruit; for in a large strategical problem, continuing for a number of days, and covering many miles in its execution, all the features of a campaign are introduced, and all the elements of tactics are brought in as incidents to the general operation. Unfortunately, however, circumstances of available military force and necessary ground prevent the adoption of such a system of maneuvers in the United States. The plan adopted, therefore, was one in which the troops leaving camp each morning should operate against each other, as parts of an imaginary larger force, in field exercises practicable under the conditions of troops and territory available. It was the intention of the Major-General commanding to have at least two of these exercises begin with a march from camp to a rendezvous in the evening, the troops to bivouac during the night, and move out from the bivouac the following morning against an opposing force. As this feature was especially for the benefit of the National Guard, these exercises were reserved for the latter part of the National Guard encampment; but the weather was such—cold, muddy, wet and windy—as to render it unadvisable to subject men new to campaigning to conditions

that would imperil their health, especially as these men were to return immediately to their civil vocations, where sickness would mean not only suffering and danger, but probably serious financial loss.

The exercises, as really carried out, more than surpassed my expectations. It is extremely difficult in the conduct of maneuvers to maintain the conditions of actual warfare and prevent the contact of opposing forces from assuming "im-



MOUNTAIN BATTERY MANEUVERING.

possible" conditions and degenerating into a "sham battle." It is gratifying to note that the conditions of actual warfare were maintained to a striking degree. This I attribute mainly to the fact that most of the officers engaged in the maneuvers had participated in actual warfare. They appreciated the value of the exercises as training for real campaign duties, and their zeal, experience and ability contributed to an immeasurable degree to the success of the maneuvers.

The unanimous opinion on the part of the umpires engaged in these exercises is, that in problems in which por-

tions of the force are imaginary or outlined, simulated action—action not apparent to the senses of sight and sound—must necessarily be unsatisfactory.*

In future I think it would be well to limit all assumptions and imaginary conditions to the "general situation" of the problem.

The question naturally arises in reviewing the maneuvers. "Are such maneuvers sufficiently profitable as a means of military instruction to justify the trouble and expense necessary to carry them out?" Without referring to European nations and European experience on such subjects, our best test is to consider what has been actually accomplished by ourselves. The opinion generally—I think universally—expressed by the officers participating in these exercises was that a great deal had been learned that could not otherwise have been acquired; and the remark was frequently heard that even if the exercises had been limited to the two problems involving the attack and defense of a convoy, and the attack and defense of a position, the instruction obtained thereby would have been well worth all the trouble and expense of the encampment. In my opinion, everybody who participated in the encampment learned something, and many of us learned a great deal.

Another question to be considered is the size of the force that should be concentrated for the purpose of carrying out successful maneuvers. The reservation at Fort Riley is large enough to admit of tactical operations by two brigades, each with at least half of the artillery and cavalry suitable for a division. A larger force would be seriously hampered by the limits of the reservation.†

As a result of my experience and observation in the recent encampment, I am of the opinion that it would be well

*Here follows a full discussion of this question, ending with the author's opinion.—[EDITOR.]

†Here follows a discussion as to strength of force and its organization and composition. The National Guard work is described, and its relation to the maneuvers explained and made clear.—[EDITOR.]

to detail a full corps of umpires before the beginning of each encampment, and direct them to convene, at the reservation appointed for the exercises, at least two weeks before the time set for the commencement of the maneuvers.*

It is very difficult to conduct field exercises on consecutive days and find time for a full report and discussion. It is suggested above that a course of two weeks' instruction be given the regular troops before the arrival of the National Guard. In my opinion, six carefully prepared exercises would be an ample number for this period. The exercise could be held one day, the reports in full to be in by noon of the following day, and the discussion then to follow in the afternoon or evening. This would give more time for the officers concerned to consider and discuss among themselves the operations in which they participate during the exercise, and to digest, so to speak, what they had seen and learned.†

The rules for the conduct of the field exercises and for the guidance of the umpires therein were in the main very satisfactory; but some additional rules found necessary in the course of the maneuvers were published, and some further amendments and additions are desirable. It would, perhaps, be well to have the rules revised by a suitable board and published as a uniform guide for field exercises throughout the army.‡

While the question of weather is such a doubtful one as to make it impossible to fix any time for the maneuvers with a certainty of having good weather, it is suggested that it would probably be better, if exercises be held in future at Fort Riley, to have them begin about the 5th of October.

*Here follows a description of the work of the umpires before the beginning of maneuvers, etc., the use and distribution of maps, and the role of the Hospital Corps in maneuvers, all of which are interesting.—[EDITOR.]

†Here follows more at length the reasons for having the exercises on alternate days.—[EDITOR.]

‡Here follows an explanation of the preparation of the tables of fire losses for use of the umpires.—[EDITOR.]

There is a reasonable prospect of getting clear weather after that date, and although the nights are cold, they are not so to such a degree as to cause any material discomfort in camp, while the days are of the proper temperature to make open-air life enjoyable.

MARCH OF SECOND SQUADRON, FOURTH CAV. ALRY, FROM FORT LEAVENWORTH TO FORT RILEY, KANSAS, AND RETURN.

By LEWIS M. KOEHLER, U. S. CAVALRY.

IN compliance with G. O. No. 96, Headquarters of the Army, A. G. O.; G. O. No. 34, Headquarters Department of the Missouri, and G. O. No. 38, c. s., post, the squadron left Fort Leavenworth at 9 A. M., September 8, 1892, en route to Fort Riley, Kansas, to participate in the first maneuvers of our army.

The strength of the squadron was nine officers and 234 enlisted men, and 256 horses. The excess horses were taken to be ridden by staff and visiting officers of the maneuver division. Fourteen horses with equipments were turned over to the Sixth Infantry to mount the field and staff and medical officers accompanying the different organizations ordered from this post.

An officer was sent early in September by the post commander to go over the route, engage the camping places, and contract for wood and forage. The officer proceeded as far as Topeka by ambulance, and from Topeka to Fort Riley by rail. The camp sites were satisfactory, and the forage, with few exceptions, good.

In anticipation of the march every horse of the squadron was shod all around. Two troops carried an extra set of shoes wired underneath the stirrup treads, another carried them in the saddle-pockets, and the fourth in the wagon. The first method, for short marches over good roads, where

the increased weight is of little importance and the transportation inadequate, commends itself. The second is objectionable, for no matter how careful a troop may be, some of the saddle-bags will be ruined by the shoes. The shoes may be carefully fastened together, and the ends nicely rounded with the rasps, and yet some of the saddle-bags will be ruined, and all of them damaged. Of the two methods, the former is to be recommended, as the horse carries the weight in either case, and in the former it is better placed and the equipment not injured. The third method is to be preferred if the transportation can be crowded to that extent; in this case each set of shoes is tagged with the number of the rider.

When the trip was first talked of, and before the final orders were issued, it was proposed to allow one four-line escort wagon to two troops, two for the four troops, and one for the headquarters. All tentage and the extra clothing of the squadron was to be shipped by rail, as well as the absolutely necessary permanent camp equipage. The squadron was to take three days' field ration to carry it to Topeka, where the field ration for five days was to be sent. From Topeka we were to have fresh meat each day, which would lighten the weight to be carried to the extent of the bacon allowance. When one stops to consider the proposition of carrying the cooking outfit for two organizations whose strength is 117, together with the picket lines and the rations for five days, and that in an escort wagon, he is impressed with the fact that to issue an order is one thing, and quite another to carry it out. In time of war there may be times when a squadron can have no transportation and be called upon to do great things and do them well, but when the marches are at home, for instruction, and the command to make a creditable appearance from day to day on the march and in its camps, as it comes into contact with its fellow citizens, then adequate transportation ought to be furnished, and one escort wagon for two troops, or one for each troop, is not sufficient. Two army wagons with their six-line teams would be no more than adequate under the conditions.

We recognize the impossibility of furnishing transportation when it is not at the post, but if a large garrison, as Fort Leavenworth, is to have its units kept on a war footing, then the transportation constantly on hand should be sufficient to send the garrison anywhere with its full allowance. It is false economy to have the post transportation a makeshift, and, when the troops are to move, have nothing to move them with. In 1898 we all saw the array of improvised wagons, rotten harness, unbroken mules, and more than worthless drivers, all thrown together to try and supply an increased army. After days of telegraphing to department headquarters, and transportation allowance changed each day, it was finally decided to allow one entire escort wagon to each troop. This called for the troops to live in shelter tents, to carry their bed blankets under the saddle, and nothing that was not absolutely necessary, and then the wagons were full to overflowing, necessitating a genius to superintend the loading, to insure the contents not being scattered along the entire route.

The squadron could easily go to Fort Riley without pack or wagon transportation, resorting to individual cooking, and carrying the rations in the saddle-pockets; but this would vitiate the object of the march. With ample transportation to carry some of the camp comforts, and to have had the bread and fresh meat shipped daily to each camp, as they were all pitched near the railway stations, would have added to the happiness of the command, and would have made a more favorable impression upon the citizens, and would aid us materially in the class of recruits obtained. The bakers could have been left behind to bake the bread to reach us at every camp.

The following is a list of the marches, and camps en route, with the distances marched:

The first camp was made one mile east of Easton, in a blue grass pasture. Distance marched, thirteen miles; wood, hay and grain delivered by the contractor; grounds, good; water for cooking and drinking, from wells—good; for animals, from a muddy, stagnant stream—not good. The road is quite hilly, and has some stone, but was in good condition

for both horses and wheeled transportation. Four and a half hours were consumed in making the march, which was practically done at the walk.

The roads for the entire distance to Riley are fenced on both sides, so the order to march the squadron as if in an enemy's country, resolved itself into one troop taking the lead, as the advance guard, with the point and flankers marching at intervals in the road in advance, followed by the remainder of the troop. Two of the troops marched as the support for the leading one, and the fourth formed the rear guard. The connecting files were constantly in their proper places, and the troops rotated from front to rear, so that each formed advance guard, rear guard, and part of the support, in regular order. The squadron in every case was camped as it marched, the advance guard in front, the leading troop of the support second in the column of troops, and so on. The officers' tents were in line on the right flank of the squadron: the troop shelter tents in accurate line, with the saddles lined in the front, and the picket line in front of the saddles. The troop kitchens were on the left flank. All camps, both going and returning, were pitched in the same way, and great care was taken to have all tents and saddles in perfect alignment, and to give the camp the best possible appearance. All camps were policed before leaving them, and after the command was saddled up. No attempt was made to clean the picket lines, as the limited transportation would not permit of such an indulgence, and, besides, a cavalryman does not think an uncleaned picket line makes a necessarily unsanitary camp for following troops.

Broke camp at 7 A. M., and marched two miles southeast of Winchester. Distance, twelve miles, arriving at 10:30 A. M. Roads less hilly, and command marched half hour at the trot. This was our most uncomfortable camp—in a small grove, too confined for a squadron, so that the men and horses were in too close proximity. Water obtained from tanks filled by a pipe line to a spring. Water was good, but ran too slowly to permit the troops to water without a considerable delay between troops.

Left camp September 10th, 7 A. M., and marched to Osawkie. Distance, seventeen miles, arriving at 12 M. Road had a few hills, and some rock near Osawkie. Camp here right in town, and in an open, blue grass pasture—an ideal camp site for even a larger force than a squadron. The camp looked well, with its clean cut, regular lines. Water was good, and horses taken to creek with rock bottom, about half a mile away.

Next day we thought to save time by watering at the creek near the mill, but found it a most difficult task, as horses had to pull through a blue clay deposit on the bank about twenty feet in width, two feet deep, and most sticky, so it proved a tedious proceeding. There had been heavy rains for some weeks before we left the post, and nearly all the streams were out of their banks, and in receding left the sediment which had not dried sufficiently to bear the weight of the horse, and where the streams were used for watering the animals it was quite an undertaking. This village proved to be a nice Dunkard town, and most of the command purchased pies, milk and apples. Here we experienced our first frost, and officers and men were awake long before reveille, and most anxious to answer that call, finding that a bed blanket and one saddle blanket did not take the place of all the comforts of home.

Left camp September 11th, at 7:00 A. M., and marched to the State Reform School, three miles north of Topeka, a distance of twenty miles, arriving at 2:45 P. M. The camp was in a walnut grove, but owing to a slight rain and a misty atmosphere, was wet and not comfortable. Had we had Sibley tents with the stoves, the men would have kept warm and dry, and would have shown their cheerfulness in laughter and song, but, as it was, intense quiet reigned and all who could crowded around the cook fires. The officials of the school were kindness itself, assisting in every way possible, and giving the troops all the green onions they wished, always a treat to a soldier living in the open air. A horse of Troop "G," threw a spavin coming into this camp, and was left here until our return trip, when he was so far recovered as to march back to the Fort.

Left camp 7:00 A. M., September 12th, and marched to Silver Lake, a distance of eleven miles, arriving at 10:00 A. M. It was so cold this morning that the command had to indulge in a trot for half an hour before the circulation seemed just right. This camp was also in a grove, and for the cold, raw afternoon, provided too much shade. It was ample as regards room, and the water was good and most accessible. One of the troopers lost his belt and revolver while watering his horse in the lake, and although only the middle of September, the cold was so intense that the men



CAMP SECOND SQUADRON FOURTH CAVALRY.

were loathe to strip and recover the property, but a promised drink to the successful one met with many volunteers.

Left camp at 7:00 A. M., September 12th, and marched to Wamego, a distance of thirty miles, arriving at 3:30 P. M. The roads for the greater part of the day were level, but with some stretches of sand, and as it was our first cavalry march, our recruit horses and recruit troops were none too gay upon arrival, and the last five miles seemed unending, judging from the absolute quiet throughout the troop—a sure sign of fatigue. Our camp was at the edge of town, in an open blue grass pasture, and well fitted in every way. The water for the animals was given by the city, and was provided by a hose attached to a fire plug and emptying into troughs in the street.

Left camp at 7 A. M., and reached Manhattan at noon. Distance, fifteen miles. Road was level, with quite a little sand, making it hard going for the wagons. Camped in a grove beside the river at the edge of town. Water was obtained from the river, and was good, and camp suitable in all respects.

Left camp at 7 A. M., and reached Fort Riley at 11:30 A. M.; distance marched, seventeen miles. The squadron was met, near Three Mile Creek by the band and the first squadron of the regiment, and escorted to the maneuver camp. One camp occupied the most eastern point of the grounds devoted to camping purposes, and was on a gently sloping terrain between the railroad tracks and the hills. We found the water mains in place, and the squadron was camped in column of troops, with the officers' line on the right flank, nearest the hills. The troop kitchens were on the flank with the officers' tents, and the sinks on the left flank and lower ground, nearest the railroad. The grass had been mowed and stakes were placed designating the limits, and the hydrants at the head of the troop streets marked the place of the kitchens. The arrangement of the kitchens on the flank opposite from the sinks is certainly a wise sanitary precaution, particularly in the season of the year when the flies are active, as it is known what disease-carrying instruments they are. The drainage all being from the kitchen toward the sinks was another wise provision.

While on this subject, I call attention to the strict policing enforced during our stay. Each morning after reveille the entire camp turned out for police, and later, after the men had used the sinks, the excrement was covered with hay and grass, sprinkled with kerosene and burned. They were then covered with a layer of fresh earth. During the morning hour the picket lines were cleaned, and before retreat the camp had another thorough going-over. The refuse from the kitchens was kept in barrels that were scrubbed each day with boiling water, and no trace was permitted to remain on the ground in their vicinity. Scavengers called regularly and emptied the vessels and carried the contents two miles away, with instructions to burn the refuse. Lime, to some extent, was used around the barrels and in the sinks, but not

with the object of germ destroying. The kitchens and the camp were always ready for inspection, which were made by troop commander, a medical officer, and a member of the Inspector General's Department at different hours during the day, and the camp was pronounced by every one as a model, from a sanitary point of view. The tentage was new and ample, a Sibley tent for ten men, one for a ration storehouse, and a wall tent for an orderly room. Captains had a wall tent and the two subalterns occupied one between them. Sibley stoves were not shipped, and for the first week not needed: when the rains of the equinoctial period began, they were provided by the quartermaster at Fort Riley.

At the head of two of the troop streets we placed a large iron trough, and could easily water the animals in twenty minutes. Saddle-racks were provided, and equipments were protected from the rain by the men's slickers. The picket lines in front of the saddle-racks were used at first for grooming and feeding hay at night until the rain and mud proved too bad, when they were moved into the grass beyond the camp. The blue-joint, owing to the frequent rains of the summer, was five feet high, and the picket line stretched through it afforded all the grazing the horses cared to do in twenty-four hours. The grass also proved a great benefit in feeding the hay at night and keeping it from waste by disappearing into the mud. A mistake was made by not shipping canvas covers for the mounts, or taking them along. They could have been carried by rolling them in front of the saddles, fastening with a coat strap and securing the buckle above the breast. The cold, rainy nights the animals stood motionless on the lines, with humped backs, shivering with the cold and wet. Had we been provided with our canvas covers to have protected the loins and backs, they would have eaten most of the hay and kept in far better condition. One of the troop commanders fed about three pounds of oats during the noon hour and nearly divided the remainder for the night and morning, five at night and four at morning, and we all thought his mount returned to the post in the best condition, and this noon feeding is the only reason we can give for its better appearance. I have never seen it done be-

fore, but as our mounts are nearly all from the farm, where feeding three times each day is the practice, and with this experience for an example, I believe it would do well to further investigate this matter. In a camp of this kind, when the men and horses are so near each other, and in short marches as we made, being in camp at noon or before, I see no reason why noon feeding should not be tried for further report.

While at Riley the bread was baked in the post, and fresh meat issued from a near by car daily. Wood and forage were usually delivered, and, if not, then hauled from the side-tracks not far away.

Our transportation hauled the refuse from the picket line, and dumped it at a designated point a mile distant. Nearly every man in the command had a slicker, so that he could go about the camp and keep the upper part of the body warm and dry, but the mud was so deep during the rains as to keep the command with wet feet for hours at a time.

For maneuvers of this kind it does not seem essential to imitate war conditions so closely as to forbid all burdensome articles, looking to the health and comfort of the men, and I shall have my troop supplied with rubber boots next year. It would be a good idea if the service would furnish them, and apropos of this a staff officer, high in rank, sent an orderly to the post quartermaster the first rainy day with a note to send him a pair of rubber boots from the quartermaster's supplies.

The squadron had its adjutant, quartermaster, summary court, mounted its own guard, and was, in fact, a complete administrative unit, and I have never enjoyed more immunity from petty annoyances before, owing to the completeness of our administration. We were all anxious for a great deal of maneuvering, if one can judge from the fact that we anticipated the opening of the camp by eight days.

September 17th, the squadron spent three hours in squadron drill.

September 18th, troop drill in close and open order.

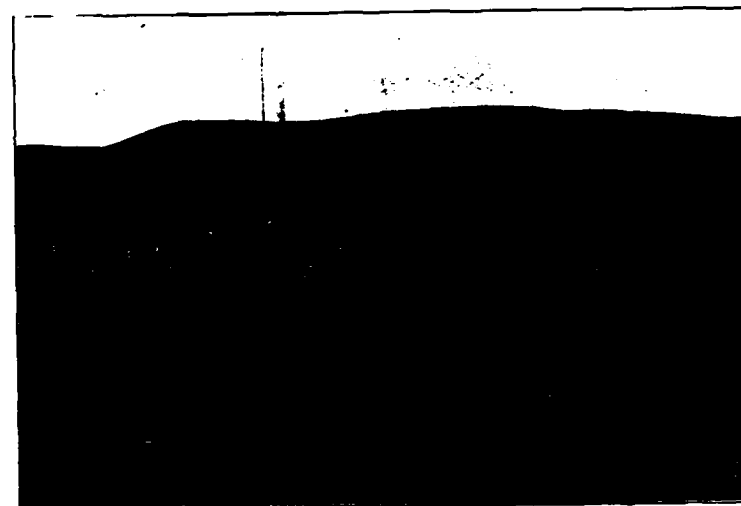
September 19th, squadron drill, extended order.

The squadron made the most of the fine grounds for maneuvering mounted troops, and derived much benefit from the week's work.

September 20th was devoted to cleaning the equipments and a kit inspection.

September 22d, regimental drill, close order, forenoon; afternoon, squadron drill, open order.

September 23d, afternoon, division drill, close order, and taking a typical battle formation—three arms present.



SECOND SQUADRON FOURTH CAVALRY.

September 24th, formation of an outpost for an army corps with exercise in attack and defense of same. In this problem the squadron formed the advance of the Blue forces, and made the contact with the Brown with its reconnoitering patrols, and then retired to a flank, and in such position to protect the batteries.

September 25th was a rainy day, so nothing was attempted.

September 26th, exercise of each regiment as an advance guard of an imaginary division, involving the employment of artillery. The squadron in the solution of this problem was divided into two commands, accompanying two Brown

forces, and covered the advance and made the contact with the opposing regiment, hanging on their advance until the Blues had deployed and advanced sufficiently to be under infantry fire of our command. The problems outlining imaginary forces were the unsatisfactory ones of the maneuvers. There are many reasons for this, but I will content myself by quoting two instances.

I was with the Browns in advance, and by dismounted fire action of a part of the squadron, caused four companies to deploy and advance immediately on my front. I retired 600 yards to a position held by the main body, but out to my right and front were two imaginary infantry battalions, designated by flags and represented by squads hidden in small depressions and the tall grass. The four companies came to within 400 yards of my position, when the squads with their flags now showing, opened fire, and as they enfiladed the advancing enemy and took part of the battalion in reverse, the umpire ruled them out of action. Now the two imaginary forces could not have been concealed in the terrain, as were the few men, and besides, the ground occupied would have been many times greater, so the advancing enemy under war conditions would certainly have discovered his error in time to avoid serious loss; but as it was, they were completely annihilated—by the umpires.

On another occasion, a regiment of infantry holding a position with three lines of resistance was opposed by one troop of cavalry, but both forces understood that the troop represented a vastly superior force, so that when a demonstration was made on the line of outposts, they would fall back to the supports, and the reserves advance. Well, before the problem started, the troop was in a ravine waiting to begin operations; a force of the enemy occupied the crest and opened fire. The umpire with the troop immediately notified the troop commander that his troop was out of action, and the problem never took place. The cavalry force being imaginary, the umpire nevertheless could see nothing but the troop, and could not differentiate what part of the vastly superior force one little troop of cavalry actually represented, and so ruined the day's work for these forces.

Had he fallen out two men and borne in mind throughout the day what the troop represented, the day would not have been lost. These are some of the funny, as well as serious, results, to be charged to imaginary forces.

September 27th, 29th, October 1st, 2d, 6th, and 7th, the squadron took part in the maneuvers of those days, consisting of contact of opposing armies, attack and defense of a convoy, three troops of cavalry and a light battery opposed to an infantry regiment as an advance guard to a division, and, in fact, the troops took part in every maneuver in some capacity, and officers and men acquitted themselves most creditably, and returned home thinking they had contributed their share to the success of the first army maneuvers.

October 8th we began packing the camp equipage for shipment by rail, and on October 9th broke camp and were escorted on our way by the band and first squadron of the regiment. Returning, the camps were Manhattan, Wamego, Ross-ville, Topeka, Osawkie, Winchester, and arrived at Fort Leavenworth on October 15, 1902, having marched about 500 miles. When we left the post the horses were a new mount, and most of the men were recruits, one of the troops having taken up twenty-two for duty three days before, and having had a mounted inspection with pack-saddles two days before with twenty-eight men present who had never seen a saddle packed. The troops returned to the post in condition for a real campaign, well shaken into the saddle and competent to pitch and strike camp and care for themselves under almost any circumstances.

The sick for the command was three per cent., and the men returned in fine physical condition. We had no sick horses, and the sore backs were less than two per cent., and none of them so serious but what they might have been ridden. One horse was left at Topeka, and two, disabled from kicks, were left at Riley.

Upon leaving the post the horses looked fat and soft, and upon their return looked thin, but were hardened and in the best of condition for work. Looking at the squadron en route on September 8th, and comparing them with their appearance and condition on October 15th, one would say they had

lost weight and flesh, but while they had actually lost flesh they took on weight, as the horses of one troop were carefully weighed upon both dates, and upon October 15th, averaged 15.1 pounds more than on September 8th, speaking volumes for their care while undergoing their first test of real cavalry work.

Our troops were somewhat depleted by the detailing of some ten to twenty mounted men daily as orderlies for the staff and visitors. All know the curse of dissipating a mounted force in this manner, and ruining its effectiveness when real work is required. One troop of the Eighth Cavalry did orderly duty and nothing else, and in future it is to be hoped that two, or even a squadron, be detailed for this necessary duty, with a view that those taking part in the maneuvers will not be called upon for a single mount.

I have heard it rumored that a change in the time of the year is contemplated for the maneuvers. Should it be earlier, much inconvenience and suffering to men and horses will result from the heat of Kansas and the deadly mosquito, and, if later, to avoid the equinoctial storms, then it will be a question of cold days and nights and heavier clothing. If a change must be made, it should be later in the year, October and not August.

SOME COMMENTS ON THE MANEUVERS.

By CAPTAIN T. R. RIVERS, FOURTH U. S. CAVALRY.

PURSUANT to the maxim, that the best way to preserve peace is to have a thoroughly efficient army, it has for a number of years been the policy of the leading nations of the earth to gather together at some time each year as large a part of their military forces as money and circumstances will permit, for "annual maneuvers," a mimic warfare, in which as nearly as possible the conditions of actual warfare are simulated.

In the past it has for many reasons been impracticable to do anything of this kind with our regular army. From its

small size and the consequent necessity of scattering it over the thousands of miles of our western country to keep in subjection the various Indian tribes, thus gradually opening up our western empire to settlement, concentration for maneuvers was of necessity precluded. The nature of our army's service on the frontier also largely superseded the necessity for such maneuvers.

For the past few years though, "Poor Lo" has no longer given us the necessary instruction in "security and information," although we have had a fair substitute from "The Don" and "Our Little Brown Brothers." However, recognizing the fact that to stand still is to retrograde, the War Department this year, for the first time, instituted maneuvers on a comparatively large scale in our service, by assembling at Fort Riley, Kansas, a fairly good sized body of regular and State troops.

It is not my intention to discuss these maneuvers at length or in detail, but some points have occurred to me in connection with them that seem worthy of mention.

In actual warfare, other things being approximately equal, the bullet is the final arbiter, but in this mimic warfare it is necessary to arrive at conclusions without the leaden messenger, hence umpires have to be resorted to.

The word "umpire" is defined to be "one agreed upon as a judge, arbiter or referee in case of conflict of opinion, especially a person selected to see that the rules of a game are enforced, and to decide disputed or debatable points." The very definition of the word presupposes on the part of any umpire, technical expert knowledge of a high order of the conflict in question or of the game being played. Certainly for decision of disputable or debatable points in the game of war the umpire should have that expert knowledge to a marked degree; otherwise his decisions and rulings will not only carry with them no weight, but will do positive harm by creating dissatisfaction and discontent. Not only should an umpire possess this technical knowledge to a marked degree, but it should be so well known that he possesses it that the majority of those to be umpired are ready to concede the fact.

The mere fact of detailing an officer as an umpire in this game of war, or putting a white band around his arm, can not make him an acceptable umpire in fact. Unless the umpire has the confidence and respect of all as to his technical professional knowledge, his opinions and decisions are valueless as instructions to others. Man (and officers are but men) is so constituted that he dislikes criticism anyway, and to be criticised by some whom he is morally sure knows no more than he does, and possibly not so much, about the rules of the game being played, is especially irksome and obnoxious.

In maneuvers of any magnitude it is of course essential that there should be an ample number of umpires with each force, so that absolutely every move of any importance will come under the observation of at least one umpire.

In the maneuvers at Riley it did not seem to me that the ideal conditions for umpires were always fulfilled, and this without the fault of those detailed on that duty or of the authorities detailing them, but rather through force of circumstances, lack of time for preparation and the necessity of utilizing every one.

In future maneuvers a sufficient number of well equipped officers should be ordered to the place of assembly several weeks beforehand and should be given the proposed problems. They should then thoroughly familiarize themselves with every part of the terrain if possible, studying that in conjunction with the proposed problems, so that when they go on the field with troops they can anticipate all conditions as far as human foresight can, and be prepared to render instant and correct decisions, that is, correct within the smallest limit of human error. Of course, in addition to this they should have access to all known resources for becoming familiar with the supposed effect of all kinds of fire, and should so familiarize themselves with these things that they may speak by authority, so far as it is possible to determine such things when there are no bullets in the guns.

During the Riley maneuvers all officers were invited to be present at the reading of the umpire's reports and decisions on the movements in connection with the solution of

the different problems, and this invitation was taken advantage of by large numbers. Now it seems to me that this public reading, or discussion, is wrong. The great Napoleon has said, "Show me a general who has made no mistakes and I will show you one who has never made war." So naturally the umpire's report was largely made up of the mistakes that had been made, giving commendation of course when deserved. Now the average man is so constituted that it is difficult for him to disassociate the honest pointing out of his mistakes from criticism.



PONTON BRIDGE BUILT BY ENGINEERS.

So there was great danger that the impression left on many minds, unconsciously perhaps, was that of having been unduly criticised before the multitude, though of course there was no such intention. If one in command of troops, either in this mimic war or in real war, makes a serious mistake on the field of battle, he is very apt to be keenly aware of it, and I do not believe that it does any good to publish the fact. It seems to me that it would be better in future to confine the reading of the umpire's reports, and the discussion thereon, to the parties intimately concerned. Of course the theory of these public discussions was, that all should profit by them, but I believe that the harm was greater than the good.

One of the first requisites of any maneuver ground of course is that it be large enough for the number of troops engaged, so that the opposing forces will not come into immediate contact—big enough to permit the strategical movements that suggest themselves as proper to the opposing commanders. With even the forces at Riley this year (about 3,500 regular troops) this condition was not fulfilled.

The reservation, as big as those of us who have been stationed there have been accustomed to consider it, is so small that all soon became familiar with its commanding points and salient features. As the troops were absolutely limited to the confines of the reservation, the result was that the tendency on one side or the other was to hurry and rush to gain the known points of command, because each commander, though technically ignorant of his opponent's orders, could, from his knowledge of the reservation, fairly well figure out his instructions and probable movements. The consequence was that often there was a great rush for such points as Morris Hill or Forsyth Mound, or some other strong point of command, the opponent being temporarily ignored, for more than half the battle was in getting to one of these points first. With greater distances and the consequent greater uncertainty this would have been avoided. Of course, this precipitancy would also have been effectually avoided had there been bullets in the guns, but it is practically impossible to make people in maneuver act as though there were bullets in the guns.

If these maneuvers are to be a regular yearly feature, and it is to be hoped that they are, it certainly is desirable to obtain a large enough territory to allow the opposing forces to start a sufficient distance from each other to admit of some strategical movements, to introduce a little more uncertainty as to the time and place of contact.

Riley is an ideal place for maneuvers if in some way it could be arranged to use the surrounding country and have the government pay for the damage to crops and fences.

In future maneuvers the government should provide beforehand a sufficient number of good horses to mount orderlies and distinguished visitors—I mean provide horses other than

those taken from cavalry troops, so that the latter can be left intact. A certain number of these horses should be furnished to each division and brigade headquarters, and also to each infantry regiment, for the mounting of the necessary orderlies. Certainly an extended infantry regiment cannot be controlled by sending messages by men on foot.

Spectators at all maneuvers should be absolutely controlled and made to keep hidden—certainly when on or anywhere near the theater of operations. Frequently it hap-



ELECTRIC LIGHT PLANT—ENGINEERS.

pened at Riley that a band of spectators was mistaken for the enemy's force, thus deceiving the commander of the troops. As to concealment, umpires, too, should be in evidence as little as possible, consistent with the performance of their duties, for fear of revealing the position of the forces they are with.

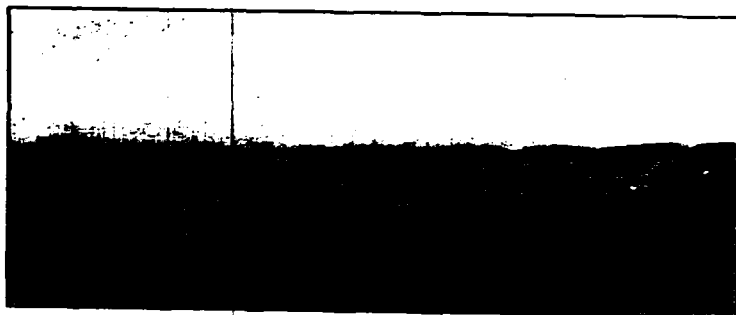
Taken all in all, though, the maneuvers at Riley this year were eminently successful, phenomenally so for the first attempt at anything of this kind on so large a scale, and I believe there was no one engaged in them who did not profit largely. If any one did not profit by them, and knew no

more on coming away than before going, then it must have been his own fault.

It seems to me that as to time, distance and terrain—about these three things in their correlation to each other in the handling of troops—the instruction gained at these maneuvers was invaluable.

It was also clearly shown how apt any large body of troops, once deployed, is to get absolutely out of the control of the commander, and how the real control must ultimately depend upon those actually on the firing line.

This brings forcibly before us the necessity for intelligent and thorough instruction of individuals, particularly company officers and group leaders. It also emphasizes the necessity for thorough instruction in the transmission of intelligent and reliable information—the carrying of messages properly—on the field, so as to keep the commander, as far as possible, in touch with his troops and informed of what is observed of the movements of the enemy.



GENERAL VIEW OF CAMP.

From the *Royal United Service Institution*, London.

These maneuvers for the land forces took place at Fort Riley, in Kansas, from the 20th of September to the 8th of October. Although the number of troops assembled at this post amounted to nearly the strength of a division, the exercises could in no way be compared to the ordinary divisional maneuvers of European powers. As a matter of fact,

there was no general idea, but merely a series of different schemes for each day, or even half day. It would, therefore, be both useless and idle to enter into the details of these somewhat unimportant operations; we will thus confine ourselves to generalities, which may possibly prove more instructive. The corps assembled at Fort Riley consisted of the Sixth, Eighteenth, and Twenty-second Infantry and the Fourth and Eighth Cavalry Regiments, one Engineer battalion, the Sixth, Seventh, Nineteenth and Twentieth Field Artillery Batteries, the Twenty-eighth Mountain Battery, No. 3 Ambulance, the Third Field Hospital, and a signaller's detachment, the whole under the command of Major-General Bates. The contingent of the National Guard was formed of two infantry regiments and two field batteries from Kansas, a Colorado and an Arkansas battalion. Advantage was taken of this concentration to make certain units carry out experimental marches; the Second Infantry Regiment, for instance, had to do eleven marches through a most difficult country in order to reach their destination. The following appear to be the chief observations to be made on the maneuvers:

1. *Great weight given to details of field service.* A great deal of time was devoted to the formation and to the duties of outposts, guards, and advanced and rear guards.

2. *The relatively large amount of time the director of the maneuvers found necessary to devote to close formations.* This was found to be essential, owing to the want of cohesion of units unaccustomed to combined movements. As everyone knows, units have hitherto been very widely split up and scattered in the United States army.

3. *The serious inconvenience arising from the dearth of horse artillery batteries to attach to cavalry detachments.* When it was attempted on the 30th of September to form a cavalry brigade to attack a convoy, it was found necessary to attach a mountain battery to it, as the lightest and most mobile unit of the United States artillery.

4. *Condition of the troops.* Notwithstanding the high temperature during the nineteen days of the maneuvers, the proportion of sick was only three per cent.

The artillery showed a dash which makes it the most brilliant arm of the Union: its movements were carried out with extreme rapidity and with a profound contempt for obstacles. The daring of the Twentieth Battery, on the 26th of September, in dragging their guns by hand up an apparently inaccessible hill was the subject of much remark. It may be added that the Fort Riley maneuvers furnished a

further proof that the National Guard is not a force that can be blindly depended upon for either its endurance or zeal. The War Minister and his colleagues will evidently have to make long and persevering efforts to introduce grand maneuvers as a regular thing into the National Guard. On the other hand, an experience such as this is not calculated to encourage the different States to vote funds for the movements of troops for this sort of operations.—*La France Militaire*.



THE NEW LANCE-BOAT OF THE GERMAN ARMY.

THE FIRST STEP IN THE CONSTRUCTION.



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A MOST important demonstration of the practical use of the new lance-boats, now being furnished to most of the German regiments, was given during the recent great maneuvers. They are of the most simple construction of lances and sail-cloths, or tarpaulins, and the question of their being put together, as the result of constant drill, has become a question of moments rather than of minutes.

A most exciting scene was the rapid crossing of the river by a corps of cavalry, all regiments of which now carry, when on campaign or field duty, the necessary outfit for the construction of these lance-boats. The squadrons came to the river on a trot, dismounted, unsaddled their horses, un-

DRIVING A DOUBLE TANDEM FOR CROSSING A RIVER.



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THE NEW LANCE-BOAT.

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FINISHED FRAME OF LANCES BEFORE CLOTH IS PUT ON.

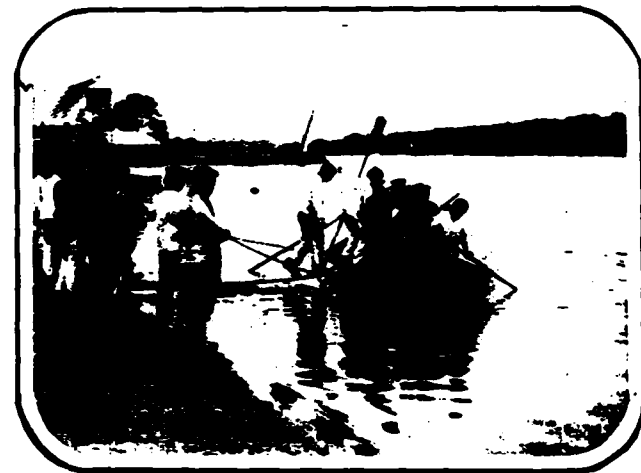


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loaded the lances and cloths, and in a few seconds the building of the boats was under way.

Each horse can be loaded with the paraphernalia for a

FINISHED BOAT OF LANCES AND SAIL-CLOTH.



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single boat, but this is so placed that the animal can take any gait or clear any ordinary obstacle. The men unload, construct the boat, and have it afloat, with themselves and horses aboard, in eight minutes, and they can take it apart and have it reloaded inside of two minutes. The boats are so steady on the water that they cannot be overturned. Each boat has twenty-four water-tight compartments, and should ten of these be pierced by shot, the remaining fourteen would keep it afloat.

Every test during the late maneuvers had a successful result, and the foreign officers and critics, who watched them carefully, were unanimous in their praises of this new means of crossing streams and rivers for large bodies of men.

EMBARKING ON THE BOAT TO CROSS A RIVER.



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LEGAL VS. ILLEGAL ORDERS.

"To justify, from a military point of view, a military inferior in disobeying the order of a superior, the order must be one requiring something to be done which is palpably a breach of law and a crime or an injury to a third person, or is of a serious character (not involving unimportant consequences only), and if done would not be susceptible of being righted. An order requiring the performance of a military duty or act can not be disobeyed with impunity unless it has one of these characters."—*Extract Digest of Opinion Judge-Advocate-General.*

In the "Annals of Iowa," July, 1900, the late Surgeon-General, William A. Hammond, U. S. Army, furnishes a paper on General Nathaniel Lyon which contains an interesting story based on what the latter considered an "unlawful" vs. "lawful" order from his commanding officer. The incident occurred at Fort Riley, Kansas, in 1855, both officers being stationed there at that time. The story cannot fail to interest officers of the army, and may serve the military lawyer. For this reason, as well as the desire to furnish the readers of the JOURNAL with "military incidents," space is given in these pages to the story.—[EDITOR.]

LYON had the utmost regard for law as distinguished from regulations or orders from the commanding officer, and frequently declared that he would disobey any order that was illegal. The then commanding officer was of a very unfortunate mental organization and greatly disposed to assume powers that did not belong to him. Finally Lyon had an opportunity of setting up his judgment in opposition to a military order, and he did not hesitate a moment as to the course to be pursued. One of the officers brought out with him from the East with his family a good-looking servant maid, who at once began to receive the attentions of the enlisted men. The one she especially favored was the Corporal Allender, the incident of assault upon whom by Lyon, I have already related [a few days previous Lyon had abused the corporal, for which he most humbly apologized], and straightway the corporal applied to his commanding officer for authority to marry, and that his wife might be rated as a company laundress. Lyon accorded his permission, and then the girl announced to her employers that she was about to

enter upon the marital relation, and that they would not in future receive the benefit of her services.

The officer went at once to the commanding officer of the post, a man who, as I have already said, was disposed to be arbitrary and tyrannical, and obtained an order from him prohibiting Corporal Allender marrying Sarah Ahren. This order was sent to Captain Lyon with instructions to see that it was obeyed.

I was present in Lyon's quarters when he received the order, and I have rarely seen a more striking instance of intense rage than he exhibited. He fairly foamed at the mouth, as he walked up and down the floor, gesticulating violently, and stammering over his words in a way that rendered them almost incoherent. It was very clear that he intended to disobey the order, and that, too, in a way that should leave no doubt relative to the motives by which he was actuated. After he became a little calmer, I understood that he regarded the order as illegal, and as an attempt to interfere most unwarrantably with the rights of a soldier of his company. There is no law or regulation prohibiting officers or men from marrying, but there was a regulation to the effect that soldiers' wives should not be allowed with the troops without the consent of the company commander and the commanding officer of the post. The only object that the corporal had in getting his captain's consent to his marriage was that his wife might be made a laundress, receive a ration, and be the recipient of quite a snug little sum monthly for washing the clothes of such of the men as chose to employ her. There was no power in the United States to prevent the man and woman marrying, but there was power to keep her out of the garrison. The commanding officer's order was therefore manifestly illegal. This was the ground that Lyon took, and I thought he was right, and still think so.

"Corporal Allender shall marry the girl if he wants to, and no illegal order like that shall prevent him," he exclaimed, as he paced the floor. "Orderly," he continued, opening the door and calling the soldier who stood in the passageway, "tell Corporal Allender to come here."

In a few minutes the corporal made his appearance, and

making the proper salute, stood at attention. "Do you want to marry Sarah Ahren?" inquired Lyon, his small eyes sparkling with excitement. "Yes, Captain," answered the man, saluting. "And she wants to marry you?" "Yes, Captain," with another salute. "Then come here to-night at 8 o'clock, both of you, and I'll perform the marriage ceremony." "Yes, Captain," and again saluting, the man turned on his heel and marched off. "I want you to be present as a witness," continued Lyon, addressing me. "I'll show old — that he can't issue illegal orders to me with impunity." "Yes, I'll come," I assented, laughing. "But we shall both be arrested and tried, and Corporal Allender will be reduced to the ranks. "I'd like nothing better than to be tried on the charge of disobeying such an order as that," he exclaimed excitedly. "All right," I replied. "I'll aid and abet you to the extent of my power. The order is illegal certainly; but you don't propose to marry those people?" "Yes sir; marriage is a civil contract. I shall read them a chapter from Blackstone, make them a short address, ask them some proper questions, and pronounce them man and wife. Then we'll see what old — will do."

At eight o'clock I was in Lyon's quarters again, and shortly afterward Corporal Allender and his pretty sweetheart, accompanied by two soldiers as witnesses, entered the room. The happy couple stood up in front of Captain Lyon while he read an extract from Blackstone in regard to the nature of marriage. Then he made some excellent remarks on the duties of husband and wife one to the other, and finally asked them whether they took each other for husband and wife, and intended to live together in the bonds of wedlock so long as they both should live. The answers being satisfactory, he pronounced them man and wife, and forthwith made out a certificate to that effect, which I and others witnessed. Many years ago, Mrs. Allender, in order to recall herself to my recollection for a purpose that she had in view, sent me this certificate, and it remained in my possession until I gave it, a few years since, to my friend, Charles Aldrich, for the historical museum of Iowa, of which he is the founder and curator. It reads as follows:

"Robert Allender and Sarah Ahren wishing to enter upon the marriage relation, I have pronounced to them the solemn obligations thereof, which they have assumed, in the presence of the accompanying witnesses. N. LYON.

"Fort Riley, Kan., April 23, 1855.

"Witnesses: William A. Hammond, Charles E. Hammond, John Trueman, Robert Long."

That night the commanding officer heard of Lyon's contempt of his order and my countenance, and before we went to bed we were visited by the adjutant and placed in arrest. I was released the next morning in order that I might attend to my duties, but Lyon was kept confined to his quarters for several days. In the meantime the commanding officer awoke to the conception of the fact that he had made an ass of himself, and Lyon also was released. No charges were preferred.

It is not to be supposed, from this account, that Lyon was an insubordinate officer. No one could have been more scrupulous than he in obeying to the letter every legitimate order that he received. No one in the army is required to obey an illegal order. He may, it is true, be compelled, by physical force, to do what he is told to do, whether the order is or is not in accordance with law, but he has a clear right to refuse obedience to any command that is manifestly contrary to law, and the officer giving such an order would probably be punished for his assumption of authority were the case brought to the notice of his military superiors. Any one, however, who, on the ground of its being contrary to law, refuses obedience to the order of his commanding officer, does so at his peril.

An incident that occurred soon after the one I have mentioned gave Lyon an opportunity of showing the distinction that existed in his mind between an unjust and an illegal order. Two settlers named Dixon, and their families, [there were four brothers, James, John, Thomas and Patrick Dixon; they remained in the neighborhood, prominent farmers and business men, and many descendants also], had settled upon land outside of the military reservation, as they had a clear right to do. For purposes of his own, of a highly

dishonorable character, the commanding officer wanted them to move off, but they declined to do so. Determined to compel them to go, he extended the military reservation so as to include their settlement, and then ordered Lyon with his company to go and pull down the Dixons' houses, and put them and their families off the reservation. Lyon was, doubtless, selected for this work because he had stated as his belief that the action of the commanding officer was wrong, and that the men had a right to the land upon which they had settled, and further, with the expectation that he would disobey this order as he had a previous one. As I was considered to be Lyon's aider and abetter, I was ordered to accompany as medical officer, this expedition of a company of infantry against two men and some women and children.

But Lyon knew the difference between an outrage and a violation of law. He had been informed by his military superiors that the land upon which the Dixons had settled was a part of the military reservation. Whether it was or not was none of his business. That was a matter that specially concerned the Dixons, and that might safely be left for them to bring to the notice of the highest authority. So he and his command proceeded to obey the order. The Dixons were at first a little disposed to resist, but Lyon told them that if they fired on his men he would return the fire, and that as to the ultimate result there would be no doubt. So they submitted. They went off, and Lyon with yokes of oxen tore down the houses and effectually demolished them. Then after his bloodless victory he marched back, and set himself to work preparing charges against the commanding officer, of corruption and other crimes, upon which he was not long afterwards tried and dismissed from the service.

COMMENT AND CRITICISM.

COMMENT ON OUR REGULATION STIRRUP.

BY CAPTAIN E. M. SUPPLEE, FOURTEENTH U. S. CAVALRY.

THE fourth reason for the use of the present stirrup given by Major Parker, U. S. Cavalry, Assistant Adjutant General, in the October number of the CAVALRY JOURNAL, seems to answer his own objections most overwhelmingly and some to spare.

Any one who has campaigned in winter realizes the protection from cold, snow and wind the present hooded stirrups give and how readily this can be materially increased by the use of gunny sacks, old or worn out clothing, or even good clothing, as the intense cold sometimes calls for this sacrifice on the part of the soldier. The present hooded stirrup certainly fulfills all the requirements he mentioned as "principal functions of the stirrup."

That a tendency to ride with a *long* stirrup is found among many cavalymen using the hooded stirrup, I admit, but the Major also admits that there is just as strong a tendency to ride with a *short* metal stirrup, thus leaving us but the one natural resource in either case, and that is to teach the recruits to ride with stirrups of the proper length from the first day he mounts with the saddle.

I agree that there is nothing more unsightly than the long stirrup—the tongs-across-the-wall seat affected by many officers and men in our service. To see one of these riders coming down the pike with feet sticking out over both wheel tracks, makes one want to reach for his gun; and to try to take a sociable afternoon's amble beside such a rider, with his stirrups constantly striking you, makes you want to reach for the ax.

"The irresistible conclusion is that our stirrup does not teach riding." True, nor does any other stirrup. It requires a horseman, who knows how to ride and how to correct faults in the pupil, to teach riding.

I am of the opinion that the present stirrup is more comfortable and safer, and, therefore, better suited to our system of cavalry service than the metal stirrup of foreign or native make.

THE CAVALRY POST OF FORT RILEY, KANSAS.

BY HON. P. G. LOWE.

REFERRING to the article published in your October number under the head of "The Cavalry Post of Fort Riley, Kansas," I am sure that the desire of the Association is that all historic statements be as near correct as possible. The JOURNAL will be referred to as authority upon all matters therein published, and for this reason I venture some criticisms.

I find no authority for saying that the junction of Kansas River and the Republican was in Nebraska. Until the organization of the Territories of Kansas and Nebraska in 1854, this was a part of the Indian Territory, previously up to what time I do not know, called Missouri Territory.

There was no military or emigrant road to or diverging from Fort Riley at the time of its location. Neither military nor emigrants traveled that way.

Fort Riley was not intended to take the place of Fort Leavenworth as a depot of supplies. It had no climatic advantages over Fort Leavenworth. Troops could not take the field earlier nor remain out later, and there was but 139 miles difference in distance. But Riley stood at the gateway of what was then a hostile Indian country, the finest natural grazing grounds in America, then covered with countless herds, upon which the nomadic tribes ranged to the mountains, and from the British possessions to Mexico, from Platte to Arkansas being the best watered and most

productive for subsistence. At Riley the muddy roads, the deep streams without bridges, many not fordable and almost impassable in spring, were left behind, and the country beyond presented few obstructions to rapid movements in any direction, hence its importance.

The military road from Fort Leavenworth to New Mexico ran west to what is now known as eight mile house, thence south of west to Kansas River about sixty miles from Fort Leavenworth, crossing the Kaw by Papan's ferry, where Topeka now is, thence southwest to Council Grove, 120 miles from Fort Leavenworth. In going to Riley the road to New Mexico was followed to the crossing of Soldier Creek, four miles north of Topeka, thence as it now runs. The military road from Fort Leavenworth to the Oregon Trail diverges at the above mentioned eight mile house in a north-westerly direction, intersecting the emigrant road from St. Joseph, Mo., east of where Marysville, in Marshal County, now is, and thence to and up the Platte. This continued the military and emigrant road from Fort Leavenworth to the California and Oregon Trail until railroads took its place. So that the roads from Fort Leavenworth to the Santa Fe and Oregon Trails diverged eight miles west of Fort Leavenworth, neither of them going near Riley.

The figures under the Ogden monument should read 1855 instead of 1852.

RANGE HORSES FOR CAVALRY.

BY VETERINARIAN OLAF SCHWARZKOPF, THIRD CAVALRY.

ALTHOUGH unacquainted with the policy of this journal as regards discussion of its contributions, I feel that I should not withhold from publication some impartial observations and hard, practical experience with range horses for cavalry service. Major Woodward certainly presents the favorable side of the subject quite persuasively in the October issue, and, no doubt, he did personally succeed in selecting

from the ranges of Montana, Wyoming, North and South Dakota, horses of "good size and form, hardy, free from disease, tractable and very amenable to discipline and training." But I am forced to believe that his success stands as exceptional, and will remain exceptional for years to come, or until, by government control or practical help and advice to the Western breeder, we can at any time and at certain places find such suitable stock to select from for our mounted service.

This is not the case at present. We are just now undergoing an experience at Fort Assiniboine, Mont., in remounting the Third Cavalry, which brings out this fact very clearly. We had to take some range horses with us from San Francisco: were given other range horses from the Thirteenth Cavalry at Fort Assiniboine, and are still receiving additional range horses as furnished by a contractor in South Dakota. But what a collection of horseflesh they are! To be sure they are healthy and sound as far as ordinary defects go, but no man can conceive such a variety of faulty conformation, ugly shades of color, lack of brains, and enmity towards mankind, until he has seen and handled these unfortunate brutes. Of course, we account for much of this on the drained horse market, for good and serviceable cavalry horses are scarce and dear, and it seems that we have to take what is left to offer or remain dismounted.

But as our present experience with range horses may also be looked upon as exceptional by others, let us remember what we have learned during the Philippine campaign about the fitness of the range horse for cavalry service. In August, 1900, I accompanied the horses of the last squadron, Third Cavalry, on a horse transport to the Islands. These horses were all Virginia farm-bred animals, as even a lot of horses in size, color and intelligence as could well be selected under our system of purchasing remounts. With them we had a pack-train of mules of Missouri breed, and finally seventy-five Utah range horses which we received at San Francisco. In loading these animals on the transport, we were able to get the 250 Virginia horses over the bridge-plank into their stalls in single file like soldiers within about two hours. The mules followed suit in much the same order. But, lo!

what time and temper had to be wasted with the Utah range horses; most of them had to be dragged with ropes and pulleys up the bridge-plank, again down the stairways and again into their stalls. When the steamer put out into sea and began to roll and pitch perfect pandemonium reigned among them; they would flash their eyes in red and green, and roll the white of their eyes heavenward; they refused to eat, would kick at their stalls, and try to plunge out of them; some screamed from fear like an insane man confined in a straight-jacket, and others became afflicted with "ship-staggers" from frantic excitement. All the while the Virginia farm-bred horses and Missouri mules behaved reasonable, and accepted their often unpleasant situation as a matter of course, and they remained healthy throughout the voyage. But the Utah range horses were more or less seriously bruised; they caught colds, distemper, pneumonia and everything wrong that came in their way until their arrival in the Philippine Islands.

Some utilitarian might now say: Never mind these little things; you got them there. Yes, but in what condition for service? While our farm-bred horses had remained in good spirits, had eaten all that was coming to them, and looked well and clean after a plunge into the ocean in swimming ashore, and were immediately saddled and ready for work against the insurgents who were watching us from the nearby hill, the Utah range horses presented a sorry spectacle. They had become lean and haggard from worry and fear and failure to eat, and dropped their heads in a downcast mood. Nevertheless they could not be saddled without roping them, and they could not be shod without throwing and hobbling them. Neither would they lead in column, and one troop which was at once ordered to advance had to leave them behind as a burden and perhaps a menace.

Looking backwards over two years of service in the Philippine Islands, I have this to state as a veterinarian: Taken as a whole, the farm-bred horses, of which the Third Cavalry had a goodly number, were a healthy lot of animals, free from vices, tireless in work, able to subsist on a strange food, withstanding a new and trying climate well, and calm and

sensible in danger. If sickness or injury befell them they appreciated proper attention, treatment and nursing, evinced a healthy recuperative power, and thus were soon returned for duty. Taken also as a whole, quite the opposite must be said of the range horses. With few exceptions they remained dull and intractable, of little or no service, and a large proportion of them were condemned without ever having done a day's work. While from conventional belief we all considered them hardy horses at home, perhaps so from a life and climate to which they are particularly adapted, they certainly lose all stamina if taken out of their accustomed surroundings, food and climate, and easily succumb to sickness more or less protracted. On account of their suspicious nature and inherited shyness they are untrustworthy anywhere, always get hurt or injured from pure evasiveness, and if so injured they refuse to be handled or treated, thus remaining more or less on the sick list. From their unruly temper they cannot refrain, even under punishment, from biting, kicking, or in other ways injuring the other peaceful and valuable horses. Moreover, in attempts to break them many a good soldier has been severely injured, and we all know the so-called "man killer" in the troop stable who sends men with broken ribs, or arms, or legs, into the hospital. One of our best riders was drowned in a river in an attempt to break such a range horse.

No other statements are needed to show that the range horse, not as he might be if properly bred for the army, but as he is, does not fulfill the requirements essential to the effectual performance of the work of our cavalry horses. Aside from his general poor and dissimilar conformation, which springs from mating the broncho with the totally different type of the heavy draft horse, his physical infirmity, as shown above, renders him a costly object for the government. But above all, the narrow limits of his mental powers, which show themselves so prominently in his lack of understanding, good will, docility and courage, should strike him off the list of remounts for a cavalry service like ours, in which so much depends, not only upon the individuality of the soldier, but likewise upon the individuality of his horse.

EDITOR'S TABLE.

In the heading for the excellent description of the Saumur School in this number of the JOURNAL, an unfortunate mistake is made in the name of the author. It should be "Captain T. Bentley Mott" instead of "Captain Bentley Mott." The originals of the splendid illustrations for this article were sent by Captain Mott, and to him and to the photographer who furnished them, the thanks of the Cavalry Association are hereby tendered.

Pursuant to the wishes expressed in several letters from members of the Association, the Council has decided to extend the time for the contributions for the 1903 prize essay, from April 1, 1903, as originally announced, to October 1, 1903. This change is made in order to give all competitors, including those in our foreign possessions, ample time to complete their essays.

The illustrations for the "Biography of Emilio Aguinaldo," published in the commencement of this number of the JOURNAL, are furnished by Mr. H. H. Stratton, 905 Market Street, San Francisco, Cal., and Loverman Building, Chattanooga, Tenn. They are selections made from his "Scenes in the Philippines, Cuba, Porto Rico, and the Hawaiian Islands," which is a collection of 160 photogravure reproductions, printed in two colors, of scenes representing the conditions, customs and life of the people of the Islands. The book is nicely bound in cloth, and makes a valuable keepsake for the soldier.

BOOK REVIEWS.

Customs of the Service.* The Hudson-Kimberly Publishing Company has lately added to its already large list of military books an admirable little volume on "Customs of the Service," by Colonel James W. Powell, U. S. A. This volume is a revised edition in which are incorporated many essential and valuable emendations, gained from legislative enactments, general orders and recent experiences, which are lacking in the first edition, hurriedly prepared during the season of active operations. "The importance and influence in our military life of knowing the fundamental principles and how things should be done from the start in military life is imperative," the writer remarks in the preface; and the book is designed to supply the want of this knowledge by describing the various duties, etc., in a general way, reference being made to such books and regulations which contain the necessary information in detail.

Soldiers of the King.† In a very nicely printed and well gotten-up book, with the title of "Soldiers of the King," Colonel G. J. Harcourt, late One Hundred and Second Foot, has collected the concise accounts of all battles, the names of which are borne on the colors of the British and Indian armies, with names of regiments engaged, and also a selection of important and decisive actions not as yet on the colors; the whole forming a historical record of 200 engagements, from the year 1689 to the Boer War of 1899 to 1902. This means that it is a collection of 200 victories won by British arms, and it is interesting to note that every nation on the globe is represented as the defeated. Considering that the United States has had two important wars with

*"CUSTOMS OF THE SERVICE. THE ARMY, NATIONAL GUARDS AND VOLUNTEERS." By Colonel James W. Powell, U. S. A. Revised edition. Hudson-Kimberly Publishing Company, Kansas City, Mo. 1902.

†"SOLDIERS OF THE KING." By Colonel G. J. Harcourt, late One Hundred and Second Foot. Gale & Polden, Limited, London. 1902.

Great Britain, it is instructive and gratifying to note that only four victories are scored against us, namely: Detroit, August 16 to 21, 1812; Queenstown, October 12, 1812; Bladensburg, August 24, 1814; and Niagara, December 18, 1814. We can score quite a few more.

The White World.* The book is a collection of unique and picturesque phases of life in the Arctic regions. It contains hundreds of striking examples of American bravery, endurance and heroism, told in simple, interesting narratives, by twenty-two members of the Arctic Club of America. The accounts, based as they are on personal experiences, bring one into close and familiar touch with the hardships, the perils, and the fascination of life in the White World. The book tells better than anything previously written on this subject why so many men are willing to brave discomforts, privations and death itself to reach the long sought goal of the North Pole, and why this quest has such a fascination and ever lively interest to men of an adventurous inclination. Many of the stories are of peculiar interest to army men, and the subject itself, arctic exploration, is one that has been closely connected with the army.

Practical Hints for Mounted Infantrymen. A second revised edition of "Practical Hints for Mounted Infantrymen," by Captain B. L. Aubry, Second Essex Regiment, has just been issued, giving many valuable hints to the "mounted infantrymen." They are compiled from notes made on service. Gale & Polden's Military Series.

Patrolling in South Africa. Captain C. T. Vandee, of the Sixteenth (Curren's) Lancers, has presented a useful booklet on "Patrolling in South Africa," with hints on training scouts at home. It will be found very useful to the soldier, and furnish him many valuable points in his efforts to qualify for these duties. Gale & Polden's Military Series.

*"THE WHITE WORLD." Life and adventures within the Arctic Circle. By R. Kersting, New York. Lewis Scribner & Co. 1902.

AMONG THE EXCHANGES.

THE UNITED STATES.

The Journal Military Service Institution. GOVERNOR'S ISLAND, N. Y. The *Journal* for November reproduces from French and Belgium service journals an account of the recent international long-distance Brussels-Ostend ride, won by the French Lieutenant Madamet, Thirteenth Dragoons. It also gives space to accounts of long-distance rides by American cavalry officers, and criticisms of several army officers on international contests.

Not only do the fast rides of our own officers compare most favorably with these foreign contests, but in several notable instances places them far in the lead when conditions under which made are taken into consideration.

Major D. L. Brainard, Subsistence Department, and former officer of cavalry, sums up the results in this last contest in the statement that "it is not clearly seen where the lessons learned in this ride may be applied to advantage in the military service, and in view of the brutal methods, which seem to have been employed by the riders, it is believed that such competition should be discouraged."

In this country such contests are discouraged. Only recently, by intimation from the President, a contest proposed in Wyoming, by "cowboys," in which the "cow pony" was to be used, was abandoned. The "brutality" to which Major Brainard refers was undoubtedly the motive for the President's suggestion. That the promoters of the contest followed the suggestion is a decided indication that such rides, for the sake of encouraging the "betting" spirit, find no encouragement among lovers of the cavalryman's best friend in this country.

American cavalry officers and troopers have ever met the highest expectations of those charged with carrying messages of importance over long distances. The account given by General Roe, formerly a lieutenant of cavalry, of a ride covering one hundred and fifty miles in twenty-four hours,

the horses in good condition at the end of the ride, proves what can be accomplished in the United States when the occasion calls for such work. "The same horses were with the troop for several years afterwards," writes General Roe. "performing their duties."

It is not amiss, in this connection, to refer to a long distance ride performed "on board" of a quartermaster's mule, to which reference was made in the "Recollections of Fort Riley" by Mr. Lowe, in the last number of the JOURNAL. He tells of the outbreak of cholera at the post and the urgent need of medical assistance. The nearest base for supplies was Fort Leavenworth, distance one hundred and thirty miles. A man messenger, Wagon Master Orton, without previous notice, was ordered to mount his mule with the least possible dispatch, and start for Leavenworth. He left at 10 o'clock in the evening, and at 2 o'clock in the afternoon of the second day out reported with his message to the commanding officer at Fort Leavenworth. He fed himself and mule several times, but did not sleep.

November: A Moral Preparation of the Soldier for Service and Battle. The Use of Native Troops in Our New Possessions. Training the National Guard Officer for National Defense. The Mexican Military Academy (*illustrated*). The Campaign of Eckmühl III (maps). The Coast Joint Manuevers—1902 (*illustrated*): 1. Narragansett District. 2. A Study in Preparation.

The United Service. NEW YORK. October, 1902: The Training of Army Officers. A Forgotten American Humorist. A Tangled Web (*continued*). Organization of Coast Defense. Lessons of the South African War. The Combined Navy and Army Manuevers. The Loss of the U. S. Steamship *Mississippi*.

December: Evolution of the Organization of the Field Artillery. A Tangled Web: A Story of the Civil War. Culebra. Our Contemporaries. The Boers and the Empire.

Journal of the United States Artillery. FT. MONROE, VA. September and October: Report on the Mounts and Means of Ammunition Supply at the R. F. Gun Batteries at Fort Pickens and Fort McRee, Fla. A Set-back Chart for Mortars. A Predicting and Set-back Ruler. Fighting Books. Defense for Secondary Forts Against Probable Enemies, Based Upon an Appreciation of peculiarities of the Personnel and Matériel in Such Enemies. Thoughts on Coast Defenses Suggested by the Boer War.

November and December: Extracts from Minutes of the Artillery Board. Dated July 15 and June 20, 1902. The Tactics of fire Direction. A Graphic Chart for Showing Sight Deviations for Sea Coast Guns in Action. Report on Fire Control and Fire Direction, and the System Used at Battery Branstion, California. Remarks Upon the Report of Captain Haan, Artillery Corps, on Fire Control and Fire Direction. Professional Notes.

Proceedings of the U. S. Naval Institute. ANNAPOLIS. September, 1902: The Employment of Petty Officers in the Navy. The Training of Landsmen for the Navy. Some Thoughts On Our Ordnance Material. On Naval Operations of the Crimean War. Military Operations and Defenses of the Siege of Peking. Some Experiences on Board the U. S. S. *Manila*. Graphic Solution in Coast Navigation. Methods for Finding the Intersection of Two Sumner Lines.

ENGLAND.

The United Service Magazine. LONDON. October: Imperial Defense and Colonial Responsibilities. Imperial Garrisons. Canteens in H. M. Ships. Strategy and Tactics in Mountain Ranges (*continued*). Rifle Practice. Military Education. National Apathy and National Necessities. The Training and Equipment of Cavalry and Mounted Infantry in India, and Their Respective Roles in War. Machivelli on the Art of War. The Passing of a

Commando. A Russian Trip Through Persia and Persian Beluchistan. A Forgotten English Victory.

November: Imperial Defense and Colonial Responsibilities. Letter from Captain Mahan, U.S.N. The French Submarines. Naval and Military Combined Maneuvers of the United States. Gibraltar and the Bay of Algeciras—a Spanish View. Our Only Chance. Offensive Tactics in Modern War. Strategy and Tactics in Mountain Ranges. French and German Musketry Regulations. Horse Breeding for the Empire in N. W. Canada.

December: A Naval Policy for Australia. The Colonies and the Navy at the Conference. Imperial Defense and Imperial Responsibilities. The Training of Landsmen for the Navy. Recruiting. The Reform of the British Army. Strategy and Tactics in Mountain Ranges. The Capture of Fort 'M Pishani—an Episode of the Guerilla War. Side-lights on the Boer War—the Subaltern. Dispersed Artillery. The Medical Organization of Brigades and of General Hospitals in War. The Disabilities of a British Regiment in India.

**Proceedings
Royal Artillery
Institution.
LONDON.**

The August and September (1902) number has an article on the troop horse, by the late Veterinary Surgeon Thacker that is well worth comment. The paper was written in 1873, but there is nothing that is not thoroughly applicable at the present time. The subject is discussed under three heads, viz: "Description of the Horse Best Suited for Cavalry;" "Purchase of Troop Horses;" "Breeding for the Army." Among the points mentioned is that regarding the height of horses. The author says that in his opinion, "the present minimum standard of height prescribed by regulation for the Bengal cavalry is too high, and these regiments would be more efficiently mounted if the standard was to be lowered by an inch." In our service we have many officers who advocate smaller mounts, provided, however, they are carefully selected for strength, endurance and agility. In view of the contemplated experiments in the animal-breeding industry in Manila, the idea of this officer

on the use of native ponies for breeding cavalry mounts and artillery horses are of interest.

June and July: Has the Experience of the War in South Africa Shown that any Change is Necessary in the System of Field Artillery Fire Tactics (in the attack as well as in the defense) in European Warfare? The Western Glacis of India. Rapidity of Fire and Our Present Fire Discipline. Recent Development of Field Artillery Material on the Continent. Field Howitzers. Garrison Companies Abroad.

**Journal
Royal United
Service
Institution.
LONDON.**

"Suggested Improvements in Military Riding and Breaking" is the title of a paper by Captain M. Horace Hays, F. R. C. V. S., read before the Royal United Service Institute. The reading was followed by an animated discussion in which Major General Cecil Russell, Colonel Twelfth Lancers, Equerry to the King, participated. The Journal of the Institute for October gives a stenographic report of the discussion. Space, however, forbids more than a brief reproduction from the views expressed by General Russell, who said:

"Captain Hayes has criticised very justly the conditions of the breaking in of the remounts which were provided for the war in South Africa, and he pointed out how they ought to have been very much better trained before they took the field. There is no doubt whatever that we have something still to learn about the breaking in of horses, but in South Africa, unfortunately, there was no time allowed even for the most elementary breaking. The horses were landed from the ships, they were put into trains, and sent up to the front: the men were chucked onto them, and they had to do what training they could actually in the field. There was really no time whatever for any training—good, bad or indifferent. Finally, there is one point I should like to notice, namely, that Captain Hayes says that 'In olden times our military horse supply consisted of home-bred animals which were easy to break in: but in future it will be more or less made up of wild horses, and consequently the difficulty in breaking will be greatly increased.' There is no doubt that in the days of the Peninsula and in our campaigns in Europe in the early part of the last century we had a very admirable source

of horse supply in this country. In those days people made their journeys on horseback, or in post-chaises, and for that purpose a very excellent breed of horses was reared in the country. The horses were bred for a particular purpose; they were bred to have strong constitutions, to have good staying powers, and to have sound, hard legs, and we succeeded in producing that type of horse which I am sorry to say does not, I believe, exist in any number in the country at the present moment. But in the days of the Peninsula there is no doubt that our cavalry and our artillery were extremely well mounted on that type of horse, and excellent results were obtained from it. It would be very much to the advantage of the country if we could by some means, by the efforts of horse-breeding societies, or by government intervention, try to reproduce in some sense the class of horse which furnished so many horses for our wars in the early part of last century. Captain Hayes has said that our supply in future will be more or less made up of wild horses. That is all very well. We have had the command of the seas during the South African War, and we have been able to put horses into South Africa from every quarter of the world. If we had been at war with even a second or third rate sea power, the whole of the supply of those horses would have been checked at once; and until our navy had absolutely cleared the seas we should not have been able to move cargoes of horses as we hitherto have done; and if we were at war in Europe we should have to be entirely dependent on our own horses until we had actually got command of the seas. I think it is a very foolish thing indeed, if I may be permitted to say so, if we are going to consider that we shall always be able to import horses, even from our own Colonies, to any seat of war where we may be engaged in military operations. By all means let us be prepared to break wild horses from whatever part of the world they may be able to come, but we ought if possible to have a sufficient supply of horses at home to at any rate supply our wants until we can have command of the seas."

From the Von Loebell Annual Reports published in the *Journal*, the following excerpt relating to the United States is reproduced:

"The new law of the 2d February, 1901, replaced that of 1899, and laid the foundation on which the work of military reform will be reconstructed. President T. Roosevelt who succeeded the murdered President McKinley on the 14th

September, 1901, and who has strong military proclivities, and had some military experience in the late war with Spain in Cuba, and the Minister for War, Senator Elihu Root, who was appointed to that office after the war, seem to be personalities well fitted to carry out the necessary reorganization. The War Minister has rapidly mastered the essentials of war administration. The President in his first message to Congress in December, 1901, insisted on the immediate necessity for improvement in the militia and volunteers, the National Guard system being antiquated and useless, and on the militia being armed with the same weapon as the standing army, etc."

The November number contains an interesting account of the experience in South Africa with a new infantry range finder. The inventor, Prof. G. Forbes, to thoroughly test his instrument in actual service conditions, journeyed to South Africa, arriving there January 28, 1902, and joined Colonel Crabbe's column as range taker. The column trekked 300 miles and was engaged several times in eleven days, the range finder being carried by Prof. Forbes on his saddle much like a carbine or rifle. The results accomplished are remarkable. It takes less than a minute to dismount, set up the instrument and give the first range, subsequent ranges being given in a few seconds, and all done by one man. A day or two suffices to make an accomplished range taker of almost any man in the army. The error of the instrument at 3,000 yards is only two per cent. No adjustment of the range finder was necessary, and no amount of jolting in long gallops puts it out of order.

It seems from this account that this is the instrument that armies have been looking for. Estimation of distances by eye is difficult and not accurate or reliable enough for the advanced precision in firearms and other appliances. The description and drawings of the instrument and the instructions for its manipulation give an excellent idea of it, and fully explain the principles of its construction.

September: Snapshots Taken by an Officer at Rustenburg During the Boer Surrenders. What Should be the Disposition of the Matériel and Personnel of the British Navy in Time of Peace, and How Can the Peace Strength be Most

Rapidly Expanded to War Strength? Education and its Ancillary. The Military Problem. Personal Reminiscences of a Free State Burgher During the Investment of Ladysmith. Reconnaissance as a Fine Art Under the Present Conditions of War.

October: Complexity in Army Accounts. Suggested Improvements in Military Riding and Breaking. The Von Löbell Annual Reports on the Changes and Progress in Military Matters in 1901. The Duke of Wellington and the Punjab Campaign.

November: Experiences in South Africa with a New Infantry Range Finder. Anchors: Old Forms and Recent Development. The Present and Future of Arabia. The True Novel Maneuvers of 1892. The Voyage of the *Charming Nancy* 1776.

FRANCE.

**Revue
Militaire.
PARIS.**

The *France Militaire*, Paris, recently published what the *United Service Magazine* is pleased to term an interesting interview

with an American officer in attendance upon the French maneuvers, from which the following extract is reproduced:

"The officers of the United States army are recruited from among the middle and the rich classes; promotion to the higher rank is, however, open to all. Every year each Deputy and Senator has the right to nominate a pupil to the Military School at West Point. Candidates for the school must undergo a very severe entrance examination, and those who pass enter the school for four years. There they must submit to the very strictest discipline. They may not smoke, nor may they drink wine, beer or spirits. Smoking a cigarette is punishable by ten days close arrest. Drunkenness entails instant dismissal without the possibility of re-admission. There is no leave, not even a short exeat, for two years. At the end of two years, the pupils are entitled to two and a half months' leave. They then return to the school for another two years without leave of any kind. Every six months they undergo an examination; should they fail in any subject, they are at once sent down and put back without mercy. Thus during four long years these young men must devote themselves to work and study; their only distractions

are athletics, such as polo, football, golf, tennis, etc. On leaving West Point, the pupils are sent, as probationary officers, to special schools of that branch of the service in which they have selected to serve. Those for the artillery finish their studies at Fort Monroe; those for the cavalry at Fort Riley; engineer officers go to Washington; infantry officers to Fort Leavenworth; whilst artificers are sent to Willet Point. After two fresh years of practical study, the probationary officer leaves the special school and becomes a lieutenant."

A new apparatus for the use of cavalry in crossing rivers has been recently tested in France, says the *France Militaire*. France. It consists of light bridges seventy-two feet long, supported by two boats, the whole weighing 1,431 pounds. The bridge is in sections, none of them weighing more than forty-eight and one-half pounds, the boats being divided into two sections, each of seventy-seven and one-eighth pounds weight.

According to the *Matin*, this new pontoon system was used by the French artillery in the military maneuvers this year in the departments of the Loiret and Vilaine. A bridge, about twenty-eight inches wide, was thrown over the river Loire, the horses being made to swim, while the drivers carried the harness over the bridge. The bridge was then converted into a sort of a raft eight feet in width, and the artillery was ferried across the river. The pontoons are very light and practically unbreakable. The bridge can be put together in twenty, and taken apart in ten minutes. In the second case, the bridge was thrown across the River Vilaine, at a spot where the river was 190 feet wide, in forty-five minutes, and battalions of infantry, 1,400 strong, with arms and baggage, crossed the river in forty minutes. The new apparatus is the invention of M. Veory, of the Army Engineers.

**Revue de
Cavalerie.
PARIS.**

August, 1902: The Decisive Attack. Can the Napoleonic Cavalry Still Serve as a Model (*concluded*). Method of Horse Training in the Italian Army. A Page from the History of the Royal Piémont Cavalry: Twenty-third Dragoons.—Its

Stay in the Saône Camp in 1730 (*continued*). The Latest Tendencies of the German Army, Revealed by the *Revue des Deux Mondes*, and explained by the *Cosaque du Kouban* (*concluded*). A Steeplechase (with sketches). Composition and Station of the German Cavalry in the Summer of 1902.

September, 1902: On the Development of the Instruction and of the Character of the Officer. A Page from the History of the Royal Piémont Calvary (Twenty-third Dragoons)—Its Stay in the Saône Camp in 1730 (*concluded*). Method of Horse Training in the Italian Army (*concluded*). An Episode in the Battle of Beaumont. The Ostend-Brussels Ride.

October: Rolland and the Cavalry. On the Development of the Instruction and of the Character of the Officer. Gassion at the Battle of Rocsoe (1643). Reconnaissance by Cavalry Patrol. The Brussels-Ostend Ride.

November: Evolution of Modern Cavalry. Reconnaissance by Cavalry Patrol. Should the Napoleonic Tactics be Abandoned? Gassion at the Battle of Rocsoe (1643). Detailed Description of Light Material for Use of Cavalry in Crossing Rivers.

**Revue du
Cercle
Militaire.**
PARIS.

August, 1902: —A Visit to a Battlefield. Tactical Scheme. Evolution of Artillery During the Nineteenth Century. An Imaginary Russo-Swedish War. Magenta

—A Visit to the Battlefield. An Attempt at Military Conscriptio in Pe-chi-li. Evolution of Artillery During the Nineteenth Century. A Russian Heroine. Evolution of Artillery During the Nineteenth Century. At St. Cyr. Military Expenditure of the States of the Triple Alliance. Biserta. The Swiss Army. A Russian Heroine. Marching to the Sound of the Guns. Biserta. The André Expedition.

September, 1902: Three Years' Campaigning in the Basin of the Chad, 1899-1900. The Actual Period of Military Service of the Principal European Powers. Marching to the Sound of the Guns. The English Army and its Recruiting. Three Years' Campaigning in the Basin of the

Chad, 1899-1900. Reflections of a Swiss Field Officer on the Haute-Saône Maneuvers. Some Notes on the Reorganization of the Swedish Army. Three Years' Campaigning in the Basin of the Chad, 1899-1901. Italian Military Literature. Tactical Lecture. Scheme for Light Bridges for the Passage of Rivers. Three Years' Campaigning in the Basin of the Chad. 1899-1901.

October, 1902: Scheme for the Transport of Light Bridging Material. Notes on Japan. Three Years' Campaigning in the Basin of the Chad, 1899-1901. Notes on Japan. Examinations on Military Legislation. Three Years' Campaigning in the Basin of the Chad, 1899-1901. An Anniversary—Auerstädt. Notes on Japan. Medical Statistics of the Austro-Hungarian Army for 1900. Tactical Lectures. An Anniversary—Auerstädt. A Few Words on the German Maneuvers of 1902.

Revue Militaire. August, 1902: The War Budget of the German Empire for 1902. The German Mobilization and Centralization in 1870 (*continued*). Studies of the South African War, 1899-1900 (*continued*).

September, 1902: Studies of the South African War, 1899-1900 (*continued*). The German Imperial War Budget for 1902 (*concluded*). German Mobilization and Concentration in 1870 (*concluded*).

October, 1902. The Possibility of a Russian Campaign Against India. Machine Gun Detachments in the German Army. New Law on the Status of Non-commissioned Officers in Italy. Studies of the South African War, 1899-1900 (*continued*).

THE UNITED STATES CAVALRY.

FIRST CAVALRY—COLONEL ALMOND WELLS.

Adjutant, Capt. SAMUEL B. ARNOLD; Quartermaster, Capt. WILLIAM C. BROWN;
Commissary, Capt. MILTON F. DAVIS.
HEADQUARTERS—MANILA, P. I.

All troops of regiment serving in Philippine Islands.
Under orders to return to United States.

SECOND CAVALRY—COLONEL ELI L. HUGGINS.

Adjutant, Capt. THOMAS J. LEWIS; Quartermaster, Capt. WILLIAM F. CLARK;
Commissary, Capt. RALPH HARRISON.
HEADQUARTERS—FORT MYER, VA.

Troops—A, B, C, D, I, K, Fort Ethan Allen, Vt.; E, F, G, H, Fort Myer, Va.; L, M, Fort Sheridan, Ill.

THIRD CAVALRY—COLONEL ALBERT E. WOODSON.

Adjutant, Capt. HENRY L. RIPLEY; Quartermaster, JOHN B. McDONALD;
Commissary, Capt. GEORGE H. MORGAN.
HEADQUARTERS—FORT ASSINIBOINE, MONT.

Troops—A, D, I, K, L, M, Fort Assiniboine, Mont.; B, C, Fort Yellowstone, Wyo.; E, Boise Barracks, Idaho; F, Fort Yates, N. D.; G, H, Fort Apache, Ariz.

FOURTH CAVALRY—COLONEL CAMILLO C. C. CARR.

Adjutant, Capt. JAMES B. ERWIN; Quartermaster, GEORGE O. CRESS.
HEADQUARTERS—FORT RILEY, KAN.

Troops—A, B, C, D, Fort Riley, Kan.; E, F, G, H, Fort Leavenworth, Kan.; I, K, L, M, Jefferson Barracks, Mo.

FIFTH CAVALRY—COLONEL A. G. HENNISEE.

Adjutant, Capt. LAWRENCE J. FLEMING; Quartermaster, Capt. NATHANIEL F. MCCLURE;
Commissary, Capt. ———.
HEADQUARTERS—MANILA, P. I.

All troops serving in Philippine Islands.
Under orders to return to United States.

SIXTH CAVALRY—COLONEL ALLEN SMITH.

Adjutant, Capt. JOHN W. FURLONG; Quartermaster, Capt. GEORGE L. BYRAM.
HEADQUARTERS—MANILA, P. I.

All troops of regiment serving in Philippine Islands.
Under orders to return to United States.

SEVENTH CAVALRY—COLONEL THEODORE A. BALDWIN.

Adjutant, Capt. WILLIAM A. MESCHER; Quartermaster, Capt. SOLOMON P. VESTAL;
Commissary, Capt. WILLIAM H. PAINE.
HEADQUARTERS—CHICKAMAUGA PARK, GA.

All troops stationed at Chickamauga Park, Ga.

EIGHTH CAVALRY—COLONEL LOUIS H. RUCKER.

Adjutant, Capt. ANDREW G. HAMMOND; Quartermaster, Capt. WILLIAM F. FLYNN;
Commissary, Capt. CHARLES G. SAWTELLE, Jr.
HEADQUARTERS—JEFFERSON BARRACKS, MO.

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HEADQUARTERS—MANILA, P. I.

All troops serving in Philippine Islands.

THE UNITED STATES CAVALRY ASSOCIATION.

FORT LEAVENWORTH, KANSAS, U. S. A.

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Vidmer, George.
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Fisher, Ronald E. †
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Weyrauch, Paul H. †
Zane, Edmund L.

Veterinarian.

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Lieutenant-Colonel.

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Craig, Louis A. †
Day, Matthias W.

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Briand, Christian.
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Lear, Ben., jr.
Mowry, Philip. †

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Van Dusen, Geo. W. †

INFANTRY.

Captain.
Barber, Henry A., 28th Regiment.

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Colonel.
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The following are eligible to associate membership: (a) Persons who are, or who ever have been, commissioned officers of honorable record in the Regular Army (service other than cavalry) or in the Navy. (b) Persons who are, or who have ever been, commissioned officers of honorable record of the National Guard of any State or Territory. (c) Former general officers and former commissioned officers of cavalry of honorable record in the Confederate Army.

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PUBLISHER'S NOTICE.

We have made a departure in this number of the JOURNAL by inserting an advertisement in front of the reading matter, but considering the well-known reliability of the wares advertised, it is hoped that no objections will be made by our readers.

The firm of Nitschke Bros., of Brooklyn, N. Y., manufacturers of boots and shoes, needs no introduction to army men. It has an established reputation for high class work, and in reliability. The firm comes highly recommended by officers of the army. Their advertisement is found among the JOURNAL's advertising patrons.

Koken's Barber Supply Company is so well known that it is hardly necessary to call the attention of our readers to their advertisement appearing in this number of the JOURNAL. It will, however, serve as a reminder to troops needing anything in the barber's line, that Koken's is still doing business and always ready to receive and pay careful attention to orders from army posts.

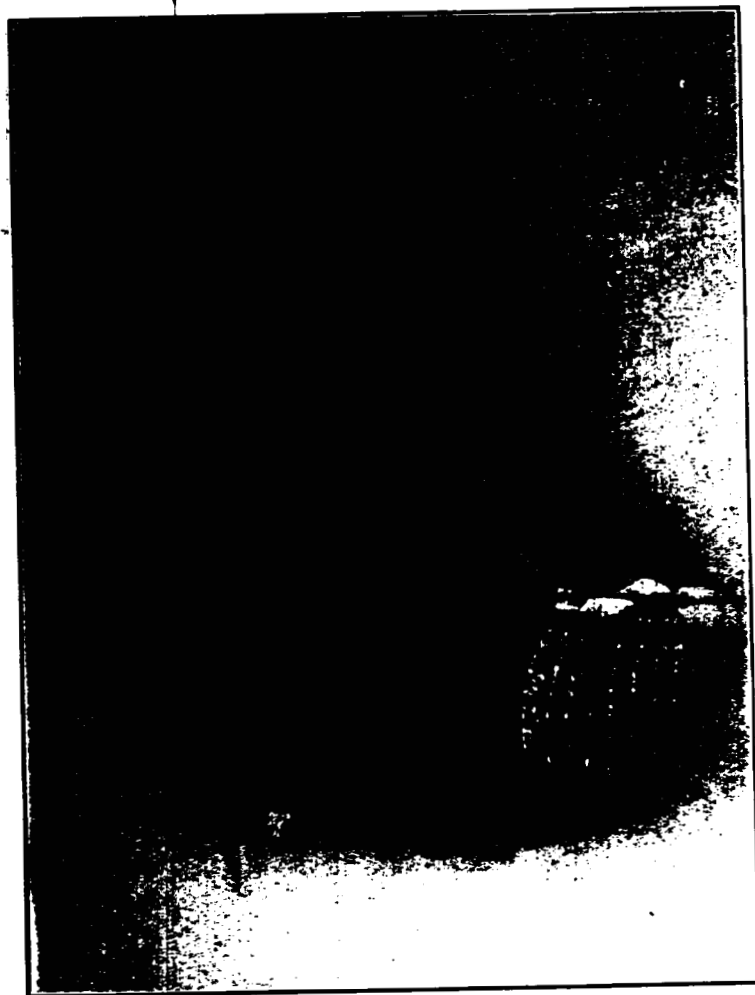
Attention is called to the advertisement of the Wm. J. Lemp Brewing Co., which occupies space in this issue. The goods of this renowned pioneer brewery of St. Louis are most favorably known throughout both hemispheres, and its foremost brews, "Falstaff" and "Lemp's Extra Pale" justly merit their epithet: "The Choicest Products of the Brewers' Art." Some of the recent successes of the establishment are the facts that "Lemp's Extra Pale" was the *only* American beer served at the United States Pavilion during the Paris Exposition in 1900, and the *only* St. Louis beer handled by the official caterers of the Pan-American Exposition at Buffalo, N. Y., in 1901.

Mr. H. W. Littlefield, whose new advertisement appears in this number, is an officer of four years' service during the

Civil War, and knows what kind of insurance army officers should carry. He represents about the only old line company that grants to regular officers insurance policies at regular rates without extra charge for free permit, good to travel, reside or change service or station without notice. It is well known what a hardship was imposed on officers by making them pay extra war premiums at a time when they needed the money badly. It would be well for those desiring insurance to make inquiries of Mr. Littlefield. He comes well recommended by his patrons, as a glance at his advertisement will show.

Government statistics show that the Miami Valley in Ohio produces better grain and has purer water than any other section of this country. It is Nature's garden. Right in the heart of this favored spot is the Hayner Distillery. It has at its very doors the two essentials for producing the finest whisky in the world—the best grain and the purest water. Add to these one of the most completely equipped distilleries ever operated and an experience of thirty-six years in distilling whisky, and you have a combination that is unequaled anywhere. That's why Hayner Whisky is regarded as the best for medicinal and other uses. That's why it has over a quarter of a million satisfied customers. Read its advertisement in this issue of the JOURNAL.

The Armour Packing Company has new matter on its page of advertising. All who wish to secure a handsome calendar for the year 1903 should take advantage of the offer made. Attention is also called to the Helmet Emergency Ration made by the Armours. The experience in the Philippines showed that the former emergency ration was not quite satisfactory. The objections made against it were mainly as to method of packing and the size and shape of the tin envelope. This has been remedied in the new ration. The next number of the CAVALRY JOURNAL will have a very interesting article on the "Emergency Ration in the Philippines," by Captain Wm. R. Grove, Subsistence Department, formerly colonel of the Thirty-sixth United States Volunteer Infantry, General Bell's famous regiment.



MAJOR-GENERAL E. S. OTIS.
U. S. ARMY, RETIRED.

JOURNAL

OF THE

United States Cavalry Association.

VOL. XIII

APRIL 1906

THE CAVALRY IN SOUTHERN EUROPE

BY

MAJOR-GENERAL E. S. OTIS, U. S. ARMY, RETIRED.



As a prelude to the opening of the 1906 Convention of the U. S. Cavalry Association, the following article by Major-General E. S. Otis, U. S. Army, Retired, will be just as well to give general attention to the conditions existing in the Philippines at that time, espe-



MAJOR-GENERAL E. S. OTIS.
U. S. ARMY, RETIRED.

JOURNAL OF THE United States Cavalry Association.

VOL. XIII.

APRIL, 1903.

No. 48.

THE CAVALRY IN SOUTHERN LUZON.

PROVINCES: CAVITE, LAGUNA, BATANGAS, TAYABAS.

BY COLONEL J. A. AUGUR, TENTH UNITED STATES CAVALRY.



AS a prelude to the operations of Brigadier-General T. W. Schwan's expedition from January to March, 1900, it will be just as well to give a general outline of the conditions existing in the Philippine Islands at that time, espe-

cially relating to the Island of Luzon. While it may be familiar to the majority of the readers of the JOURNAL, yet to a great many it is unknown, and a detailed account may not prove uninteresting even to those who have been active participants in the stirring events that took place in that far distant land, our new possessions in the Orient.

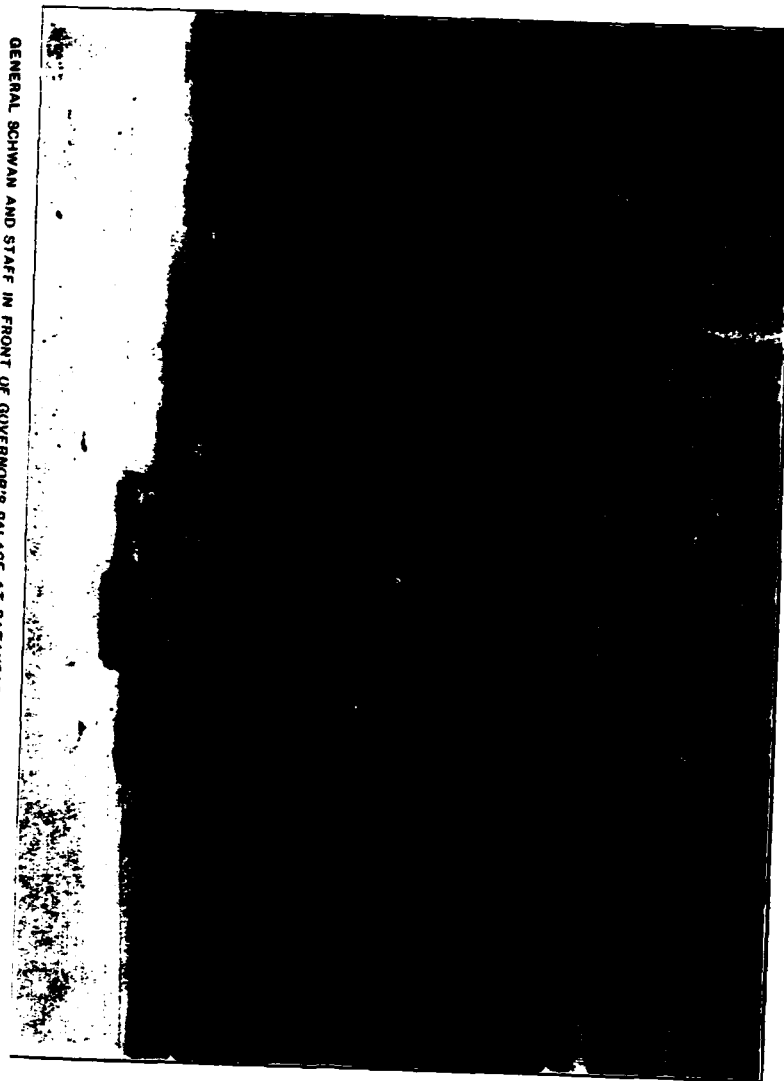
This narrative will pertain more particularly to the work of the cavalry part of the expedition, in which it was legitimately used, with results worthy of this arm.

The overrunning of the four provinces named, and the establishment of posts of infantry at different strategic points, the infantry following closely upon our horses' heels and the cavalry pushing on ahead again until the circuit of the provinces was made.

Let me preface my remarks that they are made not with a view to glorify or exalt the actions of the cavalry above the infantry, nor to belittle the work of any, but to bring forward prominently that our arm properly used and worked in its own particular sphere, is just as important as ever it was—that we have lost nothing in prestige, and our usefulness has not in the slightest degree been lowered—only this condition must be recognized by those who control the arm—I mean the chief in authority—that this arm has its proper role, and in that role alone must it be employed, not frittered away, doing any and all kinds of work, which destroys its usefulness, impairs its efficiency and renders it at the crucial time worthless, because it has been ruined. This condition is likely to occur again as it has in the past, in spite of all precedents, and it is proper to emphasize it once more, so the warning may be ever present. The sign board should always be marked: "N. B.—Do not ruin your cavalry in the beginning. Save it until you have to ruin it if necessary, and then there will be no regrets whatever expressed by any true cavalry soldier, for we will have done what we could, and more no one could expect."

By December 1, 1899, the whole of central and a portion of northern Luzon had been invaded; the insurgents driven back into the mountains; their organized forces scattered; some of their principal men captured; military departments

GENERAL SCHWAN AND STAFF IN FRONT OF GOVERNOR'S PALACE AT BATANGAS ON JANUARY 17, 1900, THE DAY OF ITS CAPTURE.



organized; the principal towns garrisoned, and preparations made to stamp out the guerrilla warfare instituted, whether by the recognized head of the so-called insurgent army, or by the voluntary act of the head of each force in a province, is hard to determine, but the fact was evident that in the future such was to be the warfare waged. The conditions in the island, the nature and extent of the country to be traversed, the condition of the so-called roads, mountain trails on which it was impossible to march on foot or horseback, except by file or trooper, with no chance to guard the column by flankers or other necessary military precautions, brought us face to face with a very difficult problem, the solution depending upon various quantities, time, number of troops available, and the strength and endurance of the personnel of the army subjected to the trying tropical climate. Military headquarters had been established at Vigan and at Bayambang, while Major-General Lawton had returned to Manila with the Fourth Cavalry, to make preparations for the expedition into southern Luzon. Before being carried out he was sent to clear that section of the country in the vicinity of San Mateo and Montalbon, the gateway of communication between the central and southern portions of the island. San Mateo had the distinction of being captured and abandoned as many times as Porac. This time it was to be taken for good, garrisoned, and in a manner, guard that pathway, making it useless, practically, as a means of convenience to the organized and disorganized bands that were employed in that stage of the military problem. The place was taken, but with the loss of General Lawton, than whom no more brave and gallant officer ever lived or fought for us. His death seemed unnecessary, for he at all times exposed himself more than was necessary for one who held his rank. To speak in the vernacular, "took too many chances," but he felt his presence was needed, and with that thought uppermost, he counted nothing too dangerous and hazardous, and in the thick of the fight he was always present to direct and give his orders. His was a great loss to pay at this stage of the solution of our difficult task—in the real beginning, as it were, of this hunting-down process we were to embark upon.

DOCK AT BATANGAS.

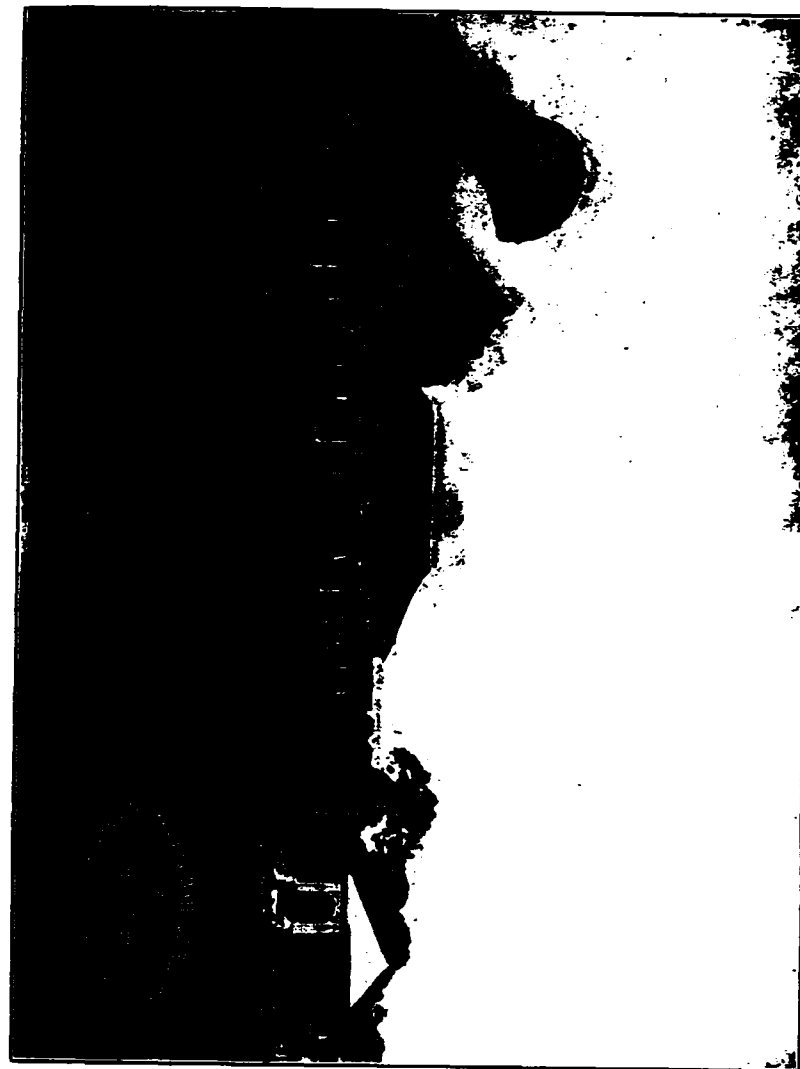


He was an ideal soldier and officer, and a true cavalryman. It is meet and right in this, our journal, to give voice to his worth and splendid example, as an incentive to our young officers to emulate his energy, activity and untiring devotion of self to the task imposed upon him—to the mastering of all details to enable him to carry out his plans. In a word, preparedness—a motto for every officer, in whatever position, however unimportant it may seem to him.

His plan, so I am informed, was to move a column along the east side of the Laguna de Bay, another to push from Manila Bay south, and with the aid of transports to take a force by water to Batangas, with the idea of converging to a common point, driving the forces in front of each column, thus enabling the other columns to capture or destroy whatever each column may have driven back, then to garrison the important places, and by continued scouting from them as bases, to clean up the whole of the forces opposed to us.

Not having the ear of those highest in authority, I do not pretend to say that this was really his plan, but from words and conversations gathered from time to time during the fall of 1899, the above is as close a guess as one can give, knowing it is not *ex-cathedra*. It was talked about as his idea, that would be submitted for approval. Beyond this I cannot say more. His sad, untimely death ended his share in any future operations, and the plan as carried out followed closely on the above outline, and in every way was most successful so far as scattering all the forces and capturing and holding the prominent places, but unsuccessful in destroying the enemy's forces, yet compelling them to take to the mountains, from which advantageously selected places they worried and harassed certain districts of country in these four provinces until the last man of prominence—Malvar—surrendered to General J. F. Bell, after his most vigorous, arduous, splendid campaign of this past year. The section of country embraced in these four provinces consists of lowlands, rising from the bay until the chain of mountains is met, which covers the interior of the section. The low lands on the Manila side, through the Cavite province, are rice fields, intersected by numerous mountain streams, which rise in the interior and

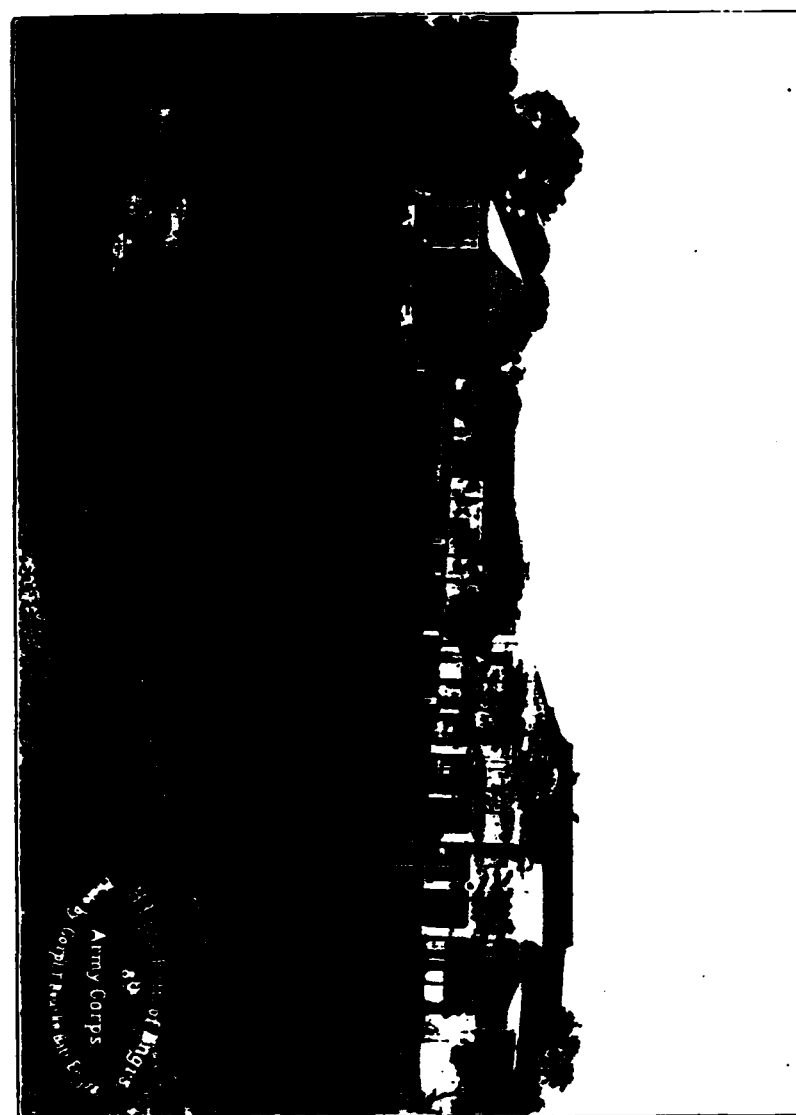
CHURCH AND SQUARE, BATANGAS.



flow north to the bay, forming deep gorges, difficult to cross except on the one road that runs from Silang to Indang, which had been bridged very substantially by the Spanish; and had the retreating insurgents taken the time to destroy two or three of the eight or nine bridges on this road, the cavalry command would have been materially delayed and our rapid advance checked, as we would have had to make a trail down and across, and up the steep sides. Fortunately they were on the run, and the idea of delaying the cavalry never was a factor, except to make a faint show at the crest of the hills nearest them and then fall back. In the other three provinces the mountains came closer to the water, with smaller extent of lowlands, making it difficult of access to us, and affording protection to small armed parties, which could be assembled for attack upon a small garrison, or an ambush against the wagon trains carrying supplies which was of frequent occurrence. Another feature was our inability to secure any reliable information about anything as to the roads and hostile forces. For the time being all were "amigos," "no quiere combate;" yet if an opportunity offered, the next moment would be fighting us, then return to peaceful pursuits, to repeat the operation. Information from such sources was unreliable, of no value, so we had to depend upon what maps we had and on our own judgment.

Cavite Province was the hot-bed of the insurrection, the home of Aguinaldo, with the best troops, with numbers anywhere from a battalion to several thousand. We were told that these forces were brave, well organized, well officered, and would make a good fight, and we must be prepared for a stout resistance; that our task would be more difficult than any our troops had encountered before; that there would be more severe fighting. With this information we were prepared for a severe resistance, in that the insurgents would stand up and give us a good fight, but it proved a delusion and snare, with one or two exceptions. They would fire a few volleys from their trenches and scatter like a bevy of quail, to meet at some other point, and repeat. In this connection it is well to state for those who have not been in the Philippines, that in every trench, or series of trenches, there

GOVERNOR'S PALACE, BATANGAS: BRIGADE HEADQUARTERS.

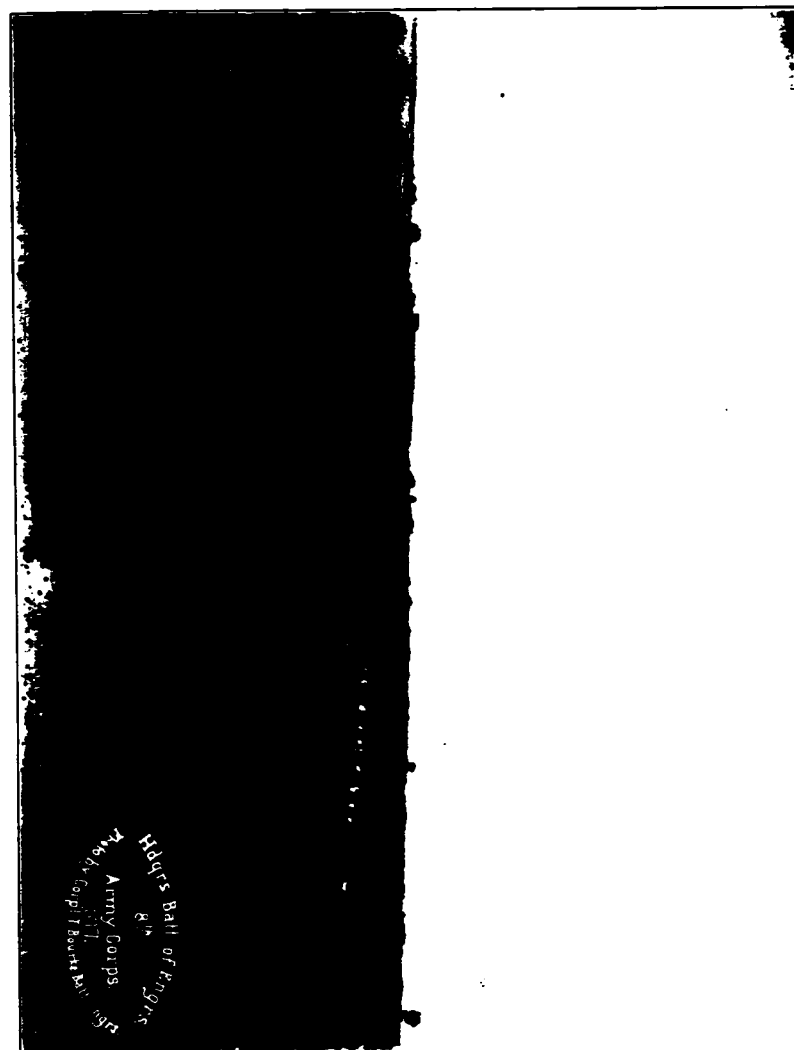


was always an exit so that all could get out in time. There never was an idea in their minds to make a determined stand, and the possibility of an easy-get-away-hole was always provided. Open fighting was not their forte, and in trenches, only so long as to give them cover for a few misdirected, harmless volleys, at distances which it seemed impossible to miss. It was only necessary to put the gun on the parapet, point it in the proper direction and pull the trigger, even with their eyes shut, and somebody would be hurt, but fortunately for us their marksmanship was of the poorest, and very little damage was done. I have been told that in the trenches in front of Santiago, the trenches were dug, the men put in, and there they had to stay. Would that the Filipinos had adopted that style, for we could have bagged all, or nearly all, the troops at each encounter.

By the time this expedition had finished its task there would have been very few fighting insurgents left. Again, the prestige born of being the head and front of all insurrections against the Spaniards; that our troops had never penetrated very far into the interior; that our attempts, although successful so far as they were carried out, but only to return and reoccupy our old position near Manila Bay, had also imbued the insurgents' minds that they were able to hold their own, and Cavite Province was able to take care of itself, backed up by the other three provinces. It was natural because the expedition in that province in the fall of 1899 resulted in our losing several officers and quite a number of men, pushing forward several miles and quietly returning to our former positions. I believe it was unnecessary, for we gained nothing and lost many lives. The time was not ripe then—there were not enough troops at that time to combine a southern expedition, in connection with Generals MacArthur and Lawton's advance in central and northern Luzon, so things remained in *statu quo* there until the organized movement was made, beginning in January, 1900, which brings us to the task assumed—the description of the work the cavalry performed.

This southern campaign was for the subjugation of the insurgent forces in southern Luzon, and was composed of

GENERAL SCHWAN'S COLUMN NEARING MUNTINLUPA.



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8th Regt.
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two expeditionary brigades under Generals Wheaton and Schwan, under command of Major-General Bates of the Eighth Army Corps. The plan was for Schwan's brigade, starting from San Pedro Macate, to push through Muntinlupa to Bifan on the Lake, thence west through Silang and Indang to Naic on Manila Bay, while General Wheaton's brigade was to push south from Imus, attack and drive the insurgents back, to permit Schwan's forces to cut off their retreat and finish the work. The plan was not carried out exactly as planned, for the attack by Wheaton's forces was made January 7th, a couple of days too soon to enable the enveloping column of our forces on the south to be near them when the fight was going on. Instead of retreating as a body, they broke up and scattered, many returning to their homes as "amigos," having previously concealed their guns and ammunition. This fight demonstrated that the enemy's forces in this section were no better than elsewhere, and the stand-up fighting was a myth, so we could expect at certain places a few volleys, then a scattering. The result would have been more disastrous and far reaching if this attack had been delayed, and had the insurgents retreated in an organized way. It illustrates how often troops, operating on different lines, with a combined movement in view, fail to make the necessary steps to bring about the most successful results, by not being at the right spot at the right time, or commencing an action ahead of the stipulated time. General Schwan's brigade was composed of the Thirtieth and Forty-sixth regiments of infantry, a battalion of Macabebe Scouts, a mountain battery, Headquarters Fourth Cavalry, with Troops A, B, C, and D, first squadron of the Fourth Cavalry, under Major J. A. Augur, one squadron Eleventh Cavalry (Troops C, F, I, and M) under command of Major D. E. Nolan, Eleventh Cavalry, Troop "I" Fourth Cavalry, as escort to the cavalry command, the cavalry under the command of Lieutenant-Colonel E. M. Hayes, Fourth Cavalry.

The Fourth Cavalry was in barracks at Pasay cavalry barracks, Manila, the squadron of the Eleventh Cavalry was in camp there, each with its own pack-train. The command left their station in the early afternoon of January 3d, and

FLOATING BAMBOO BRIDGE BETWEEN MUNTINLUPA AND BIFAN.



marched to San Pedro Macati, a distance of six miles, at which place the brigade was being concentrated. Due to the fact that the Fourth Cavalry pack-train had been received only a short time before our departure, the mules had a very hazy idea of what a pack was, and as fast as one was packed and turned loose he proceeded to lie down, as the most convenient position to wait for the other mules, with the result that it took all the morning to properly pack them. Finally the train was started, but after reaching the Exposition Grounds in the city it had to be driven into the enclosure and repacked. The sad part of the affair was, that we waited in camp until after 9 P. M., and nearly all of the squadron went to bed supperless, saving what little lunch a few fortunate ones had stowed away in their saddle pockets. A good rule to follow is, however short the distance, never fail to have a bite to eat in your saddle pockets.

January 4th.—Remained in camp to make ready for the march the next day. To form an advance guard for the cavalry command, six selected men were chosen to act as scouts from each troop, and placed under charge of an officer, Lieutenant J. H. Munro, Fourth Cavalry. This gave a force of fifty-four men, which was deemed sufficient to clear the way and to hold on until reinforced by the advance squadron first, and later by the rear squadron. This scheme worked beautifully, the men gaining experience every day in their hard, trying work, and finished by being as perfect a body of men for such work as one could desire. The men at the head, the point, were changed each day, so all had the advantage of being at the front, the exposed position. This system was such a success that it should be adopted by all cavalry commands, for we would always have a trained body of keen, active, intelligent men for the arduous duties of the advance guard. They were excused from all guard and other duties and no extra work required of them. It has also the effect of stimulating the men and making them proud to belong to such an organization. In peace this body could be formed and extra work given them, to learn their duties before taking the field, then the field work, in actual operations, would complete their education. In this campaign, first

LAQUINA DE BAY, MUNTINLUPA: 1 TROOP, FOURTH CAVALRY.



X
X
Troops.
Ad. Col.
6x9 = 54 =
1 Troop.

under Lieutenant Munro, and later under Lieutenant O. P. M. Hazzard, Eleventh Cavalry, the scouts deserved and received credit for their fine work throughout the campaign. Practically, except on two or three occasions, their work was sufficient to clear and open the way. Their work was quick and decisive, for they knew they were well backed up, and would always be supported in good time, and there was never any hesitation in going into anything. Through the dense jungle on either side of the road or trail, never knowing when a "blizzard" would be received, the extreme point of the scouts could not be called a very enviable or desirable position, that is, one would not, through choice, select it as a daily pastime. This much notice our scouts deserve, and I very gratefully record here the unanimous verdict of all officers of the cavalry command, the appreciation of the valuable services they rendered, recognizing their worth and value in their arduous duties. It should be an incentive to incorporate in each cavalry regiment a company of these most valuable men as an adjunct for field service.

The accompanying map will show clearly the course followed.

January 5th.—Left camp and marched to Muntinlupa without meeting any opposition, and camped. Distance marched, eighteen miles. A small reconnoitering party under Captain Hazzard, Eleventh Cavalry, encountered an outpost of the enemy, so we felt that we were in the zone of fighting and knew that the morrow would bring some opposition.

January 6th.—Our objective was Biñan. Colonel Hayes with the Fourth Cavalry and the Macabebes took the direct trail, followed by one battalion Forty-sixth Infantry; Major Nolan with the Eleventh Cavalry took the right flank skirting the hills, the rest of the infantry and wagon train the road along the lake shore. The only bridge across the stream was of stone, partially destroyed, so only one trooper could pass at a time, and with five troops in single file it can be seen how long it took to get across, and before the last man had crossed, the scouts had opened up the fight, with I Troop, Fourth Cavalry, and the Macabebes. The rest

BATTALION OF FILIPINO INSURGENT TROOPS.



of the squadron soon closed up, dismounting, C and D Troops were deployed on the right flank as support, but by the time they reached the scene the insurgents had retreated. During the night this outpost had been reinforced by two hundred men from Biñan. The squadron resumed the march, passing through Tunasan, where we were delayed by two bad crossings over the stream, belly deep in mud and water. As we approached Biñan, a distance of three miles at a fast trot, a battalion of the Thirtieth Infantry, which had passed us by bridges over the two streams, were deployed, and had a slight skirmish, with a few casualties. The cavalry trotted in and through the streets to the far end of the town, and later were assigned houses for the night. Lieutenant Davis with D Troop of the Fourth Cavalry, made a reconnaissance on the road to Carmona and developed a small outpost. A march for the day of seven miles. Major Nolan, with his squadron, in the meantime encountered some of the enemy retreating from the morning engagement and pursued, but as usual, they scattered through the high grass and bushes, reaching Biñan at 2 P. M. The country was such as to hamper the action of the mounted troops—rice fields, gulleys and impassable streams—so they were dismounted to do the fighting.

January 7th.—Nolan's squadron, with one battalion Forty-sixth Infantry, moved on Carmona; Hayes with the rest of the Fourth Cavalry and scouts, took the southerly road to join the other column at Carmona. The distance by both roads is practically the same, the map showing the roads joining at Carmona, but the map road and our direction was wrong. Upon inquiry we learned there was no road to Carmona, and securing a guide, the command was taken by a trail, over rice and cane fields, across two streams, when we finally arrived at the designated meeting place, to find that the command had passed on ahead of us. We finally overtook the command, to find that Nolan's squadron had taken the lead and was on its way to Silang, meeting and encountering the insurgents, capturing a small muzzle-loading cannon, and at Rio Muntin Ilog, overtook and had a spirited engagement, pursuing the insurgents, but owing to the deep

FROM BRIDGE, LOOKING TOWARD NOVALETA.



gorge, bad and narrow trail, considerable difficulty and delay was encountered, enabling the enemy to make a resistance at the crossing of the Tibyan at Silang, but the squadron soon dislodged them and entered the town. Colonel Hayes, with I Troop, overtook this squadron at Silang about 1 P. M., and the squadron Fourth Cavalry followed at about 2 P. M. The three crossings were very bad, the one over the Rio Grande especially, a deep gorge, with a narrow, dangerous trail, leading down at a steep angle to the bottom, where the stream was crossed on slippery rocks, boulders and narrow ledges. The horses had to be led, and why everybody got through without accident to horse or man is quite marvelous. It can be surmised the delay and time it took the cavalry, each man leading his horse, for 600 men and horses to pass across, not one, but three, gorges. Such an exit, more especially that of the Rio Grande, could have been held by a small determined force and prevented our crossing and compelled us to make a detour. On the trail leading into Silang, one horse of C Troop Fourth Cavalry got into a cleft and blocked the trail until the animal was extricated. This operation consumed valuable time. We passed the Fourth Cavalry pack-train in one of these gorges, and bade it good-bye for a time, as the rations were used for some one else. Colonel Hayes had started for Indang with the Eleventh Cavalry leading, and the Fourth Cavalry, with the pack-train of the Eleventh Cavalry, followed immediately. From Silang to Indang, about eleven miles, there is a good wagon road lined with dense forests and underbrush, a veritable jungle intersected by narrow trails, with sixteen streams to cross, some of them bridged very substantially over the deep gorges. Two had been partially destroyed, which delayed the advance, so the entrance into Indang was not made until about 6 P. M., after a spirited engagement between the insurgents (who were strongly posted on the heights of the town behind stone walls and in the convent grounds) and the scouts and Troops C and M, Eleventh Cavalry, under command of Major Nolan. The delay at the head of the column caused a much longer delay at the end of the column, so it was about 7:30 P. M. when Major Augur arrived with part of his squadron. Later

BAMBOO RAFT.



the rest of the command arrived and the troops were quartered in the town, glad of the chance to rest after their hard day's march of twenty-eight miles, from 7 A. M. to 9 P. M. It was a very tedious day's march considering the distance made, over as mean and nasty a bit of country as could be pictured—rice and cane fields, gorges and gullies, riding, walking and leading horses over almost impassable places, with only a chance for a bite to eat; so, when our day's work was ended, everyone felt relieved. We had finally reached a place where all could "turn in" and enjoy a good night's rest. Each one cooked his own supper with his individual mess-kit, not a sumptuous repast, yet to us a most delightful meal. Nothing is so conducive to restore one's spirits, and instill new life into a drooping, tired anatomy of flesh and bones, than a good hot cup of coffee, bacon and hard-tack. We found palay, unhulled rice, which also gave the horses a good feed.

January 8th.—With Troops A, B, C, and I, Fourth Cavalry, and the scouts, Major Augur made a reconnaissance to Alfonso, through Mendez Nuñez, returning the same day; distance marched, eighteen miles. The town was deserted save the padre and half a dozen wounded men in charge of a native surgeon and two hospital corps men. The men were wounded in the fights around Imus and in that vicinity, in November, 1899. The character of the country was similar to the rest passed over, save the streams and gorges were less numerous. The country seemed bereft of all able bodied "hombres," who had scattered and gone, where, we could not find out. The women and children were conspicuous by their absence, always a sure sign that you must be on the lookout for squalls, the zip of the Mauser or the rattle of a volley of Remingtons.

January 9th.—Left Indang at 7:45 (a battalion of infantry having arrived) for Naic on Manila Bay, a distance of thirteen miles by road. We had a fairly good road with but two stretches of mud and water to cross, reached a point about four miles from Naic when the scouts encountered quite a force of the enemy. Dismounting my four troops we formed line to the right front, through rice fields knee

BATTALION OF FILIPINO INSURGENTS



deep in mud and water, and, after a short engagement cleared the front flank. During this operation Colonel Hayes took a portion of the Eleventh Cavalry and the scouts and marched to Naic, entering the town after a short resistance, the Fourth Cavalry coming in an hour later, and the command was quartered in houses and made themselves comfortable, for we were to have a rest, renew our supplies and shoe the horses. Just at dusk I took two hundred men dismounted from both squadrons and made a reconnaissance to the Timalan River, three miles, as artillery firing was heard in the north, but we encountered no one, and returned. Taking into account our dismounted work, the entire command had marched twenty-one miles. We remained here until 5 P. M., January 12th, receiving grain, supplies and making ready for our next move. The enjoyable part of our stay was, meeting the officers of the navy on the gun boat *Wheeling*, which had been ordered to this place to cooperate with the land forces. To Captain Burwell and his officers, for their hospitality and kindness, I wish to extend our thanks. The dinner given us on board the day we left, still has many memories of good cheer and fellowship, and they may not know that the good effects of that substantial meal lasted us for many a day, and made us feel that scouting aboard ship was far more pleasant, enjoyable and less harassing a task than on foot or horseback; for with them there is always a comfortable room to sleep in, and the cook is always on time at each "mess call."

As I have mentioned previously, the attack by General Wheaton's command was made on January 7th. If it had been delayed two days later our command would have been in their rear with more of a chance to cut off the retreating forces. We believed at the time that the column we encountered was a portion of General Trias's command from the north, but I am satisfied now, from knowledge gained later, when I was stationed at Naic, that it was the battalion of four companies that belonged to the force stationed in this town.

Our delightful rest of three days (which the horses enjoyed as much as we did, for they had grain for two days)

BRIDGE BUILT BY UNITED STATES ENGINEERS.



was broken into, the afternoon of the 12th, as the command moved out at 4:45 P. M. A party of officers, who had just finished dinner and were enjoying a quiet smoke with our naval friends aboard the *Wheeling*, were signaled that the command was under orders, and bidding them a good-bye, we were rowed ashore, to find everything in readiness, our horses saddled, so we had only to mount, and off we started, reaching Indang at 8:15 P. M., occupying our houses of the 7th and 8th. One troop (C) was pushed on to Silang to report to the brigade commander. Nothing unusual occurred except that we were making camp at night, which makes it very disagreeable for every one, especially when there is no provision or food for the animals, and it required hustling to collect enough palay for them. Our rations were carried in our saddle-bags, for the two pack-trains had gone on a side trip to carry rations for an infantry column on our right flank. It was to be a hard trip, so we inferred, and every one, officers and soldiers, made the best of their conditions, and during the whole trip there was a hearty, cheerful disposition shown, and everyone did their duty in the spirit of doing it as well as it could be done.

The command marched the morning of the 13th over the road, to Silang, we marched on our advance, and as some of the bad places we had crossed a few days before had been repaired by the engineers, our march was more rapid. Reached Silang before noon and learned that the brigade commander had pushed on to Santo Tomas via Talisay. The division commander was here, and it is presumed that the orders for our future operations had been given and something cut out for us, but we who had not sufficient rank to be consulted, did not learn very definitely the plan to be followed, except a hazy idea we were to go somewhere which in due time we would discover where. A short halt, a chance for a bite for everybody, and off we started for Talisay, reaching there about 5 P. M., and found some engineer soldiers in the town.

As we were marching along we espied an infantry battalion winding its way along the crest of a ridge, the same that had marched through Magallanes and Alfonso with our pack-

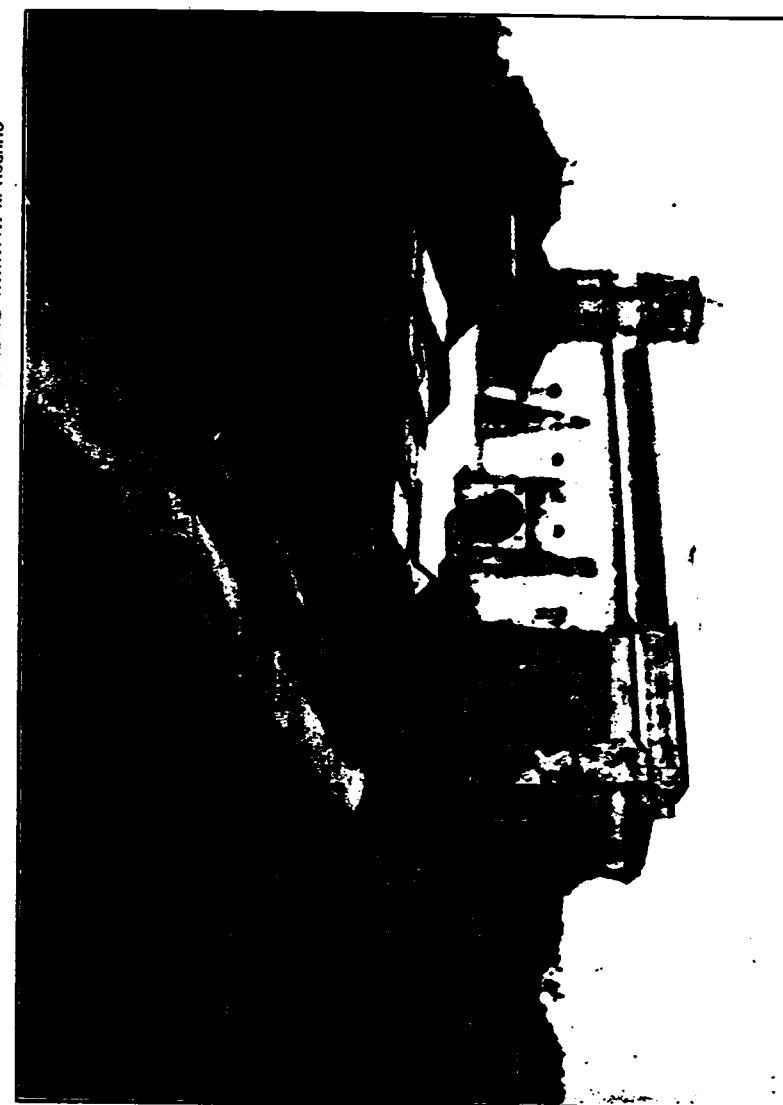


FROM BRIDGE, LOOKING TOWARD CAVITE VIEJO. RIGHT OF WORK ON BRIDGE SHOWING EFFECT OF FIRE. GUN COVER NEAR WHERE MAN IS STANDING.

trains, and shortly afterwards as we raised the crest an unexpected sight met our eyes. Lake Bon-Bon, (Taal) with its beautiful waters, nestling two volcanoes in its placid bosom, away down below, a thousand feet or more, surrounded by mountains with tropical verdure. The sun, low down in the horizon, with its red rays touching the scene that opened so suddenly before our eyes, was a most beautiful picture, and, oh! for an artist on the spot to do justice, which this pen picture fails to convey to one who was not there. The aftermath was not so pleasing, for after a long tedious descent, over a narrow, nasty trail, we reached the bottom of the valley and entered the town, we found orders to push on to Talaga in the vicinity of eight miles or more, which place we reached about 7:30 P. M.; found some palay for the horses and bivouacked, each officer and man cooking his own supper with his cup and meat can—a scant meal—for the water was poor and little of it, and hunting in the dark for something to cook with, and not certain where to get it, is not very encouraging to a long fast. The other *contretemps* was the loss of four pack mules and their packs on the trail down to the lake, and the writer's entire outfit on one of the missing mules, soon, no doubt, was adorning an "amigo." On this trail Lieutenant Shockley met his death the day before, as he, alone, ventured to make a reconnaissance; so it can be seen that everything was not the *couleur-de-rose* of the enchanting picture spoken of. Our day's march was thirty-three miles, and although the ground was a trifle harder than usual, we managed to get a fairly good night's rest.

January 14th.—Left for Santo Tomas, reaching there about 8 A. M., where Troop A Fourth Cavalry was detached as escort to General Schwan, and Troop C Fourth Cavalry, rejoined the squadron. Here we learned we were to go as far as Tiaon, twenty miles or more, and about 9:30 A. M. resumed our march, soon overtook a battalion of the Thirty-seventh Regiment, U. S. Volunteers, who were having a scrimmage, and we took up the trot for three miles, thinking to overtake the insurgents, but what few were left were quickly dispersed by the scouts, and in a short time we entered Alaminos, met the padre and one or two "hombres." the

CHURCH IN MAJAYAY, TAKEN FROM ACROSS RAVINE BRIDGE, SHOWN IN FOREGROUND, FEBRUARY 20, 1900.



only living things we saw. A half hour's rest, with no information obtained as to the enemy, but expecting to meet him, we again resumed our march on San Pablo. Two miles from there is a miry stream, clear running water, which by the time the leading squadron, the Eleventh Cavalry, had gotten across was in such a condition that a horse in crossing sank to his withers, and several had to be pulled out with lariats. The rear squadron Fourth Cavalry were delayed an hour in cutting down bamboo and banana trees before we could get over. While we were working like beavers, the scouts and Eleventh Cavalry were having quite a little "scrap" at San Pablo, and finished up the job handsomely, driving the insurgents out of the town, killing four, wounding and capturing thirteen, taking twelve guns, a lieutenant-colonel and captain, while we were trying to cross a Filipino mud stream—very exasperating, but not to be avoided. Finally we got there and had a pow-pow with our prisoners and an agent of a foreign government, who had his country's flag displayed over nearly every storehouse of copra in the town. He was not there for his health, and subsequently he was tried by a military commission, with what result we have never heard. This was only a temporary halt, for about 4:30 P. M. we were in the saddle again headed for Tiaon, reaching the small town about 7:15 P. M., after the scouts had received a volley at the bridge on entering the town. D Troop, Fourth Cavalry, was left at San Pablo until relieved by a company of infantry, joining with the pack-train about midnight. The town was deserted and we chose our quarters for the night, finding a small feed of palay for the stock, for their meals were of the scanty order, yet there was no help for it. Distance for the day, twenty-five miles—a wearisome, annoying, tiresome march, making camp again after dark. The command remained until 3 P. M., January 15th, and moved out to reach Rosario. After marching two miles the scouts, in turning a sharp bend of the road to cross a wide stream, heard the music begin with the crack of quite a number of Remingtons, and the "baile" was opened with a great vim. My squadron supporting the scouts, soon drove them from their position, killing several, wounding one



MACABEBE SCOUTS.

we knew of, and capturing three guns. So far, so well, but the bridge had been destroyed, and it was 6:20 P. M. before a new one was made and the command across. With the horses lined along the road and the scouts and two troops dismounted, fighting on foot, we had no men or horses wounded—this at a range of about sixty yards. We were grateful they had not graduated as sharpshooters. They were simply "third class," and we did not have to render an excuse for their classification. We finally reached Rosario at 9:30, another deserted hamlet, save for a detachment of "A" Troop, Fourth Cavalry, which had been sent from Lipa to meet us. We found ample quarters, but this thing of reaching our destination in the night hours, and having to hustle and rustle for "grub" for man and beast, was getting to be very monotonous, yet there seemed to be no help for it, as we were on the warpath, and had to accept the conditions as we met them—cheerfully, of course—as it lightened our task and made things much easier to do. Good humor is a potent factor for doing good work.

January 16th.—Left Rosario; marched to Ibaan, and reached Batangas to find it occupied by the Macabebe scouts and one battalion Thirty-eighth U. S. Volunteers, under command of Major Muir, Thirty-eighth Infantry. The command remained there January 17th and 18th, getting supplies, refitting and sending back sick men and horses. The animals enjoyed the rest, for they received grain and hay.

January 19th.—The cavalry command retraced its steps, as other work had been cut out for it, and marched to a stream near Tiaon, where we bivouacked in a rice field, with rice straw and palay for the horses. An incident occurred here which is well worth relating, for every one had a good hearty laugh, although it might have been a serious matter to the officer concerned. This officer, with his Filipino boy, went down to the stream to bathe. Undressing and carefully putting his clothing on the pebbly bank, he was having a fine bath. Upon looking up he espied two "hombres" with guns, coming to the ford. They hailed him in Spanish, to which the boy replied, "Buenos Filipinos," but they kept coming on, and soon spying, in the dusk of the evening, the white skin of this officer, they began shooting, and he and the boy

TRAIL ACROSS GORGE, NEAR SILANG.



made a break for camp, in no holiday attire, leaving his clothing behind, appearing in our midst clad in a blanket picked up on their way back. The firing brought the outpost to the ford, but the "hombres" had disappeared, with clothing, a gold watch, and \$60.00 in gold. Don't go bathing at such times. We had to outfit him, each one donating an article of dress, to give him a military appearance again. Our camp was not disturbed during the night. The ground for your night's berth as a rule is not very soft, but a rice "paddy" for hardness and irregularities holds the palm. Many of my fellow-officers will vouch for the truth of this statement.

January 20th.—Left camp, the Eleventh Cavalry squadron leading, each squadron alternating daily, marched to Tiaon, thence to Candelaria, where my squadron was fired upon. The other squadron dismounted not four hundred yards away, but no one was hurt. It was a pot shot from one of the houses. After a short halt the march was resumed, and about four miles from Sariaya the scouts in crossing a rocky bed of a dry stream, encountered the enemy entrenched on the far side. The scouts became engaged and Major Nolan with his squadron deployed one troop on the right and left of the scouts, and moving forward, soon routed the enemy and they dispersed, and the squadron proceeded to Sariaya, followed shortly by Major Augur's squadron, and the town was entered without any further resistance. The town was quite a nice one, but not a being in the place save one woman. We found an abundance of palay and some rice straw. The palay was ample for the animals then, what we could carry away, and still we found some on our return, the 23d. Our loss was one private killed and two privates mortally wounded, one sergeant and two privates wounded. The wounded and dead were brought in by an infantry company of the Thirty-eighth Infantry, which was following. The next day the dead men were buried in the church enclosure.

January 21st.—The command left at 9 A. M., and with an insurgent as guide: Colonel Hayes with the entire command, marched about three miles on, turned to the right, and directed Captain Hazzard, Eleventh Cavalry, with his



BRIDGE BETWEEN SILANG AND INDANG.

troop and pack-trains to keep the main road to Tayabas. The idea was to find a trail leading to the Lucena-Tayabas Road and take them in the rear. We found no cross trail, and soon found ourselves near Lucena, where the leading squadron of cavalry had a slight "scrap," killing a few of the enemy, capturing a few guns, and crossing the river entered the town, finding only a few men. After a short halt we proceeded to Tayabas, nine miles distant, meeting no opposition, to find that Captain Hazzard and his command had arrived after two small skirmishes, with no casualties. The entrenchments and pitfalls we met were quite elaborate and newly thrown up, but our flank march had rendered them of no account. The object of our being sent here was to release some of our own and Spanish prisoners known to be at Tayabas. As usual, this place was deserted, save two men. That evening some of the Spanish prisoners got away and came back, and the next day a few others with some women came in, but all of the others were taken off. Subsequently nearly all were taken by our troops.

January 22d.—One hundred and sixty dismounted men and officers, under command of Major Nolan, were sent to reconnoiter to Lucban and the practicability of the trail for horses to Luisiana, Cavinti and Santa Cruz. A slight resistance was encountered, and the command reached its objective at 4 P. M., stayed all night and returned to Tayabas at 10:30 A. M. the next day. At this time General Schwan's forces were in front of Majayjay, a strong position, well fortified, south of Lucban, which was carried without any serious resistance, due in my opinion to the appearance of the dismounted cavalry force at Lucban, and this fact was noted as due the cavalry command. As our command was not fit to go through the difficult trails on account of the condition of the horses, a great many barefooted, and the physical condition of the men, twenty per cent. unfit for hard marching, the commanding officer wisely determined to retrace his march to Tiaon, thence to San Pablo, reaching Santa Cruz on the Laguna, January 25th. Taking into account the trip to Lucban, the command marched 324 miles in seventeen marching days. Considering the character of the country passed

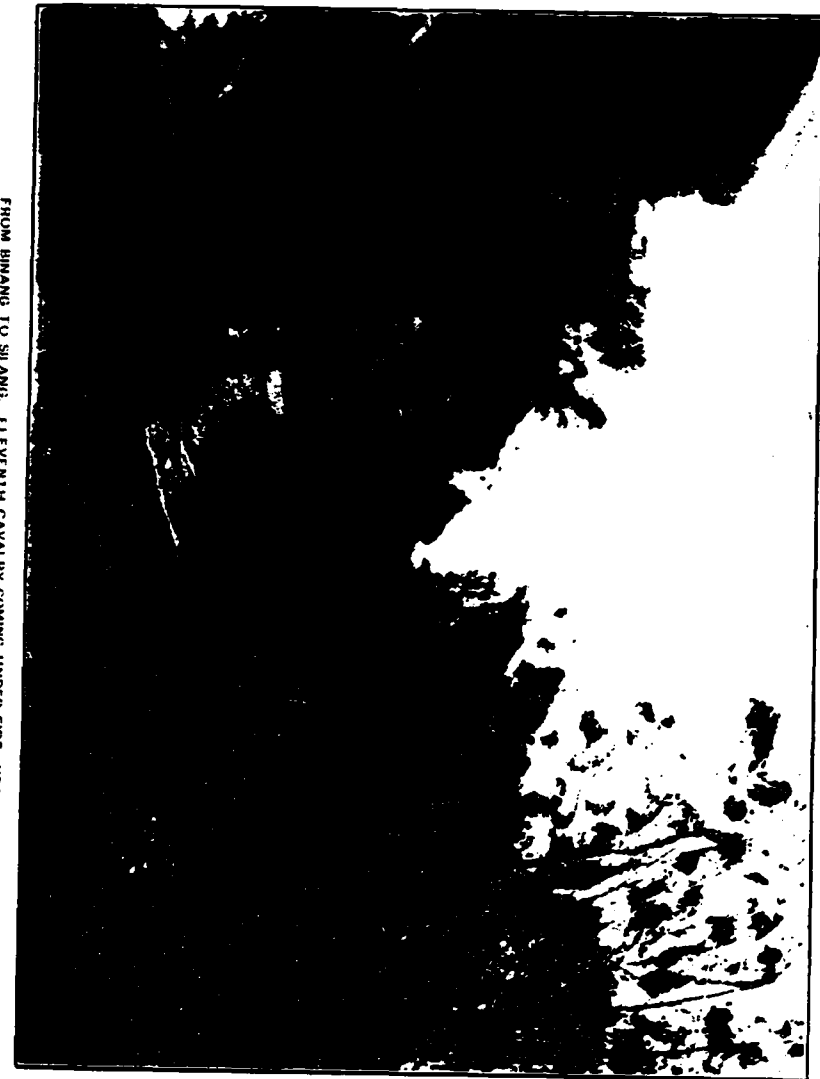


TRAIL ACROSS GORGE, NEAR SILANG. PREPARING TO TAKE WAGON TRAIN THROUGH.

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over, the trails, streams, dismounting to fight on foot, lack of sufficient food for man and beast, and at times none for the horses, makes the distance passed over in the time given a most creditable showing, and for the service rendered does compare most favorably with other work performed by the cavalry. This fact must also be taken into account. The five troops of the Fourth Cavalry, with only two weeks' rest at Manila, started on this expedition after more than two months' campaign with General Lawton in central and northern Luzon, in which officers and men were on half rations most of the time, and the horses getting every now and then only a feed of palay, living on the green rice cut by the men of the command after each day's march. It can be seen we were rather handicapped, and while our actual loss from hostile bullets was very small, we suffered somewhat from sickness among the men and a few of the horses giving out. The success was due to the celerity of our movements, causing surprise, and never for a moment letting up after the enemy were on the run, in spite of good defensive positions which, if they had been held by a small and determined force, would have seriously delayed the command. They learned to have a deadly fear of the quick moving cavalry, always on their heels, giving them no time to rest. In this campaign, as no flankers could be used, and the command marched in column of twos, Colonel Hayes directed, when an attack was made on one flank, all men on that flank should pass their reins to the man on the inner side, then dismount and form line toward the enemy either on the flank, or form line to the front, if the attack was from the front. It required but a few seconds to have a well established line for attack. If it was necessary to reinforce it, half of the other troopers would link horses, and soon give a good supporting force. Our drill regulations were simply modified to suit the peculiar conditions. The scheme worked admirably. The cavalry command was well handled, and Colonel Hayes performed his task and carried out his orders in a most satisfactory manner. There was no hitch: the cavalry was always ready, on time, and always reached its objective designated in the orders for the day. In thus recording in a manner

FROM BINANG TO SHANG. ELEVENTH CAVALRY COMING UNDER FIRE, NEAR SILANG.



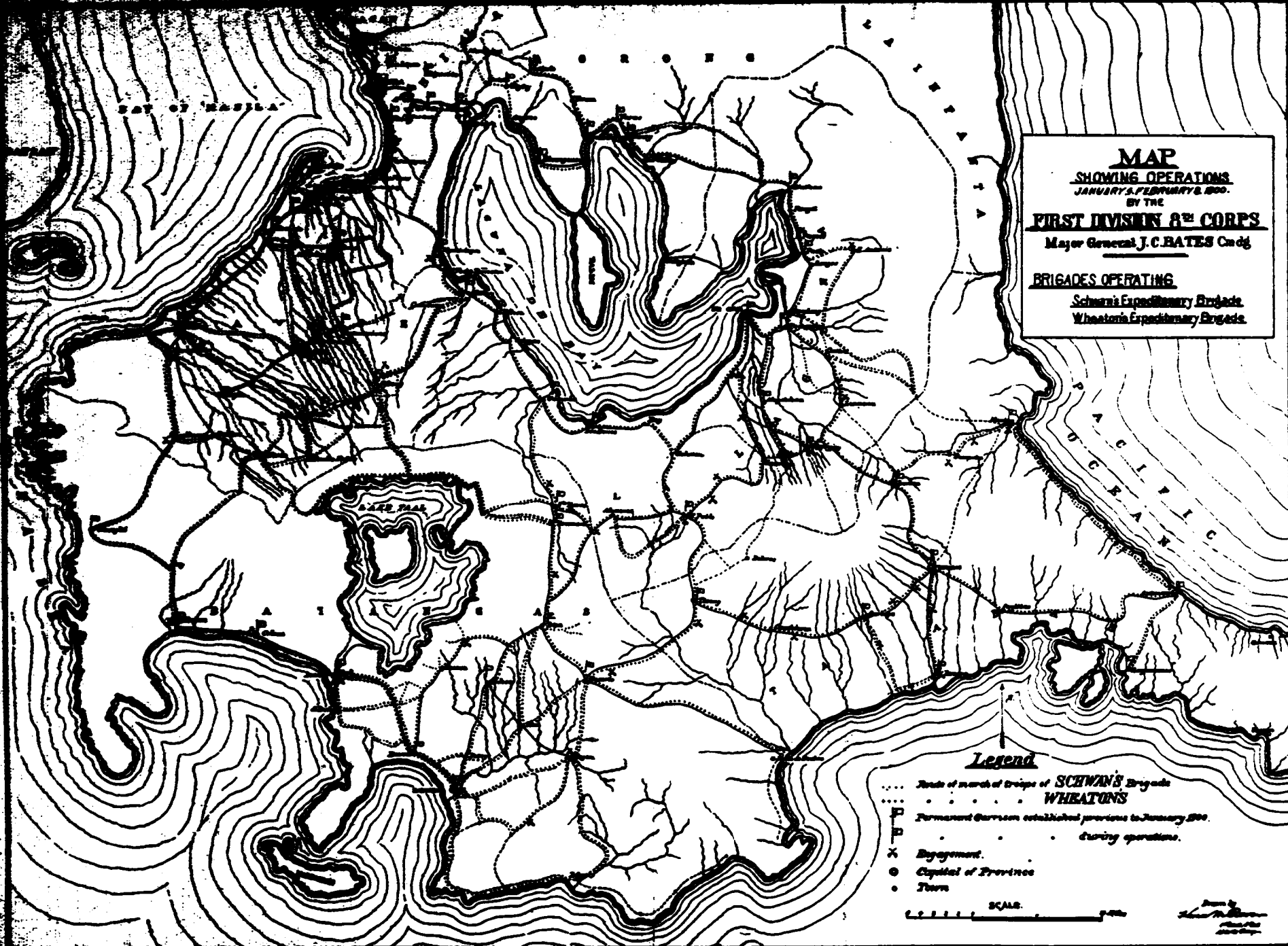
which hardly does justice to the splendid work performed by this cavalry command, it has been a great pleasure to me to write what was accomplished, in my feeble way, and place before the readers of the JOURNAL some recognition of the cavalry's work, and to show that cavalry, when properly handled, is still in the ring and always ready when the occasion presents itself. Everyone felt that pride which is stirred up when doing good work, and considered themselves fortunate to have participated in this campaign.

8/31/11.



MAP
SHOWING OPERATIONS
JANUARY & FEBRUARY 1890.
BY THE
FIRST DIVISION 8TH CORPS
Major General J. C. BATES Comd'g

BRIGADES OPERATING
 Schwan's Expeditionary Brigade
 Wheaton's Expeditionary Brigade



Legend

..... Route of march of **SCHWAN'S** Brigade
 Route of march of **WHEATON'S** Brigade

P Permanent Garrison established previous to January 1890.
 P Permanent Garrison established during operations.

X Engagement.

o Capital of Province

• Town

SCALE 1:100,000

2 divisions - 307. + 6", 1 Bat of Mass Scouts, 1 Mt B battery; Troops A B C D W - 4" Cav (Anger) } Hayes
 " E F J M - 11 Cav - Maj Nolan }
 Reserve Troop J - 4" Cav



CAMERON'S TROOP, FOURTH CAVALRY, NEAR INDIANO.

THE GENERAL SERVICE AND STAFF COLLEGE.

HISTORICAL SKETCH.

THE steps taken at various times by the War Department for the establishment of an army school of practice for young officers of the army, which have evolved the present "General Service and Staff College," are the subject of the following sketch.

The first school of practice in the army was established for the artillery arm, under orders issued by the War Department April 5, 1824, directing ten companies of artillery to be stationed at Fortress Monroe, Va., to be organized as a regiment; and this was called the "Artillery Corps for Instruction."

In advocating the establishment of this school Quartermaster General Th. S. Jesup, wrote to the Secretary of War, the Hon. J. C. Calhoun, under date of November 5, 1825, as follows:

"The importance of an army school of practice is too obvious to require demonstration. Without such an establishment, uniformity of discipline cannot be expected, nor can the government be sufficiently acquainted with the character, capacity, and attainments of its officers to be able to employ them with advantage in the event of war. In developing character and talent, a school properly organized would have the same advantage in peace which active service would have in war. It should be organized on a liberal scale, and, so soon as the circumstances of the service shall permit, should embrace the theory and practical application of every branch of military science. In the present state of our army it would be difficult to form a school on a scale so extensive; but as regards a knowledge of the separate arms much might even now be done.

"The regiments of infantry, if the officers were properly instructed in the elements of military science, would, for

that arm, present the best possible school, but unfortunately, very few of them have received even the rudiments of military education; of consequence, no advance is made by that arm beyond the mere parade and drill of a garrison."

In his annual report for 1826, Major-General Jac Brown, commanding the army, referring to the school of practice for the artillery, said:

"The benefits which are believed naturally to spring from the system in question are important and manifold. Among them may be noted, in general terms, habits of uniformity and accuracy in the practical routine of service, fresh incitement to the cultivation of military knowledge, emulation and *esprit de corps* among the troops, and mutual conformity and general elevation of individual character among the officers. But by the enervating influence of a passive garrison life, influence which, without the adoption of this or a similar system, it is impossible to resist, these high qualities, so invaluable to an army, must in a measure be forfeited.

"With this view of the subject, it has been thought desirable to extend the principle as far as possible for the infantry also. Duties of an active nature are, perhaps, more frequently enjoined on this arm of service than on the artillery, but it stands in no less need of the advantages to be derived from a school of practice. The numerical strength of our infantry regiments is indeed small, considering the wide extent of frontier which they are commissioned to defend, and detachments could not, perhaps, be permanently drawn from them without prejudice to the ulterior object of their maintenance; but while this objection would be effectually obviated by the increased efficiency which such an institution is calculated to produce, the salutary operation of it in other respects, it is hoped, will in time be generally felt and fairly appreciated."

The success of the school of practice for the artillery arm led the War Department to establish a similar school for the infantry in 1826, at a point "on the right bank of the Mississippi River," and what is now known as Jefferson Barracks, Mo.

This view of the need of a school for infantry was followed up by Secretary of War, the Hon. James Barbour, in his annual report for 1826, in the following:

"The dispersed situation of the infantry of the army in various garrisons, and frequently so reduced as rarely to exceed a captain's command at any one place, was attended with great inconvenience and injury to the service, and their utility had in many instances been superceded by our rapidly extending settlement. It was desirable to alter this state of things to effect it; a concentration of the army, as far as practicable, was ordered on the right bank of the Mississippi, a few miles below St. Louis, at the Cantonment Jefferson. The advantages of this position was obvious. The troops can be easily transported to the Eastern or Western frontier wherever the public exigencies may require their presence. In a salubrious and fertile region their health will be preserved, and their supplies may be cheaply obtained and delivered with facility; but the leading consideration remains to be noticed—the effect of the movement on the discipline and good character of the army. It is admitted by the most intelligent that both these desirable qualities are more generally found in large masses of troops than in small detached commands. Profiting by the experience of officers of a superior grade and greater professional skill—emulation excited by the presence and rivalry of so many aspirants for reputation, and subjected to the wholesome control of the opinion of an increased number of brother officers, to whose eye the conduct of each is exposed, the discipline and morality must be greatly improved."

The site was selected by General Atkinson, then commanding the Western Department, under orders of the War Department, dated March 4, 1826. Colonel Henry Leavenworth, Third U. S. Infantry, was detailed as the first commandant of the school. He marched with a part of his regiment from Green Bay, Wis., to Cantonment Jefferson, and addressed himself to the task of building a post and setting up the first American school for infantry. The school was not long lived, and when it died, partly from inanition and partly from want of official encouragement and support, did not have a successor for more than fifty years, and at a post selected by Colonel Leavenworth, after whom it was named.

Nothing was done by the Department looking towards the reestablishment of a school for infantry until 1881, when the School of Application for Cavalry and Infantry was established at Fort Leavenworth. It was recognized soon

after the close of the Civil War that a school of practice for these two arms was needed, but the work of the army on the frontier was such that troops could not be spared to permit it.

In his annual report for 1877, General John Pope, then commanding the department, in support of the establishment of such a school, said:

"As time goes on there is less and less danger of Indian troubles on this frontier, and it becomes more and more apparent that every interest of the government and the army would be promoted by abandoning the small temporary posts west of this place, which no longer serve any military purpose except the mere sheltering of troops. A policy of concentration, it should seem, ought now to be begun, both for the discipline and instruction of the troops, and for the sake of economy. I have so often recommended this consolidation of troops and posts that I dislike to urge it further; but it will be proper again to invite attention to the great advantage for such a purpose possessed by the military reservation at Fort Leavenworth. We have here a reservation large enough for convenient accommodation of at least four regiments, situated at the intersection of many railroads, and easy of access and communication in every direction; in the midst of as fine an agricultural and stock raising country as there is in the United States; where troops can be supplied at a minimum cost, and be instructed under the most favorable circumstances, and where they would be conveniently placed at a moment's notice to be transferred to any point where they might be needed, and sent there in the best condition for duty. As a depot for troops, central enough to fulfill any demands for service at any point west of the Mississippi River, and, indeed, far east of it. I know of no place so suitable, and as the reservation belongs to the United States no expense would be involved, such as would be necessary to build barracks, which, with the labor of considerable number of military prisoners in confinement here, would be trifling as compared with the cost of building elsewhere. I need not point out the benefit to the service of having two or three regiments concentrated here for military instruction and exercises."

The persistency with which General Pope continued to urge the establishment of a school for practice and the selection of Fort Leavenworth as the place, bore fruit in General Orders No. 42, War Department, May 7, 1881, which pro-

vided that the commanding general of the Department of the Missouri should, as soon as the requisite number of troops could be assembled at Fort Leavenworth, take measures to establish a school for infantry and cavalry similar to that in operation at Fort Monroe for the artillery arm of the service. It fixed the minimum of the garrison at four companies of infantry, four of cavalry, and a light battery. It directed the detail of one lieutenant for instruction from each of the infantry and cavalry regiments, fixed the number of field officers at three, and general instruction regarding organization and management.

Colonel Elwell S. Otis, Twentieth Infantry, was assigned to its command. In its establishment considerable difficulty was experienced in so regulating the duties of the different organizations represented as to avoid conflict of action, and at the same time to have opportunity for necessary recitations and for the full performance of the necessary other duties devolving upon officers serving at a large garrison post.

General W. T. Sherman, commanding the army, can rightfully be termed the "father of the school." To him is due its establishment, and none took a greater pride in its progress. In a letter to Lieutenant-General Philip H. Sheridan, dated November 22, 1881, General Sherman writes:

"MY DEAR SHERIDAN:—I am just in receipt of your letter of the 19th, with the tabular list of the officers comprising the new School of Application at Leavenworth.

"I need hardly say that I regard it as admirable, and I feel sure that this school will become the best practical military school of all in the United States. * * *

"I want this new school to start out with the doctrine that service with troops in the field in time of peace is the most honorable of all, and the best possible preparation for high command when war does come, as it always does, suddenly. I don't want to meddle with this new school or to have it the subject of legislation, because if this is done it will, like West Point, be made political and taken out of our control.

"The school should form a model post like Gibraltar, with duty done as though in actual war, and instruction by books

be made secondary to drill, guard duty, and the usual forms of a well regulated garrison.

"I want you and General Pope to feel that I am well pleased with all that has been done, and that I have abundant faith in the future.

"As ever, your friend.

"W. T. SHERMAN."

The troops assigned to duty at Fort Leavenworth, forming the first garrison under the command of Colonel Otis, consisted of headquarters, band, and Companies F and H, Twentieth Infantry; Company H, First Infantry; Company A, Fourth Infantry; Company G, Eleventh Infantry; Light Battery F, Second Artillery; Troop B, Third Cavalry; Troop L, Fourth Cavalry; Troop G, Seventh Cavalry; and Troop M, Eighth Cavalry, numbering all told, general staff included, thirty-nine officers and four hundred and fifty men. All of the lieutenants of the infantry and cavalry regiments, specially detailed for instruction, reported before January 1st, with the exception of four, and the last one of the number arrived January 25th.

In General Orders No. 8, Headquarters of the Army, January 26, 1882, the General of the Army announced that "the garrison and detailed officers prescribed in General Orders No. 42, of 1881, having reached Fort Leavenworth, the School of Application for Cavalry and Infantry is now declared established."

In thus inaugurating and prescribing a moderate course of instruction General Sherman states that "To Colonel Otis the government looks to make this a school which will prepare future officers and generals. The staff are his assistants, and the more faithfully they assist him the higher the honor. Out of the experience of a few years will arise a set of regulations better adapted to the future than the wisest minds can now prescribe." The General believed it is better to attempt little and succeed than too much and fail.

Concluding General Sherman says:

"The rank of the officers concerned is determined by law, and cannot be modified or impaired by anything at this school. Yet it is well known that the superior officers of the

army are always most willing to advance young officers of special zeal, intelligence and acquirement; therefore the instructors will keep daily notes of application and progress, and about the first of January of each year there will be a public examination by the commanding officer, the staff of the school, and such detailed officers as have had charge of classes, at which examination the class will be arranged according to general merit, and special mention made of each officer who deserves it, a report in which also will be made and forwarded to the Adjutant General of the Army for publication and such use as may hereafter be determined."

In a report submitted to the Adjutant General of the Army upon the close of the first school course Colonel Otis said:

"The course here is not difficult for one who has received a fair English education, and who is disposed to make good use of his time, but the school presents no attractions for demoralized and indolent gentlemen. Besides, the time expended upon them is almost thrown away. They will carry very little away with them, and will be very apt, as soon as restraint is removed, to fall into their old habits."

In his report for 1884 Colonel Otis said:

"Among so large an assemblage of officers as is gathered at this post, circumstanced as these officers are in the midst of many influences which are calculated to distract their attention from their legitimate occupations, it might not be considered strange if some fail to reach professional requirements. There are such here, and there are also a very few, who, in my opinion, are totally devoid of a wish to acquit themselves well or to render any assistance to government. Sent here for instruction, their aim is apparently to escape it. Artful dodgers betwixt the moralities which stay civilized society, they mingle with the outside world and bring into ill-repute the profession which they represent. Important and worthy of regard only because of the uniform they wear, they bring discredit on the school in the estimation of those who are unacquainted with its workings."

To Colonel Otis, more than to any other officer of the army, belongs the credit for making this school the success claimed for it by the authorities. No assignment, in time of peace, ever befell an officer who was beset with so many trying situations. He knew how to combat these better than

any other man in the service. Endowed with a high order of administrative ability, sound in judgment, cautious and prudent in the highest degree when called on to decide important questions, an untiring worker, he faced every duty imposed upon him as commandant of the school, which he created and nursed to success, with that soldierly courage and determination to succeed so thoroughly characteristic of this officer. The high plane upon which he placed the school will remain an enduring monument to his untiring efforts to meet every requirement of duty imposed, and which higher authorities knew he was well fitted to perform.

June 29, 1885, Colonel Otis was relieved by Colonel Thos. H. Ruger, Eighteenth Infantry. The latter's stay was a brief one. Not quite a year as commandant he was appointed a brigadier-general, but even this brief period caused the school to advance in importance and usefulness. Up to this time no system of general regulations for the conduct of the school had been adopted. It was not until 1887 that a board of officers was assembled for the purpose of formulating such regulations, and of this board General Ruger was made president. Its report recommended, among other important changes, a change in name from "School of Application for Cavalry and Infantry" to the "United States Infantry and Cavalry School."

Colonel A. McD. McCook, Sixth Infantry, succeeded to the command of the school, and on May 13, 1886, assumed the duties. In this officer the school found an enthusiastic supporter. During the four years of his administration it made rapid strides, and to his persistency in placing before the department the school's needs, great credit is due. In his first annual report Colonel McCook made many important recommendations, particularly in connection with creating a department of engineering, under the control of regular engineer officers, and the assignment of a company of engineers to duty at the school. He also recommended that "if during any period of the course a student officer becomes neglectful of his studies, failing to pass the stated examinations, he should, upon the recommendation of the staff and commandant of the school, be returned to his regiment with a proper

reprimand from the Lieutenant-General, to be published to the army in General Orders.

In closing his last annual report Colonel McCook made this recommendation:—

“For the welfare and still further progress of this institution it is recommended that the control of the school and the post of Fort Leavenworth be segregated from the Department of the Missouri placing it under the immediate direction of the General commanding the army. The school and the post are so mutually dependent upon each other, that what affects one influences the other. They should enjoy like advantages with West Point, the Engineer School at Willett's Point, and Artillery School at Fort Monroe.”

In 1890 Colonel McCook, like his predecessor, was advanced to the grade of brigadier-general, and relieved from duty by Colonel E. F. Townsend, Twelfth Infantry.

Colonel Townsend assumed command of the school in July, 1900, and remained on duty as commandant for four years. Colonel Townsend applied himself studiously to the work of increasing the importance of the school. That he gave it an able administration, those who were serving at the school as instructors and students fully recognized. In his report for the first two years of his administration, Colonel Townsend says:

“It is with great satisfaction that I can certify to the exceptionally high standard of efficiency attained by the last class, the first four members of which reached an average of over ninety-eight per cent. for the two years' course of study, and the next of over ninety-seven per cent.”

Colonel Townsend continued on duty as commandant until October, 1894, being relieved by Colonel Hamilton S. Hawkins, Twentieth Infantry.

Colonel Hawkins' reputation as an administrator was well sustained as commandant of the school, and those who served under him will never fail to credit him with a full share of the good done for the institution by the men who have been its commandants. Colonel Hawkins, as an ideal soldier, inspired the two classes under his control with a spirit at once worthy of the true qualities of all that goes to make up the

sum and substance of the real soldier, officer and gentleman.

Colonel Hawkins remained in command of the school until April, 1898, war having been declared by the United States against Spain. The entire command of the post, including the Twentieth Infantry and four troops of cavalry, were transferred to the South and participated in the engagements of the American forces on the island of Cuba. Major Jacob A. Augur, Fourth Cavalry, was assigned to the command of the post, but the school was closed and so remained until September 1, 1902.

The Spanish-American War made a complete revolution in the army. Many of the younger officers were promoted, and an increase of the army resulted in a large influx in the number of officers not well grounded in professional requirements.

In his annual report for 1901, the Secretary of War, the Hon. Elihu Root, referring to the subject of military education, said:

“Existing conditions make this subject one of primary importance at the present time. The imperative demand for the service of all our officers since the spring of 1898 has caused a practical cessation of all systematic education of commissioned officers for nearly four years. In the meantime, the ordinary additions to the number of second lieutenants have been, roughly speaking, about one-third from West Point and about two-thirds from the ranks and civil life. In the reorganization of the enlarged army about 1,000 new officers have been added from the volunteer force, so that more than one-third of all the officers of the army have been without any opportunity whatever for systematic study of the science of war. On the other hand, the rapid advance of military science; changes of tactics required by the changes in weapons; our own experience in the difficulty of working out problems of transportation, supply, and hygiene; the wide range of responsibilities which we have seen devolving upon officers charged with the civil government of occupied territory; the delicate relations which constantly arise between military and civil authority; the manifest necessity that the soldier, above all others, should be familiar with the history and imbued with the spirit of our institutions—all indicate the great importance of thorough and broad education for military officers.

X "It is a common observation, and a true one, that practical qualities in a soldier are more important than a knowledge of theory. But this truth has often been made the excuse for indolence and indifference, which, except in rare and gifted individuals, destroys practical efficiency. It is also true that, other things being equal, the officer who keeps his mind alert by intellectual exercise, and who systematically studies the reasons of action and the materials and conditions and difficulties with which he may have to deal, will be the stronger practical man and the better soldier.

"I can not speak too highly of the work done in our service schools for a number of years before the war with Spain. It was intelligent, devoted, and effective, and produced a high standard of individual excellence, which has been demonstrated by many officers in the active service of the past four years. There was, however, no general system of education. The number of officers who could avail themselves of the very limited accommodations afforded was comparatively small. The great body of officers were confined to the advantages offered by the post schools, called 'lyceums,' which were, in general, unsatisfactory and futile. There was no effective method by which the individual excellence demonstrated could be effectively recognized, or the results attained be utilized.

"After careful consideration and study of the subject, a general scheme of instruction has been matured and embodied in an order, the general provisions of which are as follows:

INSTRUCTION OF OFFICERS.

With a view to maintaining the high standard of instruction and general training of the officers of the army, and for the establishment of a coherent plan by which the work may be made progressive, the Secretary of War directs that the following general scheme be announced for the information and guidance of all concerned:

THE SYSTEM OF INSTRUCTION.

There shall be, besides the Military Academy at West Point, the following schools for the instruction of officers in the army:

1. At each military post an officers' school for elementary instruction in theory and practice.
2. Special service schools:
 - (a) The Artillery School at Fort Monroe, Va.
 - (b) The Engineer School of Application, Washington Barracks, D. C.
 - (c) The School of Submarine Defense, Fort Totten, N. Y.
 - (d) The School of Application for Cavalry and Field Artillery, at Fort Riley, Kansas.
 - (e) The Army Medical School, Washington, D. C.

The special service schools will be open to officers of the National Guard and former officers of volunteers who shall furnish evidence to the War Department of such preliminary education as to enable them to benefit by the courses of instruction.

The college staff at the General Service and Staff College, Fort Leavenworth, will make report to the Secretary of War of qualifications of officers of the National Guard, ex-volunteers, and graduates of military schools and colleges, who shall have attended the college or shall apply for examination, and shall further certify whether or not they are qualified for service as officers of volunteers, specifying character of the service, whether line or staff, for which they are specially qualified.

A special register of the names of persons so reported as qualified will be kept in the War Department.

A register shall also be kept in the War Department in which shall be entered the names of officers of the regular army below the grade of colonel, as follows:

First. Officers who have heretofore exhibited superior capacity, application and devotion to duty, the names to be selected by a board of officers convened for that purpose.

Second. Officers who shall be reported as doing especially meritorious work in the above mentioned schools, other than the officers' schools at posts.

Third. Officers who at any time specially distinguish themselves by exceptionally meritorious service.

It will be the aim of the Department to make this register the basis of selection for details as staff officers, military attaches, and for special service requiring a high degree of professional capacity.

3. A General Service and Staff College, at Fort Leavenworth, Kan.

4. A War College, for the most advanced instruction, at Washington Barracks, D. C.

The War College shall be under the immediate direction of a board of five officers detailed from the army at large and the following ex-officio members: The Chief of Engineers, the Chief of Artillery, the Superintendent of the Military Academy, the commanding officer of the General Service and Staff College.

The War College Board shall exercise general supervision and inspection of all the different schools above enumerated, and shall be charged with the duty of maintaining through them a complete system of military education, in which each separate school shall perform its proper part. Such officers as shall be requisite to assist the board in performing its duties will be detailed from time to time for that purpose. It should be kept constantly in mind that the object and ultimate aim of all this preparatory work is to train officers to command men in war. Theory must not, therefore, be allowed to displace practical application.

The officers' schools at military posts and the General Service and Staff College will be open for instruction to officers of the National Guard of the several States, to former officers of Volunteers, and to graduates of military schools and colleges which have had officers of the army as instructors.

"This order, if loyally and persistently followed, will result in the building up of what is practically a university system of military education. The principal advantages which it is designed to secure are:

(1) The bringing of all the different branches of military education into one system, under direct supervision and inspection by a body of officers, whose special business it will be to make every part of the system effective.

(2) The establishment of definite required courses of instruction in the officers' schools, which will be the foundation of the whole system, in the place of the very loosely regulated lyceums, which in most cases were not schools at all.

(3) The establishment of the General Service and Staff College, upon the foundation of the Infantry and Cavalry School at Fort Leavenworth, so that every officer who displays superior qualities in the lower schools may be instructed there in every branch of military service.

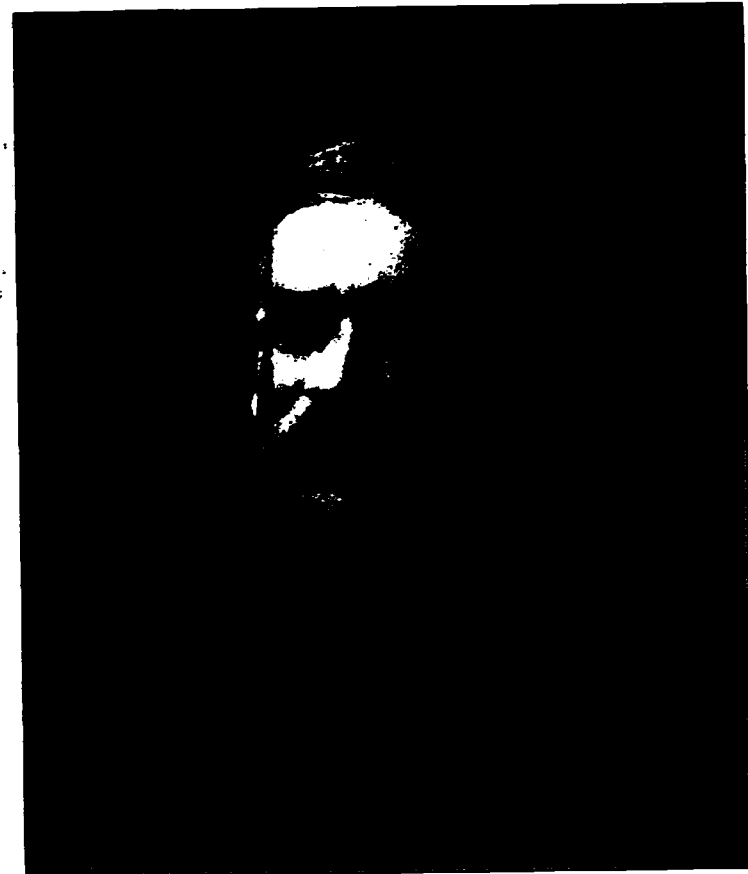
(4) The completion of the series of instruction by the War College, which will ultimately be in effect a post-graduate course for the study of the greater problems of military science and national defense.

(5) The establishment of a record in the War Department, on which shall appear the names of officers who have exhibited special capacity, in order that they may be known by the Commander-in-Chief, and by the country whenever special service is required, and so that, although under the law meritorious service cannot be rewarded by increase of rank or pay below the grade of general, it may receive the reward of recognition and honor and opportunity, to which it is entitled. This record will be made by a board of officers instructed and bound to select the names of those who are worthy, without reference to any consideration but their military records.

(6) The throwing open of the schools to the officers of the National Guard, of the former volunteers and the graduates of military colleges and schools for instruction by and with the officers of the regular army.

"The courses, both of the officers' schools at the posts and the General Service and Staff College, will be arranged so that the young men wishing to fit themselves for volunteer commissions may spend their vacations in military study. It is particularly desirable that a large number of young men should be made competent to perform the duties of volunteer officers in the staff and supply departments. Without such a class at the outbreak of a war, with a large volunteer force called into being, there will always be confusion, waste, delay and suffering, because untrained quartermasters and commissaries of subsistence cannot properly perform their duties. If the war lasts long enough they will learn in time, but at a frightful cost. There are thousands of young men in the country engaged in various kinds of civil business which make them thoroughly familiar with the subject-matter of quartermasters' and commissaries' duties, and who, with a little timely instruction and practice, could learn to apply their business knowledge in military affairs so as to be useful quartermasters and commissaries whenever called into the volunteer service.

"It is hoped that if the gentlemen to whom instruction is



COLONEL CHAS. W. MINER, SIXTH U. S. INFANTRY.
COMMANDANT GENERAL SERVICE AND STAFF COLLEGE.

thus offered avail themselves of the opportunity in considerable numbers, laws may be enacted under which their proved fitness for volunteer commissions will carry a right to receive commissions whenever a volunteer force is called out, and that a selection upon the ground of ascertained competency may thus take the place of the necessarily indiscriminate appointment of volunteer officers concerning whose fitness the appointing power can not possibly be informed."

The system of military education prepared by Secretary Root, was carried out in General Orders No. 155, Headquarters of the Army, series of 1901, under which the General Service and Staff College is established, taking the place of the U. S. Infantry and Cavalry School. The provisions of this order relating to the establishment of the college are as follows:

"The Infantry and Cavalry School at Fort Leavenworth, Kan., shall be enlarged and developed into a General Service and Staff College, and shall be a school of instruction for all arms of the service, to which shall be sent officers, preferably of the grade of lieutenant, who have been recommended for proficiency attained in the officers' schools conducted in the various posts.

"The college will be opened September 1, 1902, and for the present the instruction will be limited to a period of one year, and such additional time as may be necessary to complete the annual maneuvers, which it is contemplated shall be carried out each autumn conjointly with such garrisons as may be assembled for the purpose. The permanent garrison for the General Service and Staff College will consist of four companies of engineers, four troops of cavalry, three batteries of field artillery, twelve companies of infantry, a band, Signal Corps detachment, Hospital Corps detachment, post non-commissioned staff, and such field officers, instructors, and student officers, in addition to those belonging to the organizations serving at the post, as may be ordered from time to time.

* * * * *

"Upon the conclusion of the annual examinations the college staff will recommend such student officers as have especially distinguished themselves, for further instruction in the War College. Such recommendations will make mention of any special qualifications or attainments of individual officers."

The last named order was followed with another, General Order No. 89, August 1, 1902, in which the regulations and program of instruction for the government of the College are published.

The strength of the command at Fort Leavenworth under the plan adopted will consist of 3,006 men, not including officers. Brigadier-General J. Franklin Bell, U. S. Army, has been assigned to the command of the post, and as the commandant of the General Service and Staff College.

From September 1st to September 11, 1902, Colonel J. A. Augur was temporarily commandant of the college, and inaugurated the course for the first class of students. Since September 11th, Colonel C. W. Miner, Sixth Infantry, has been in command of the post and commandant of the college. In the present class, the first to take the course are twenty-nine cavalry and sixty-five infantry officers, chosen from the head of the lists of first and second lieutenants.

REGULATIONS AND PROGRAM OF INSTRUCTION OF THE GENERAL SERVICE AND STAFF COLLEGE.

HEADQUARTERS OF THE ARMY.

ADJUTANT GENERAL'S OFFICE.

GENERAL ORDERS,
No. 89.

WASHINGTON, August 1, 1902.

The accompanying Regulations and Program of Instruction for the government of the General Service and Staff College, at Fort Leavenworth, Kan., are published for the information and guidance of all concerned:

REGULATIONS.

OFFICIAL DESIGNATION, ORGANIZATION, AND ADMINISTRATION.

1. The College is officially designated the General Service and Staff College.
2. The commanding officer of the post of Fort Leavenworth, Kan., shall be the Commandant of the College.
3. The senior officer on duty with the College, pursuant to orders from the War Department, shall be the Assistant Commandant of the College.
4. The Staff of the College shall consist of the Assistant Commandant and the Instructors in charge of departments. A majority thereof shall con-

stitute a quorum for business. All deliberations, discussions, and individual votes of the Staff are to be regarded as confidential.

5. There shall be a Secretary of the College, appointed by the Commandant.

6. The Instructors shall be assisted by such number of Assistant Instructors, designated by the Commandant, as may be required.

7. When practicable the Instructors and Assistant Instructors shall be senior in rank to the officers of the student class; but when officers assigned as Instructors or Assistant Instructors are junior in rank to officers of the student class, they shall, in the execution of such duty, be respected accordingly.

8. The Instructors and Assistant Instructors shall, as far as practicable in the judgment of the Commandant, be exempt from all duties which would interfere with the performance of duty as Instructors or Assistant Instructors.

9. The officers and the enlisted force and equipment of the several organizations on duty at the post shall be available for the practical instruction of officers of the student class in field operations and drill regulations, at such times as may be determined by the Commandant.

10. The officers designated as members of the student class shall be detailed in orders from the War Department. As soon as a list of the officers so selected has been furnished to the Commandant of the College, he shall cause the program of instruction and the list of authorized text-books to be sent to them.

DISCIPLINE.

11. The College shall be governed by the rules of discipline prescribed for military posts and by the regulations of the College. In matters pertaining to the College and the course of instruction, it shall be exclusively subject to the control of the War College Board.

COMMANDANT OF THE COLLEGE.

12. The Commandant shall from time to time apply to the War Department for the detail of officers for duty at the College, and from them he shall assign the Assistant Commandant, the Instructors, the Assistant Instructors, and the Secretary.

13. The Commandant shall make application to the War Department for such articles of engineer, ordnance, and signal property as may be necessary.

14. The Commandant shall make annual report to the Adjutant-General of the Army of the progress and wants of the College after each yearly examination.

15. The Commandant is authorized to order the expenditure of such quantity of ammunition for field guns, machine guns, and small arms as he may deem necessary for proper instruction.

ASSISTANT COMMANDANT OF THE COLLEGE.

16. The Assistant Commandant shall preside at the meetings of the Staff in the absence of the Commandant.

17. The Assistant Commandant shall inspect the methods of instruction in the several departments, and shall frequently visit the section rooms during recitations or lectures. He shall make report in writing to the Secretary of the College from time to time, for the information of the Commandant. If occasion should arise, he will make immediate report.

THE SECRETARY OF THE COLLEGE.

18. The Secretary shall be the custodian of the records. He is responsible for the College fund and for all property purchased therefrom.

19. All official correspondence relating to the College from members thereof shall be addressed to the Secretary.

DEPARTMENTS.

20. The course of instruction shall be embraced in four departments, as follows:

First—Department of Tactics.

Second—Department of Engineering.

Third—Department of Law.

Fourth—Department of Military Sanitation and Hygiene.

The Instructors assigned by the Commandant shall have charge of these departments respectively. The chief medical officer at the Post shall have charge of the Department of Military Sanitation and Hygiene.

21. The departments shall include the courses of study as follows:

Department of Tactics: The course of tactics and minor tactics, organization of armies, field exercises with and without troops, hippology, equitation, small-arms firing regulations, lectures on the principles of strategy, and drill regulations of the different arms.

Department of Engineering: The course of military topography and sketching, field fortification, and field engineering.

Department of Law: The courses of law and military administration.

Department of Military Sanitation and Hygiene: The course of military sanitation and hygiene.

INSTRUCTION.

22. The course of instruction shall be as provided for in the program of instruction, covering one year consisting of two terms.

23. The first term's course shall begin on the 1st of September, unless that date fall on Saturday or Sunday, in which case the course shall begin the following Monday. It shall end on the 21st of December, concluding with the semi-annual examination.

The second term's course shall embrace the period from the 1st day of January to the 30th day of June following, concluding with the final examinations.

24. The month of July following the final examinations shall be devoted to such practical exercises in the field as may be ordered by the Commandant.

25. Recitations, including exercises in application, shall be held daily excepting Saturdays, Sundays and holidays. The period from December 22d to January 1st, both dates inclusive, shall also be excepted.

At stated intervals, to be determined by the Commandant, during the course of instruction in each department, these shall be prepared by the student officers in addition to their regular classroom work. The subjects shall be assigned by the respective instructors with the approval of the Commandant. They shall be germane to the subject under instruction and shall be such as will not involve unreasonable labor in preparation. In determining the merit of such work stress shall be laid, not merely upon soundness of conclusions, but also upon combined clearness and terseness of statement and of reasoning. The aim shall be to make them models of military memoranda, as complete and in as few words as will clearly express the ideas.

26. All student officers shall be embraced in one class, which shall be divided into sections of convenient size and adaptation.

27. Record shall be kept of all recitations and exercises, and weekly report of the same shall be made through the instructors to the Commandant.

28. Recitations shall be classified as "satisfactory" or "unsatisfactory." Each unsatisfactory recitation shall be at once reported to the Commandant, who will require an explanation in writing from the officer reported.

29. The study of text-books and recitations therefrom shall be supplemented by lectures and exercises in application. Recitations shall not as a rule exceed one hour for each section, but this time limitation shall not apply to practical exercises.

30. The allotment of time for instruction in each department shall be fixed upon the recommendation of the Staff, approved by the Commandant.

Each instructor shall devote to practical instruction as much as possible of the time allotted to his department.

31. Instructors and Assistant Instructors shall report in writing, on the day of occurrence, all student officers late or absent from recitation or exercise, or neglecting to make proper preparation for the same.

EXAMINATIONS.

32. Examinations shall be held in the months of December and June.

33. All examinations shall be written and shall be conducted under the supervision of the Staff.

34. When any subject upon which a student is to be graded is weighted, its value shall be announced before the examination work is begun.

35. The Instructor and his assistants in any one department shall assign to the student a mark on his examination papers, the mark varying between "0" for a complete failure, and "3" for a perfect paper. The average of the marks given by the Instructor and his assistants shall constitute the examination mark in their department. The Instructor shall then submit to the Commandant lists of the students under his instruction, arranged in order of merit by marks received (a) in examination and (b) in practical exercises which have been held during the previous term.

36. In determining the order of merit in any subject, due credit shall be given for problems, maps, and results of practical work pertaining to such subject and required of student officers during the course of instruction.

37. All members of the class shall be given identical questions and required to draw the same maps and diagrams in examination. In case of an officer not examined with his class owing to sickness or other cause, he shall be examined as soon as practicable after his return to duty. For this examination the topics and questions shall be similar to, but not identical with, those given in the general examination.

38. The examination papers, maps, problems, etc., with such exceptions as the Staff may designate, shall, after action by the Staff, be filed with the records of the College.

39. The assist in fixing the relative proficiency of officers the Instructor in the Department of Tactics and his assistants shall note the manner in which students perform their duties in all military exercises. The ability to impart instruction, to command, to see what is required, and the soldierly bearing of an officer—all shall be considered in marking, according to the rule prescribed for examination.

40. The maximum values assigned to the different departments in ascertaining the figure of merit shall be as follows:

Department of Tactics (350):	
Practical work	175
Theoretical work	175
Department of Engineering (300):	
Practical work	150
Theoretical work	150
Department of Law	100
Department of Military Sanitation and Hygiene	50

41. For record at the College and at the War Department, the class upon graduation shall be arranged in order of merit, special proficiency in any subject to be noted; but publication of the class standing shall be limited to an alphabetical arrangement in two grades, viz:

(1) Distinguished.

(2) Proficient.

In determining the order of merit the marks received upon original examination shall be considered.

42. Relative standing in the theory of the different subjects taught in each department shall be based solely upon the examinations, but all practical work marks shall be considered in determining the order of merit as con-

templated in paragraph 41, as well as in deciding upon the proficiency or deficiency of an officer at the close of each term.

43. An officer failing to pass a satisfactory examination in any subject (by which shall be understood the attainment of 70 per cent. of the maximum in the examination, as well as 70 per cent. of the maximum in the practical work of the previous half year) shall be re-examined either in theory, in practice, or in both, at the discretion of the Staff of the College, after such equitable time as may be fixed by it, and, if then declared deficient, he shall be specially reported to the War Department, with a statement by the Commandant as to the cause of failure as determined by the Staff, and with a view to his being returned to his regiment: *Provided*, That if the deficiency occur at the semi-annual examination, the officer may be conditioned by the Staff until the final examination, at which he shall be examined on the whole year's course of that subject in which the deficiency occurred.

44. The Commandant shall forward to the War Department a report of the final action of the Staff at each examination.

GRADUATION.

45. The Staff shall note the names of the students who may have shown marked proficiency in any branch, and shall state the professional employments for which any of them appear to be specially qualified. The staff shall also note the names of officers of the distinguished grade, if any, not to exceed five, to be borne upon the Army Register as "honor graduates."

46. Officers who pass successfully through the entire course of instruction shall receive a diploma setting forth their proficiency. This diploma shall be signed by the Commandant, the Assistant Commandant, and the Staff.

47. When an officer has graduated in the distinguished class, that fact, with a transcript from the records of the College, setting forth the branches in which he has been especially distinguished and the recommendations given in his case by the Staff of the College, shall be communicated to the colonel of his regiment, who shall publish the same in a regimental order.

MISCELLANEOUS.

48. Disbursements of the funds shall be made only upon the written order of the Commandant, and vouchers shall be taken for all expenditures, one copy of which shall be filed with the College records.

49. The College library, consisting for the most part of professional books, maps, and scientific periodicals, shall be maintained separate and apart from the Post library, and for the convenience and improvement of officers.

50. In case of loss or damage to any book, periodical, map, or other property belonging to the College, the person responsible for such loss or damage shall make the same good by the payment of the amount of the damage or actual cost of the article lost or destroyed. The damage shall be assessed by the Secretary of the College, whose action, when approved by the Commandant, shall be final.

51. The authorized text-books and books of reference shall be selected upon the recommendation of the Staff of the College and with approval of the Commandant, but Instructors and Assistant Instructors shall, when required to do so, prepare essays on the subject-matter of their courses of instruction, which, when recommended by the Staff and approved by the Commandant, shall become authorized text-books and be printed at the College.

52. Student officers shall be required to purchase their text-books.

53. Instructors and Assistant Instructors shall submit to the College Staff, immediately after the final examination, any suggestions or recommendations they may have with regard to the course of instruction and the text-books used in their respective departments.

PROGRAM OF INSTRUCTION.

DEPARTMENT OF TACTICS.

Program of the Course in Tactics.

The course in Tactics is divided into ten parts, and embraces lessons, lectures, and practical exercises with and without troops.

- Part I. Infantry Drill Regulations.
- Part II. Small Arms Firing Regulations, supplemented by lectures on Fire Discipline.
- Part III. Cavalry Drill Regulations.
- Part IV. Equitation and Hippology.
- Part V. Demonstrations of Field Artillery.
- Part VI. Manual of Guard Duty.
- Part VII. Troops in Campaign.
- Part VIII. Security and Information.
- Part IX. Organisation and Tactics.
- Part X. Practical Work in the Study and Application of the Principles of Minor Tactics.

DEPARTMENT OF ENGINEERING.

Program of the Course of Engineering.

The course of engineering is divided into three parts and consists of lessons, lectures, and exercises in application, as follows:

- Part I. Military topography and sketching.
- Part II. Temporary or field fortifications.
- Part III. Military field engineering.

DEPARTMENT OF LAW.

Program of the Course of Law.

The course of law is divided into three parts, and consists of lessons in the section room supplemented by lectures.

- Part I. Military law and Constitution of the United States.
- Part II. International law.
- Part III. Administration.

DEPARTMENT OF MILITARY SANITATION AND HYGIENE.

Program of the Course of Military Sanitation and Hygiene.

The course of military sanitation and hygiene consists of theoretical studies of the authorized text-book (Woodhull's), practically illustrated and explained by lectures, drawings, microphotographs, models.



COMMANDANT, SCHOOL STAFF, INSTRUCTORS AND STUDENT
OFFICERS PRESENT AT OPENING OF SCHOOL IN 1881.

To find the names of the officers whose excellent likenesses are presented in the double page half tone read below from left to right, commencing at top of picture.

FIRST ROW.—Second Lieut. H. D. Reed, 25th Infantry; 1st Lieut. M. B. Hughes, 9th Cavalry; 1st Lieut. John H. Gifford, 2d Artillery; 2d Lieut. Herbert J. Slocum, 7th Cavalry.

SECOND ROW.—Second Lieut. W. A. Kimball, 14th Infantry; 1st Lieut. Josiah R. King, 5th Cavalry; 2d Lieut. R. J. C. Irvine, 11th Infantry; 1st Lieut. Rufus P. Brown, 4th Infantry; 2d Lieut. Charles Dodge, Jr., 24th Infantry; 2d Lieut. W. C. Brown, 1st Cavalry; 1st Lieut. B. H. Cheever, 6th Cavalry.

THIRD ROW.—Second Lieut. D. M. Defrees, 5th Infantry; 2d Lieut. J. E. McCoy, 7th Infantry; 2d Lieut. C. W. Abbott, Jr., 12th Infantry; 1st Lieut. Cunliffe H. Murray, 4th Cavalry; 2d Lieut. J. B. Erwin, 4th Cavalry; 1st Lieut. J. J. Crittenden, 22d Infantry; 1st Lieut. Otho W. Budd, 4th Cavalry.

FOURTH ROW.—Second Lieut. E. H. Weber, 20th Infantry; 1st Lieut. Henry A. Reed, 2d Artillery; Capt. John N. Coe, 20th Infantry; Maj. B. E. Fryer, Surgeon, U. S. Army; Capt. S. B. M. Young, 5th Cavalry; Capt. T. M. Tolman, 1st Infantry; Capt. J. B. Johnson, 3d Cavalry; 1st Lieut. George D. Wallace, 7th Cavalry; 2d Lieut. Charles Byrne, 6th Infantry.

FIFTH ROW.—First Lieut. Victor Biart, Assistant Surgeon, U. S. Army; Capt. Theodore J. Wint, 4th Cavalry; 1st Lieut. John B. Rodman, Adjutant 20th Infantry; Maj. Caleb R. Layton, 20th Infantry; Col. E. S. Otis, 20th Infantry; Maj. J. J. Upham, 5th Cavalry; 1st Lieut. Thomas W. Lord, Quartermaster, 20th Infantry; Post Chaplain T. W. Barry; Acting Assistant Surgeon W. J. Barbour.

SIXTH ROW.—First Lieut. T. E. True, 4th Infantry; 2d Lieut. L. H. Slocum, 15th Infantry; 1st Lieut. Frank H. Edmunds, 1st Infantry; Capt. Theodore Schwan, 11th Infantry; Maj. J. S. Poland, 21st Infantry; Capt. E. B. Williston, 2d Artillery; Capt. J. S. McNaught, 20th Infantry; 2d Lieut. Arthur Williams, 3d Infantry; 1st Lieut. Charles M. O'Connor, 5th Cavalry; 2d Lieut. Vasa E. Stolbrand, 13th Infantry.

SEVENTH ROW.—Second Lieut. Silas A. Woolfe, 4th Infantry; 2d Lieut. Thomas J. Clay, 10th Infantry; 1st Lieut. Paul Harwood, 20th Infantry; 1st Lieut. Lewis Merriam, 4th Infantry; 2d Lieut. Henry A. Greene, 20th Infantry; 1st Lieut. Alfred Reynolds, 20th Infantry; 1st Lieut. Leon Matile, 11th Infantry; 2d Lieut. Joseph T. Dickman, 3d Cavalry; 1st Lieut. C. M. Rockfeller, 9th Infantry.

EIGHTH ROW.—Second Lieut. F. D. Rucker, 2d Cavalry; 2d Lieut. Edwin St. John Greble, 2d Artillery; 2d Lieut. A. F. Handforth, 11th Infantry; 2d Lieut. John A. Lockwood, 17th Infantry; 2d Lieut. H. W. Wheeler, 5th Cavalry; 2d Lieut. E. H. Brooke, 21st Infantry; 2d Lieut. Eugene Cushman, 16th Infantry; 2d Lieut. Thomas Connolly, 1st Infantry.

NINTH ROW.—Second Lieut. William C. Muhlenberg, 2d Infantry; 1st Lieut. C. H. Heyl, 23d Infantry; 2d Lieut. John M. Cunningham, 19th Infantry; 2d Lieut. Leighton Finley, 10th Cavalry; 1st Lieut. D. D. Mitchell, 15th Infantry; 2d Lieut. H. Johnson, Jr., 5th Infantry.

CHINA NOTES (1900).

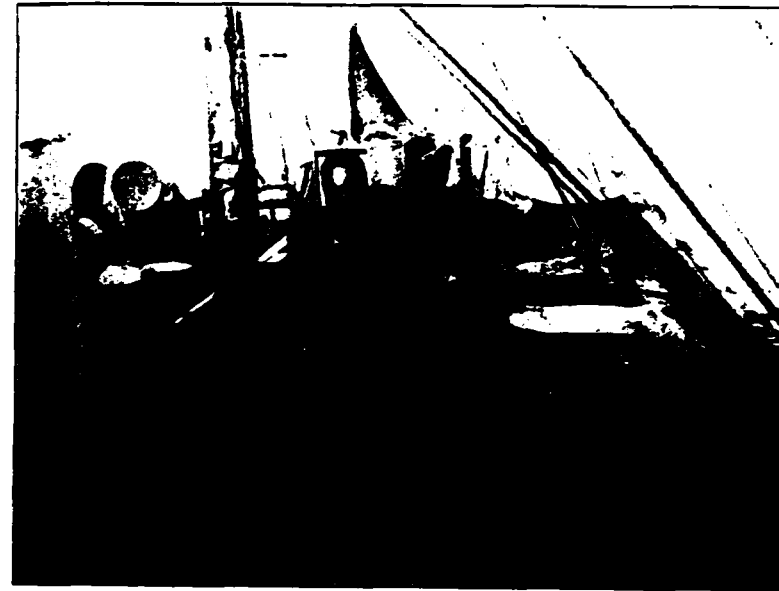
BY CAPTAIN CHAS. D. RHODES, SIXTH U. S. CAVALRY.

THESE notes are jottings made in a diminutive diary from day to day while participating in the China relief expedition. If they prove at all interesting to the readers of the CAVALRY JOURNAL, it will be because they were made on the spot, with little subsequent revision or amplification. No literary merit whatever is claimed for them.

June 30th.—After one day's notice I took up my quarters as quartermaster on the United States chartered transport *Leelanaw* and worked very hard all day, loading horses and stores, and otherwise preparing for sea. Have 252 horses of the Sixth Cavalry aboard, and one private horse of Major E., to be delivered at Honolulu. Have thirty-one soldiers of my regiment, and one hospital attendant. Lieutenant S. and Dr. R., with Veterinary Surgeons G. and D., are to be my companions of the voyage. At 5:30 this evening we pulled out and anchored off shore, San Francisco Harbor, awaiting sailing orders. We are as yet ignorant of our destination, but expect to go to Nagasaki, via Honolulu and Kobe, and there receive instructions as to final destination, China or the Philippines.

July 1st.—Waited all the morning for sailing orders. Sent Lieutenant S. ashore for salt-water soap and thermometers to hang in lower holds. He returned with *clinical* thermometers about 12 M., saying our sailing orders had been prepared and would soon be aboard. When I came aboard at such short notice, I found the *Leelanaw* loaded with thousands of dollars worth of stores, and was handed invoices and receipts to sign for property said to be buried in the bowels of the ship. It is needless to say that I refused to receipt under such circumstances. At 1:30 P. M. to-day a tug brought

our sailing orders, and at 2:00 we passed out towards the Golden Gate. Immediately encountered the tail end of a storm, a very heavy sea from the northwest; and as our course lay southwest by west, we rolled in the trough of the sea all night. Our horses are ranged in two tiers on the main deck and in the hold; and are separated from each other by wooden bars, with breast and tail boards. Some of these broke during the storm, and one poor animal was pre-



UPPER DECK HORSE TRANSPORT.

cipitated into the hold. Although falling eighteen or twenty feet, he was uninjured. Dozens of horses lost their footing and fell to the slippery deck, where they slid helplessly about as the vessel rocked from side to side. We were all violently sea-sick, but managed to get a half dozen men up, and together we worked nearly all night getting the horses on their feet. To labor in the hold of a vessel under such circumstances, reminds one of Dante's Inferno. It was a fine

test of the habit of discipline, for personally we all wanted to die, such were the pangs of *mal de mer*.

July 2d.—Everybody very sea-sick and but few men able to work. Have been feeding the horses bran, but to-day put slings on all animals on starboard side of main deck, and fed bran and oats, half and half. Two horses are still down on the after main deck, and until the storm abates we shall be unable to right them.

July 3d.—Had guard of six men with horses all night. Four animals fell, but were promptly righted. This morning we got a horse on his feet which has been down for thirty-six hours, wedged under the after-winch. Our first horse died to-day from internal injuries and was thrown overboard. All hands are feeling better.

July 4th.—Sea smooth, and everyone except Privates W., M. and H., are feeling better. My men are fed by contract with the ship, and there is complaint to-day of poor fare. Found horse of Troop D, moved yesterday from winch, dead to-day in his sling. Both he and No. 1 died from internal injuries, portions of their stalls having broken during the storm. Spent the entire day thoroughly cleaning, washing and disinfecting the ship.

July 5th.—Our third horse (Troop D) died early this morning of internal injuries received the first night of our voyage. He was found dead in his sling. After breakfast we thoroughly cleaned ship. Worked all afternoon over Sergeant B.'s horse, which has colic, and he is improving. Saw our first flying fish to-day. Our fourth horse died this evening, again of internal injuries. He had been refusing his forage. It would seem now that the stalling had been materially weakened by several voyages, and should have been renewed by the quartermaster's department before leaving port.

July 6th.—Sergeant Baker's horse died about 5:00 P. M. to-day of inflammation of the bowels, following colic. He made a grand fight for life. We threw him overboard. It is sad to see these grand old troop horses die so ignominiously after years of faithful service on the Western plains. The weather continues fine. We expect to reach Honolulu

Wednesday morning. All persons on board have been vaccinated.

July 7th.—Nothing of importance. One horse suffering with pneumonia seems to be improving. Collins' horse had slight colic and retention of urine. Used catheter.

July 10th.—One day is like another. We see flying-fish, goonies and bos'n birds.

July 11th.—Sighted the Hawaiian Islands about 11 o'clock last night. Pilot came aboard at 5 A. M. to-day, and by 6:00



HORSE TRANSPORT. SHOWING WINDSAILS.

we were alongside the dock at Honolulu. Unloaded horses and turned them loose in a paddock about seven-eighths of a mile distant. Horses are in good shape except the pneumonia case, which died on the dock this evening. Fed three pounds of oats only to animals, but as much hay as they could eat. Saw something of the City of Honolulu this morning, a curious mixture of all nationalities, mostly Asiatics. The amount of shipping in the harbor is prodigious.

gious. Twelve vessels are at anchor awaiting berths at the docks. Visited Camp McKinley, and passed lovely residences, fairly buried in luxuriant tropical vegetation. The mosquitoes here are very troublesome.

July 12th.—Find so much bran necessary to keep animals' bowels open, and so much spoils through exposure on deck, that we loaded an additional 30,000 pounds to-day. A gang of Kanakas cleaned the ship.

July 13th.—Was notified by Depot Quartermaster that he wished the *Leelanaw* to sail on Sunday, the 15th inst. As my animals had been put aboard at San Francisco after a ten-day railroad journey, I would have liked two days longer rest at Honolulu. It has seemed to me that as I am the officer held responsible for the safe arrival of the horses, I should be the judge of the amount of rest needed en route.

July 14th.—Carpenters put to work strengthening superstructure deck on which many thousand tons of forage are loaded. We fear lest a severe typhoon may precipitate this load on the animals below. The braces between stalls and worn breast-boards have been replaced.

July 15th.—Carpenters worked until 9:30 A. M., when loading of horses was begun, using two swinging cars, hoisted aloft with steam winches. At 5:00 P. M. we went to sea. Found two stowaways aboard, one being a deserter from the artillery at Honolulu, who said he desired Philippine or China service. Put them both to work.

July 16th.—Another complaint from the men about the unpalatable character of the ship's food. The contract price of sixty cents per day per man should give them excellent fare. Had a very plain talk with the master of the transport, which will result in improved rations for the men. The master was once a petty officer in the U. S. navy, and judges the needs of our soldiers by the now ancient standard of "pork and treacle."

July 17th.—Horses are doing well. Another civilian stowaway turned up this evening. The ship's captain put him in irons, but afterwards released him and put him to stoking in the engine room. I now have 249 animals aboard, six having died en route to Honolulu.



FLYING STALL.—HORSE TRANSPORT.

July 18th.—One or two animals a little off their feed. We are so far south that the temperature is quite warm. With no facilities for exercising the horses, it is difficult to keep their bowels open. Colic and pneumonia are the two diseases most to be feared; the former from overfeeding without sufficient exercise, and the latter from draughts caused by wind-sails, blow-pipes and electric fans. If the sea were a little rougher the horses would have sufficient exercise in retaining their footing. The heat in this southern latitude is oppressive to animals in the hold of the ship, and I am beginning to think the northern route the better, whether from San Francisco or Seattle.

July 22d.—This morning we crossed the 180° meridian, and hence jumped from the 20th to the 22d of July. Had fire and boat drill this afternoon at 4 o'clock. Boat drill very slow and poor. I doubt very much if these boats could be safely unshipped in a moderate sea; and the conglomerate array of firemen, waiters, and others who make up the crews, does not promise well for good management in an emergency.

July 30th.—Since last writing, our voyage has been uneventful. No land has been sighted, and not a single sail since leaving Honolulu. Much of each day has been spent in caring for the horses and in keeping the horse decks clean and free from odor. All manure must be raised from the holds in baskets, and the horse decks flushed with a hose. The last two days have been cool and the animals appear refreshed. Several incipient cases of colic have been treated opportunely. We expect to sight land to-morrow—the Japanese island of Fatsizio.

July 31st.—Passed Fatsizio about 8:00 A. M. It seems to be an extinct volcano, and is green with vegetation. Portions of it seem to be under cultivation, although field glasses revealed no signs of inhabitants.

August 1st.—All day long we skirted the Japanese coast, entering Kii Channel. The country is beautifully green. About 8:00 P. M. we passed through the narrows and dropped anchor off Kobe.

August 2d.—Moved up early to a better anchorage. After breakfast went ashore and visited the American Consulate, where I found a telegram from General Chaffee, sent from Nagasaki, directing us to proceed at once to Taku, China. The ship's captain made arrangements for coaling the vessel,



FLYING STALL—HORSE TRANSPORT.

and I ordered 300 tons of water aboard.* Cabled our arrival to Washington.

August 3d.—Our pilot came aboard and we started for Mozi, through the Inland Sea, about 8:30 A. M. The scenery is beautiful in the extreme, the sea being dotted with green islands and the water made picturesque with odd-shaped junks, sampans, and larger craft.

August 4th.—The Inland Sea is more open to-day, but the scenery is still very fascinating. About 11.00 A. M. to-day the sea narrowed and we reached Mozi. In the straits we passed four fortified land batteries, the armament apparently being eight-inch Krupp rifles. We passed out of the Inland Sea about 2:00 P. M., and the pilot left us. To-night we are far out on the China Sea, steering almost due west. This course will take us south of Korea. The days are very hot, but after nightfall a delightful breeze springs up, refreshing the tired horses.

August 6th.—We have sailed up around Korea, first west, then northwest, and finally nearly north. On the night of the 5th one sick horse died of pneumonia, caused by the change in latitude.

August 7th.—About 9 A. M. we got our first sight of China, the promontory of Shantung, on which stands a light-house. About 5 P. M. some excitement was caused by the appearance of a man-of-war, apparently steering to intercept us. As we had received little news at Kobe as to the progress of the China relief expeditions, we immediately had visions of being sunk by one of the Chinese battleships. Fortunately, however, our fears proved groundless, and the war vessel crossed our course towards Korea. Our horses have naturally become tired of the long voyage. Another one is threatened with pneumonia.

August 8th.—Our pneumonia case died last night. This morning about 8 o'clock we narrowly escaped running on an uncharted rock in the middle of the Yellow Sea. One of the ships of the allies had evidently discovered it, for its location was marked by a small buoy, surmounted by two colored streamers. Had we been here at night it is likely we would have struck the obstruction, as our course was taking us directly towards it. Our horses appear very tired and are apparently unable to successfully combat disease. At 1 P. M. we reached the roadstead of Taku. It was indeed an inspiring sight to see hundreds of men-of-war and transports of all nations riding at anchor. We anchored near the transports *Connebaugh* and *Grant*, about ten miles off shore, owing to the shoal water. Admiral Remey's aide came aboard with



THE LAST RITES.

the Admiral's compliments, and told us all the news. I later returned the visit. Saw Captain Baker of the *Grant*, who is acting harbor-master, and got half promise to unload the *Leelanaw* to-morrow. We can see a lighter loaded with 135 of the *Connamough's* horses stuck in the mud at the mouth of the Pei Ho River. We hear that General Chaffee and our troops are at Tien Tsin—the Sixth Cavalry waiting for its horses.

August 9th.—Waited for a lighter all the morning. Sent Lieutenant S. to the *Grant*, and Captain B. said that a lighter would surely come to unload us at 2 P. M., but it failed to appear. We are very impatient to get our poor horses ashore and rejoin the regiment at Tien Tsin.

August 10th.—Still waiting for a lighter. As our vessel has no steam-launch, and it is probably fifteen miles to Tongku, we are rather helpless. Sent Lieutenant S. in to Tongku on the *Grant's* steam-launch, invoking him to do all things to get us unloaded. About 3:00 P. M. the *Pichili*, a large steam lighter, came out, and I unloaded part of the stores, all the saddles and 124 horses before 12 o'clock to-night. An incident of the unloading was that the ship's officers and crew refused to assist in the unloading or in working the steam winches without extra compensation, claiming that their contract did not require it. I found two soldiers who understood the work, and much to the chagrin of the seamen, did the unloading without their assistance. I have never yet failed to find the right man for any emergency among our American soldiers. We expect another lighter alongside in the morning to take the rest of our horses. Unloading horses by steam power by starlight ten miles off shore, with inexperienced men, has been a unique experience.

August 11th.—The lighter *Foochow* appeared early and we unloaded the remainder of our cargo, passing up the winding Pei Ho to Tongku. The latter is a very busy town, crowded with the soldiers of all nations, working Chinese coolies to the limit. Supplies are being forwarded as rapidly as possible on the river by means of junks, and on the railroad now managed by the Russians. Our Depot

Quartermaster at Tongku has not lost time in seizing buildings for the storage of United States property, and is rushing forward supplies at a lively rate. Each junk carries the flag of the nation to which it belongs, usually with ours—a white flag with the letters U. S. marked thereon with a brush. Similarly each gang of coolies carries a protective flag. At least one soldier accompanies each gang to prevent it being gobbled up by the soldiers of other nations. The



SIXTH CAVALRY CAMP AT YANG TSUN.

coolies prefer to work for our government, as we treat them kindly, and are paying them twenty cents gold a day. The coolies of other nations are impressed.

August 12th.—Loaded my horses on a train of Gondola cars, on the Russian Railway, and stationed soldiers between the cars to quiet the animals and keep them aboard. As the sides of the cars barely reached the animals' knees, each sudden jolt seemed about to precipitate horses to the ground; in fact, before we started, I picked up three American horses

which had been lost from preceding trains. Fortunately the train moved with snail-like slowness. Back in the caboose a Cossack officer and myself attempted to talk French. He was good enough to say that the American cavalry was the finest in the world. Reached Tien Tsin at 3:00 P. M. on the hottest day I have ever experienced. A mounted detachment met us, and after unloading our animals, led them off towards the Sixth Cavalry camp, leaving us to follow on foot. Unfortunately we were misdirected, and after wandering an hour among the remains of deserted Chinese buildings, we reached our camp thoroughly exhausted. It was the last straw in the fatiguing labor of the past four days.

August 13th.—Very, very hot in camp. The Sixth Cavalry is assisting in holding Tien Tsin. General Chaffee is moving up the Pei Ho with the allies. Troop M alone accompanies him, as our horses arrived too late for the first advance. Even now, after forty days at sea, the animals appear quite exhausted and run down. There was a night alarm to-night, as a wild rumor came that our forces at the front had been cut off.

August 14th.—It is still intensely hot. Our horses are being shod and placed in condition for active field service.

August 15th.—Troop A went on a scout this morning, accompanied by twenty-five Bengal Lancers. Near a native village six miles from here, the little command was suddenly fired upon by Chinese concealed in trenches at two hundred yards range. Their fire was returned, but our troops did not care to bring on a general action. No casualties. Lieutenant Gausson, of the Lancers, performed an act of heroism in rescuing under a hot fire, a corporal of Troop A, who had been thrown from his horse in the first mêlée.* We are warned to-night by the British and Japanese generals in Tien Tsin, that a general attack is expected on our position to-night by the Chinese Imperial troops, their main attack to be directed west of the west arsenal. Our troops have been assigned to positions along the parapet encircling our

*Lieutenant Gausson has since received the Victoria Cross for this act of heroism.

camp, so that there may be no confusion in case this night attack materializes. We slept in our clothes.

August 16th.—It rained hard during the night and the Chinese failed to attack. We heard to-night, through the Japanese headquarters, of the fall of Peking and the safety of the legations. Lieutenant M. made a reconnaissance this morning, but the Chinese had retreated.

August 18th.—We received orders to day to prepare for an attack on the Boxers, located southwest of Tien Tsin, who are reported as being active and threatening.

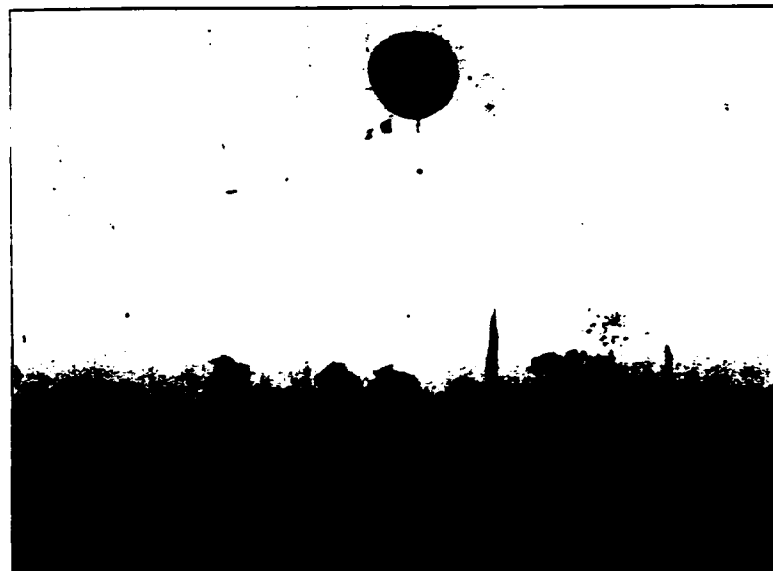


CHINESE PRISONERS—SIXTH CAVALRY FIGHT, TIEN TSIN.

August 19th.—It is Sunday. We left camp, mounted and equipped, at 4 A. M., and rendezvoused at the race-track, with a platoon of Bengal Lancers. Proceeded south of west about six miles. Our squadron (A, C and D Troops) had the advance, with Troop D as advance guard. As we passed by a field of high standing corn, we received a heavy fire from the field on our right flank. Several men were hit, but the Chi-

nese fire was too high to do much execution. Our three troops quickly dismounted to the right, "to fight on foot," and under a hot fire, which clipped the cornstalks like the buzzing of bees, charged through the field. Picked up one Winchester repeating carbine in the field, showing the Boxers' position. As we deployed into the open, we saw, some 1,200 yards away, a long line of hostile troops deployed along trenches, and waving aloft all manner of strange flags. They opened a long range fire on us, to which we replied, principally volley firing, by squad and troop. A few minutes later our led-horses were brought up, and the men held their horses individually on the skirmish line. Yielding, perhaps to fear of a flank attack by some British troops on their right, the Chinese moved by their left flank, and we conformed to their movement by making a half change of front to the right. Lest they should envelop our right flank, the troops of our third squadron were deployed, dismounted on our right, their horses under cover to the rear. The Boxers kept up a pretty steady fire on our part of the line, which we answered by volleys, specially good marksmen being designated to pick off the Boxer standard-bearers. My trumpeter, standing a few feet behind me, and holding his own and my horse on either hand, had both horses wounded almost simultaneously. Altogether, my troop alone had one horse killed and six horses wounded by this long range fire, we meanwhile waiting for our allies, the British, to reach the extreme left flank and combine with us in a general forward movement. As part of these allies were infantry, it took them a long time to reach their position, and at last, weary at the long delay, our squadron were directed to mount and charge, which we did by echelon, as foragers, from left to right, the other squadron being held in reserve. Several hundred Boxers were killed. My own charge led me directly towards the village, where a bunch of the enemy made a stand, with a hot fire, necessitating my dismounting my men and pouring in a few volleys, which dispersed them in short order. During the charge a number of Boxers with spears, having red plumes near the point, were unearthed in the tall grass. The casualties of the entire engagement were slight for our side, being one soldier

mortally wounded and five or six wounded. Several hundred Boxers are reported killed and twenty or thirty prisoners were taken. Among the latter, one wounded boy with his arm shattered, excited our pity. During the engagement there came into action on the Chinese line what appeared to be a field-battery, burning black powder. A large puff of smoke would become visible, then a roar would be heard, and a few seconds later all kinds of old railroad iron would whistle



FRENCH CAPTIVE BALLOON—MOVING TO PEKING.

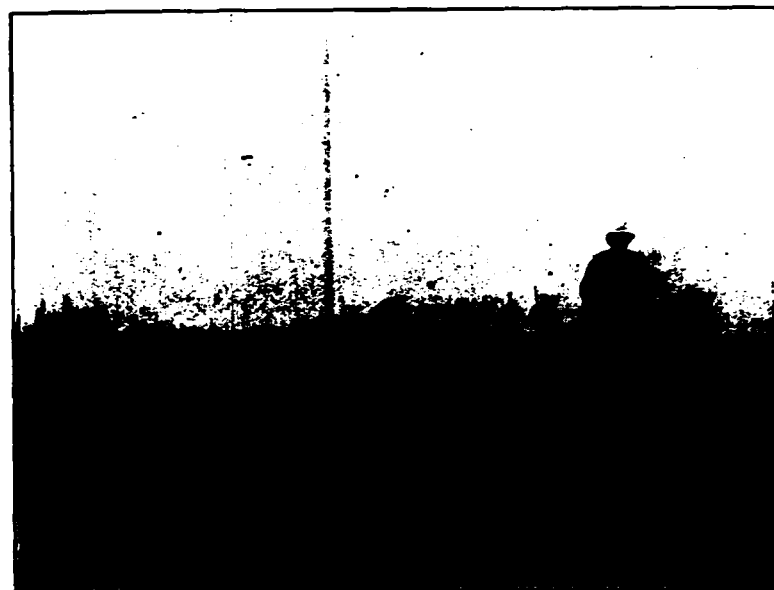
about us. We afterwards found this improvised battery to be "jingals," or two-men-guns, mounted on ordinary ginrikashas. This engagement is officially known as Gaw-Char-Chun.

August 20th.—Troops I, K and L, left for Peking early this morning, escorting General Barry. Received orders to-day to proceed with Troop C to-morrow to Yang-Tsun for station, to protect and control the Anglo-American telegraph line. Spent day loading troop property on a junk.

August 21st.—Our junk got off at 5 this morning, towed by the *Monocacy's* tug. We marched at 5:15, mounted and equipped, going by way of the Walled City to Peitsang (ten miles), and thence to Yang Tsun (twenty miles). The country is admirably adapted for cavalry, and with our flankers and connecting files, we covered a mile of front. The road crosses the Pei Ho River at Peitsang to the east bank, and follows that bank to Yang Tsun, where it crosses on a pontoon bridge to the west bank. Encountered no opposition en route. The invading army of the Allies had immediately preceded us, and the native villages were found in ruins and deserted. In many places, gruesome corpses of Chinamen still lay unburied, filling the vicinity with almost unbearable odors; while, at our approach, half-wild dogs fled from the piles of human bones that they were gnawing. In the wayside temples the Buddhist idols had been overturned and broken, and evidently a careful search had been made for money or jewels supposed to be concealed beneath the base of the images. Reached Yang Tsun about 3 P. M., and went into camp on the west side of the Pei Ho, near a well. Our junk failed to arrive, so we had to sleep in the open on short rations. To make matters worse it rained all night.

August 22d.—Our lighter arrived early and we made ourselves very comfortable, with our conical wall tents and cooking outfit. Yang Tsun is garrisoned at present by detachments of Japanese, French, and a few Germans, all of whom live in deserted houses. Three miles south the railroad crosses the Pei Ho on an iron bridge, and here the Russians have an outpost and railroad station. This is the extreme north point of railroad communication at present, the remainder of the railroad to Peking having been torn up by the Boxers. Lieutenants Alexander and Torrey, of the British forces, stopped with us to-night, conducting thirty native soldiers, five hundred Bombay coolies, and a large number of sheep and beeves on the hoof to Peking. They gave us two bullocks and eighteen sheep which were unable to march farther. The British officer seems to be a very fine fellow.

August 23d.—Sent out patrol of ten men to Hosiwu, twenty miles north of us, with two days' rations. They return to-morrow. Also a second patrol (No. 1) under Sergeant S. northwest; No. 2 patrol under Sergeant G. west; No. 3 patrol under Sergeant S. southwest. This, in order to learn the surrounding country, and locate any Boxer or Imperial troops, and make contact, if possible, with Cossack outposts along the demolished railroad. Returned, having seen neither enemies nor Cossacks.



FRENCH INFANTRY ON THE MARCH.

August 24th.—To-day a patrol went south to Peitsang, ten miles; and Sergeant S.'s patrol returned from Hosiwu with one prisoner, a coolie. We treated him kindly and offered him steady employment about the kitchen. We are now very comfortable in camp.

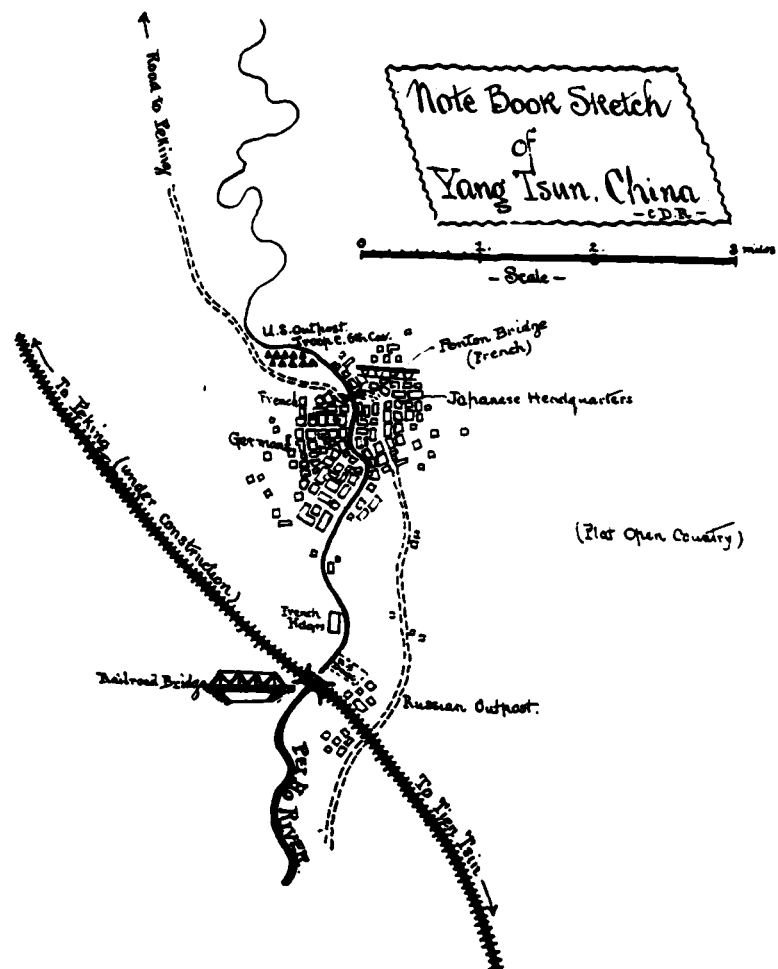
August 25th.—Captain B., our Tien Tsin quartermaster, came up on train and seized dock at the railroad bridge. Sent guard to hold it. The Allies, especially the Russians,

are rapidly seizing all available wharfage, and it behooves us to secure a good site for a depot. We have secured a good strip of river bank about one hundred and seventy-five yards in length, and have planted our flag thereon. Went out on a twelve mile scout west, northwest and south. Found villages and fields held many frightened Chinos who fled at our approach. We treated them kindly, and so reassured them that many returned from hiding. They brought us chickens, eggs and vegetables. Paid them for them, at which they were much surprised, and at first declined to accept money. We pointed to our uniforms and tried to make them understand that American soldiers would never treat them cruelly or unjustly. Returned to camp and received report of a lieutenant at Hosiwu being shot in the hand last night; also telegraph working party near Peitsang fired on this morning. Received Commanding General's order in regard to punishment of Chinese guerrillas who are supposed to be tampering with the telegraph line.

August 26th.—Sent Lieutenant D. and ten men to scout towards Peitsang, to burn village where firing occurred yesterday on our working party, and intimidate the Boxers. The Anglo-American telegraph office was moved to-day from the French headquarters to our camp. Line down again between here and Hosiwu. Lieutenant D. returned from Peitsang, without having found any Boxers. Captain B., the China representative of our Associated Press, passed through en route to Peking and dined with us.

August 28th.—A China coolie with a dislocated knee was put ashore here from one of the junks. Although we have no surgeon, we bound up the limb with first-aid bandages and gave him plenty to eat. He appears very grateful. We want these people to understand that we have no sympathy with those who have committed atrocities on non-combatants. Made application for a surgeon.

August 29th.—We are holding on tenaciously to our dock at the Yang Tsun railroad bridge, although other nations appear to be trying to crowd us out. We suspect one nation of moving the flag, marking our line of demarkation, during



the night. We had correspondent of the *London Times* at dinner to-day.

August 30th.—Junk arrived with our surgeon, Doctor B., and rations and forage for fifteen days. Now have the patrolling of the telegraph line systematized so that our entire section of thirty miles (Peitsang to Hosiwu) is traversed twice daily. We are beginning to think that the frequent breaks in the telegraph are not caused by Boxers, but by carelessness on the part of the drivers, particularly of the Russian carts which knock down the slender telegraph poles during night marches.

August 31st.—Privates J. and B. had an exciting experience to-day. They wandered off in search of watermelons, carrying no arms but their revolvers. Suddenly eight or ten shots were fired at them from a cornfield. They returned the fire and ran. Unfortunately they ran in the wrong direction, got lost, and finally entered a Chinese village for a guide. The people were very friendly to them and guided them to the railroad, which they followed into Yang Tsun. They arrived in camp to-night, tired and hungry, having walked, they declare, thirty miles. To-day seized ten of the best buildings in Yang Tsun in the name of the United States and marked them suitably, to be used as quarters for troops in case we remain here during the coming winter. Made application for a machine-gun, as many rumors of an attack have been current.

September 1st.—Sent Lieutenant D. with a detachment to try and find the Boxers who fired on our soldiers yesterday. He returned, having found the village where they had been, but they vacated in a hurry. He punished the inhabitants of this town by levying tribute of eighty chickens. His returning column looked like a caravan. Two correspondents of the *London Mail*, en route to Peking, stopped over with us to-day.

September 2d.—Last night careless foreign sentinels, supposed to be Germans, fired three shots over our camp. The foreign soldiers show poor discipline in firing at anything and everything they see, especially in passing up and down the Pei Ho on junks. Hundreds of junks of all nations pass our

camp daily, propelled by poling by coolies on the tow-path, by sails, or by a combination of all methods. The country is flat and the river winds about interminably. The river water is befouled by filth of all kinds—oftentimes by decomposing dead bodies; but the coolies drink it without the slightest hesitation. We keep careful guard over our well, and allow no one to use it but ourselves. Our sick report is comparatively small, principally from diarrhoea and boils.



BRITISH INDIAN TROOP—MAXIM BATTERY.

The constant, arduous patrolling is running our horses down, with some sore backs. Yesterday the British officer at Hosiwu sent my patrol back with unimportant dispatches, when they should have rested there over night. This gave them a fifty mile ride.

September 3d.—Received instructions to send escort for General Wilson to-morrow at the railroad depot. Lieutenant D. returned from Tien Tsin and rode his horse to our picket line between our camp and that of a French battery, tem-

porarily camped next to us. French sentinel challenged and D. answered, but the sentinel immediately fired, missing D. At reveille in the morning we found the ball had killed one of our horses tied on picket-line ("Maceo"), entering on right flank and passing through abdomen. The French battery broke camp about 4:00 A. M., so that I had no opportunity to protest, but have made an official report of the occurrence. The poor horse must have been slowly dying all night.

September 4th.—We met General Wilson with an escort at the railroad station, and had seven guests at our little dinner table to day. Sent escort forward with the general to Peking. A troop of Bengal cavalry came and camped next to us, with Captain Griffiths and Lieutenant Carnac, who are exceedingly pleasant neighbors. Also one company of British sappers and miners.

September 5th.—Went to railroad bridge and inspected our dock. Our soldiers are guarding a strip 175 yards in length, beginning at a point about 200 yards north of the bridge and extending to wagon road. Our section is surrounded by the troops of the allies, so that it was well we reserved this land in time. Received two very important cipher cablegrams by carrier from Peking, which were transmitted from here to Tongku by telegraph, thence to be cabled to Washington.

September 7th.—To-day we found the French commandante had raised the French flag over several of our buildings in Yang Tsun, and the French soldiers had chalked "Maison de France" over our own "United States property." Sent Lieutenant D. with a soldier-interpreter to protest, and this afternoon the French flag was hauled down from our buildings.

September 8th.—Had some trouble with a Russian soldier, who struck one of our Chinese coolies with a whip. Arrested him, lectured him, then released him. One of our soldiers, born in Odessa, then indicted a letter to the Russian commandante, reciting our grievance.

September 9th.—Received word from Tongku that the important cablegram had been received safely and transmitted to "Agwar" at Washington. Our guard at the railroad bridge reported to-day that Russian troops from Peking

had occupied our ground. Sent Lieutenant D., with interpreter, down to interview the Russian commander, by which an understanding was arrived at that the ground would be vacated. Russians state they did not see our flag. Our troops have not had sufficient flags. Other nations came provided with thousands of flags. For our camp I have had to have the troop saddler manufacture one from a shelter-half and strips of red torn from a Boxer sash. The stars have



DETACHMENT SIXTEENTH BENGAL LANCERS.

bothered the saddler considerably, but now "Old Glory" floats proudly from a tall staff, and means everything to us, home made though it is. Our little flag at the dock was begged from a passing steam launch belonging to our hospital ship *Relief*.

September 10th.—Received order to-day directing me to report at Peking as Adjutant General of the First Brigade (Wilson's) now garrisoning Peking and vicinity. This comes as a great surprise, and I do not know whether to be glad or

sorry to leave this little outpost in which I have become greatly interested.

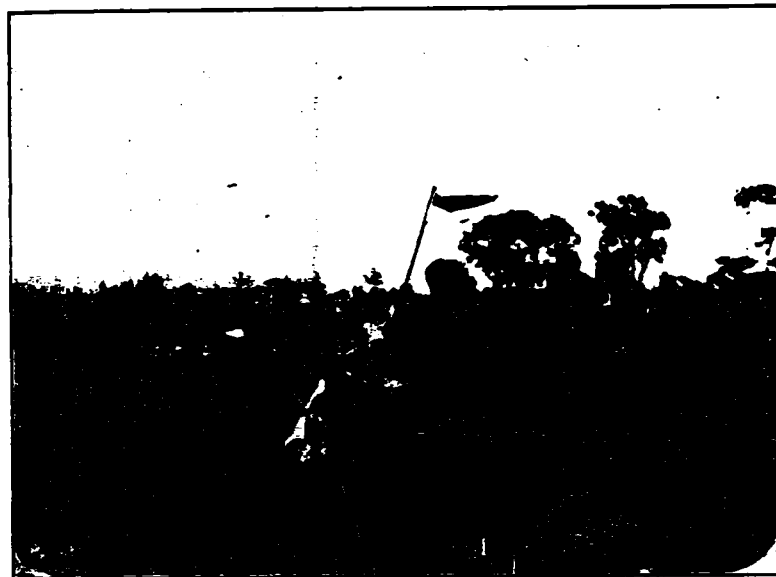
September 12th.—First day on road. Marched to Hosiwu, about twenty-two miles. Have a motley array of transportation, captured pack ponies with improvised packs, and a mule hitched to an abandoned Chinese cart. Hosiwu is garrisoned by detachments of five or six nations.

September 13th.—Marched to Maton, where we found a company of the Fourteenth Infantry intrenched on the river bank, a Gatling gun in position to sweep the approaches. Then pushed on to Tung Chow, making a thirty-two mile march. Just south of Tung Chow our cart stuck in the mud, delaying us until after dark. Made camp alongside of 2,000 Russians, and the rumbling of their transportation could be heard along the road all night long.

September 14th.—Marched to Peking, and midway met the Third Squadron, Sixth Cavalry en route to some town outside, with five days rations. Reached Peking at 11:00 A. M. and delivered dispatches to General Chaffee and Mr. Conger. Reported at headquarters First Brigade, which is located in a vast enclosure termed the Temple of Agriculture. Each separate building is surrounded by a high wall, and this wall surrounded by another wall. The whole ground is again surrounded by a twenty foot masonry wall. Opposite the Temple of Agriculture is the Temple of Heaven, occupied by the British forces. The buildings in Peking bear little outward evidence of looting, but the shops are closed and few Chinese appear on the streets. The huge walls surrounding the city, with their flanking towers loop-holed for artillery and musketry fire, are very impressive. It seems wonderful that the city fell with so little resistance. Legation Street is a succession of ruins. Troops of all nations elbow along the streets; and galloping orderlies necessitate an unending succession of salutes. The British officers and soldiers appear to be the neatest and best set-up. Then the Japanese, diminutive in stature, make a most excellent impression. They seem tireless, and do everything with the exactness of the drill-book. The Russians, big, brawny and untidy, impress me as good fighters. The French soldiers at present here,

are from the penal colonies and are poor representatives of the land of Napoleon. There are as yet, few Germans in Peking. They are superbly disciplined and drilled, but seem to lack the resourcefulness so necessary in troops operating in a strange country.

September 15th.—Orders were issued this afternoon for 800 men of our brigade to combine with the British, Japanese and Germans, in an attack on certain Boxer temples in the



BENGAL LANCERS, YANG TSUN.

vicinity of the Hun-ho River. Later in the afternoon a conference was held between representatives of the allies, General Wilson, Generals Gaselee and Barrows, Colonel Shiba, and Major Von Brixon. It was agreed that an expedition under General Wilson, to consist of United States troops and British troops, should make the direct attack, while forces of Japanese and Germans should operate northwest of Peking and east of the temples, to cut off the enemy's retreat. Gen-

eral Barrow, chief-of-staff of the British contingent, seems to have given much study to the movement.

September 16th.—The United States troops, consisting of about 800 men of the Fourteenth and Ninth Infantry, with two guns of the Fifth Artillery, left for Liukochoh at 3:00 o'clock P. M. The British column of 500 infantry, with four guns, which was to have reach Liukochoh before us, seemed to have been delayed and hindered our march considerably. Reached Liukochoh (ten miles away) about 8:00 P. M., where our troops bivouacked on each side of the principal street. Was busied for several hours getting out the order of march of the Anglo American column, which is to begin at 2:00 o'clock in the morning.

September 17th.—The order of march worked out nicely, except that the last company, neglecting connecting files, went astray in the darkness at the gate of the town, and wandered off into the country. As the night was of inky darkness, the only wonder is that the mixed column of British (Beluchistans, Bengal Infantry, Punjabs and Welsh Fusiliers) and Americans moved out with so little confusion. Our march was northeast, and at 5 A. M. we reached Peisang Yan without encountering opposition. By 6:15 we were abreast of our objective—Patachow Temples. The Twenty-sixth Beluchistans and the Fourteenth Infantry were sent to climb the hills to the west of the village, which is built in terraces. There was some friendly rivalry between the regiments, and our Fourteenth outstripped their colleagues in the race to the top. Line was then extended along the ridge, commanding the town, and the Boxers, thus outflanked, fled along the direction of least resistance. Meanwhile the Ninth Infantry battalion had moved forward to a direct attack, the guns in support. A few fleeing Boxers were killed, but little opposition was encountered, and by 8:30 the town and temples were occupied. Some arms were found in the village, including two Chinese Gatling guns, or mitrailleuses. Our troops went into bivouac, while the British Indians went to looting. The temples had previously been rented as summer residences by the foreign legations in Peking, and are beautifully situated on the slopes of the green hills. About

4 P. M. Lieutenant F. U. S. Engineers, was sent with some British Cavalry and Royal Engineers, to destroy the Chinese arsenal at San-hia-tin.

September 18th.—While at breakfast, Lieutenant F. returned and reported the destruction without opposition of the arsenal at San-hia-tin. Our objects having now been gained.



BENGAL LANCERS SALUTING.

joint operations were declared dissolved, and the U. S. troops returned to Peking, which we reached at 3 P. M.

September 23d.—The Forbidden City has been preserved inviolate from looting or pillaging, the gates being held jointly by the Americans and Japanese. To-day the Brigade Commander made up a party to visit the Imperial Palace of the Forbidden City, a holy of holies which has

hitherto been barred to all except those of the royal blood of the Manchu dynasty and their servants. The chief mandarin, who has been custodian of the royal palace since the Empress Dowager's flight, met us at the Wu-men gate with all the lesser mandarins and eunuchs, and conducted us successively through several palace throne rooms, the Emperor's apartments, the Dowager Empress's apartments, and finally to the palace gardens containing gnarled trees of great antiquity. Nearly all the buildings showed evidences of neglect except the Empress's apartments which were filled with bric-a-brac from all corners of the world. French clocks and Swiss music boxes were particularly in evidence. The chief mandarin begged not to be required to conduct us to the women's apartments, as his head would be forfeited.

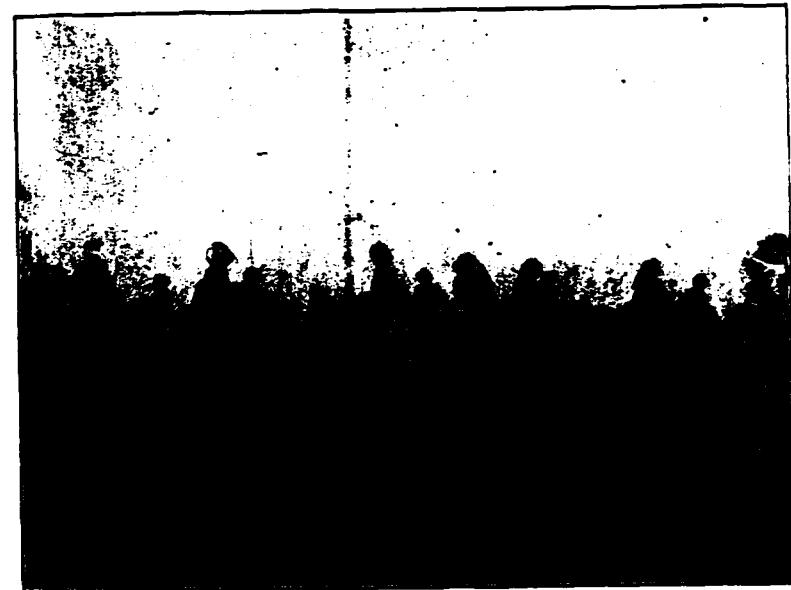
September 28th.—To-day we rode on horseback around the great wall of the Tartar City. The wall is about forty feet wide, and forms a rectangle, the four sides of which are sixteen miles in length. On each side of the roadway on the wall is a low stone parapet pierced for small antique cannon or culverins, many of which we found lying about. At certain points long lines of Imperial troops had encamped, as evidenced by their rude tents, matting and spears. At other points the havoc created by the shells of the allies was much in evidence. The magnitude of this great piece of masonry must be seen to be appreciated.

September 29th.—Dispatches received to-day announcing the breaking up of the division and the sending to the Philippines of all except specially selected troops.

October 3d.—On account of the early breaking up of the Peking Brigade, the Brigade Commander to-day had a review for the Division Commander and United States Minister of all his troops on the open space between the Temple of Heaven and Temple of Agriculture. Nearly all the foreign generals with their staffs were in the reviewing line. The review was a great success. First came the Fourteenth and Ninth Infantry, swinging along at company front with fine alignment. The dark blue shirts of the men gave them a very business-like appearance. Next came the United States Marines, and following them the squadron of the

Sixth Cavalry and Light Battery (Reilly's) of the Fifth Artillery. After passing about once the cavalry and artillery passed about once more at a gallop. It is believed that the fine appearance of our troops surprised the foreign officers, who are accustomed to seeing our men carelessly dressed on the streets of Peking. After the review a reception was held at brigade headquarters.

October 4th.—Visited the scene of the siege of the Legations to-day and made rough sketch. Overtopping the United



COOLIES OF BENGAL LANCERS.

States Legation and others, was the Tartar city wall. All foreigners assembled in the British Legation as hostilities began, which was more commodious and better capable of defense. This done, the struggle was to keep control of the Tartar wall. If this fell into the Boxers' hands, a plunging fire could be delivered by the enemy and the siege shortened. The Marines under Captain Myers seized a strip of the wall and built barricades. The Boxers approached on the wall.

east and west, and built counter-barricades, which were brought nearer and nearer until the opposing forces were separated by less than fifty yards. In a charge made at 2:00 A. M., the Marines drove the Boxers from their nearest position. Myers was disabled by an accidental fall upon a spear. The officials of the United States Legation claim that Captain Myers' successor lacked nerve. The Boxers again approached the Marines position on the wall, and at the time of arrival of the allies had an extensive mining gallery under construction, destined to blow up the Marines' position, while at the same time they were building a high masonry tower just behind their barricade from which they could command the American position. The Marines did fine work, and great credit is also due Mr. H. G. Squires (formerly Lieutenant Seventh Cavalry) Secretary of Legation, for his bravery, energy and ability. He served as Chief-of-Staff to Sir Claude Macdonald, the British Minister.

October 13th.—Had a great treat to-day in being present at the formal call of His Excellency, Li Hung Chang, upon the United States minister. Twelve invited guests were present, and the occasion was one of high dramatic interest. Li Hung Chang entered, leaning on the shoulders of his attendants. Although six feet six inches in height in his prime, he is now much stooped and physically feeble. But his mind seems unimpaired, and he gives one the idea of great breadth of character. He sparred skillfully with the United States minister as the latter questioned him. He promised to do everything possible to settle the Boxer disturbances, and seemed confident of success. When it came to inducing the imperial court to return to Peking, he was not so sanguine. He seemed pleasantly interested when informed that I had formed part of his escort in New York City some years ago.

October 15th.—Orders issued to-day directing me to join my troop, which is under orders for the Philippines.

October 16th.—Had intended descending the Pei Ho to-day, but am directed to remain over to the welcoming review to-morrow in honor of Count von Waldersee, in which the troops of all the allies will participate.

October 17th.—We rode out at 9 A. M. by way of the Ha-ta-men Gate, east of the city, where we found all the generals and their staffs assembling, ready to welcome Count von Waldersee. The latter arrived with a large staff, glittering in silver helmets and gold lace, about 11 A. M. To us who had just completed a severe campaign and were hardly yet out of the woods, it seemed as though the Germans had ridden over from a parade at Berlin that morning. The generals fell in behind the Count, and their staffs followed, proceed-



CHIEF MANDARIN AND EUNUCHS EMPEROR'S PALACE.

ing through the Russian Gate, the Ha-ta-men Gate, Legation Street, the Chun-men Gate, Ninth Infantry camp, and on to the Dowager Empress's outside palace, where the Count is to be quartered. The line of march was lined with troops facing inward, and the British Indian troops made a particularly striking appearance, as did also the Japanese. Our own troops in their field uniforms looked like fighters, but were more useful than ornamental. They are rather incompre-

hensible to foreign officers, who cannot reconcile their carelessness in dress and unreserved manners when off duty, with their splendid steadiness under fire and resourcefulness under trying circumstances. Sold my blooded horse to a high Japanese officer a few days ago for a thousand dollars Mexican, and was paid in original packages of brand new Chinese dollars, fresh from the Chinese mint. As this money occupied the better part of a soap box, it has been a problem how to transport my new found wealth. Luckily, to-day I exchanged my soap box for a check on the Farmers' Trust Company, of New York, for five hundred gold, which is decidedly easier to carry. Accompanied by one soldier, drove to-night to Tung Chow, where I slept on my junk.

October 19th.—Starting at 5:30 A. M., we descended the Pei Ho. A long rope is attached to the top of our mast and four Chinese coolies in harness pull the junk after the manner of our mules of the tow-path. The muddy river winds about like a snake in every possible direction, oftentimes doubling back to a point where the junk had been one or two hours before. Under such circumstances progress southward is slow. Attack from the banks would be an easy matter, and as there are but one soldier and myself aboard besides the coolies, successful defense might be difficult. This afternoon we heard heavy firing several hundred yards down the river, and Indian soldiers hurrying backwards warned us not to proceed. A procession of junks, Japanese, German and French, were holding back, allowing us to take the lead. We proceeded cautiously looking for a fight, but passed the danger point safely, and will probably never know whether Boxers were present or not. Tried to reach Hosiwu, but as night came on, we tied up to the bank and slept with one eye open for Boxers. Our junk coolies are villainous looking thugs.

October 19th.—Passed Hosiwu at 8:00 A. M., and by hard work, poling and pulling, reached our camp at Yang Tsun at 7 P. M. During my absence in Peking the entire First Squadron, Sixth Cavalry, has come here for station. The weather is becoming quite cold for troops dressed as we are for summer campaigning.

October 24th.—The Fourteenth Infantry came swinging by our camp about noon to-day, en route from Peking to Tongku, to take transport for the Philippines. The regiment has made a fine record in China.



CHIEF CUSTODIAN EMPEROR'S PALACE, PEKING.

October 30th.—Complying with instructions, made special investigation to-day of alleged outrages by foreign troops on the inhabitants of the village of Loo-cha-chung, about seven miles north-northeast of here. Major Johnson and Doctor Turnbull, British staff, accompanied me, with escort of Bengal

Lancers. Went up the Pei Ho about three miles, then bore off to the east. Inhabitants of the villages of Loo-cha-chung, Loo-wu-chung and Ko-tung fled at our approach, but little by little we gained their confidence. They are beginning to learn that the British and United States uniforms stand for humanity. We found convincing evidence of extreme cruelty, as follows:

1. Old man, bullet wound in abdomen, inflicted by an Italian soldier October 26th.
2. Middle-aged woman, bayonet wound through left forearm, by Italian soldier October 26th.
3. Old man, bayonet wounds through left forearm and buttock, by Italian soldier October 28th.
4. Old man, bayonet wound in abdomen and cut on head, by German soldier October 28th.
5. Old man, gunshot wound through right hand, by French soldier October 28th.
6. Old priest, bayonet cut on head; assailant undescribed.

Doctor Turnbull had brought dressings with him and skillfully bound up the wounds. As the people gained confidence they minutely described their assailants. From all accounts, the force seems to have been a mixed one of French, Italians and Germans. The able-bodied fled from the villages, leaving the old men as victims of the assaulting force. The people seem very grateful to our surgeon, who left them bandages with which to renew the dressings. It appears to us that troops who arrived here too late to take part in the first advance are now organizing these minor punitive expeditions as part compensation for what they missed. A well-worded report, glowing with the dangers of the assault, might bring to these subordinate commanders a coveted decoration. Returned to camp at 2 P. M. and submitted a report of the investigation.

November 2d.—Orders to march to Tongku, en route to the Philippines. Our Peking squadron is to remain. Sent our heavy baggage down by junks.

November 3d.—Marched to Tien Tsin, twenty-five miles, and camped back of general hospital.

November 4th.—Left Tien Tsin and marched eighteen miles, more than half way to Tongku. We have been told in Tien Tsin that our road, which is infrequently used, has been mined by the Chinese, but so far no one has been blown up.

November 5th.—Marched to Tongku. Day is cold and the howling wind blows clouds of sand in our faces. The country reminds one of the plains. All the morning a dozen



INTERIOR OF EMPRESS DOWAGER'S PALACE.

loose horses have been following our column, passing and repassing us, but successfully eluding all attempts to capture them. We hear they are part of a lot of American horses brought over by the Germans. They escaped while en route to Peking and have ever since roamed the plains of Pei Ho at their own sweet will.

November 6th.—Loaded our horses on the steam lighter *Foo Chow* for transfer to the horse transport *Packling*. Boarded the *Sumner* for the Philippines.

SURGICAL NOTES ON THE CHINA RELIEF EXPEDITION.

By MAJOR W. B. BANISTER, SURGEON U. S. ARMY.
CHIEF SURGEON CHINA RELIEF EXPEDITION.

SURGERY is as old as human need, and has been practiced on every battlefield, with more or less skill, since the world began. Since a soldier's work consists in receiving and inflicting wounds, it is a subject of peculiar interest to the profession of arms. Achilles is represented as being much concerned about the recovery of Machaon, on account of the skill of the latter in extracting darts and applying healing salves to wounds. Surgery was probably at that early day in the hands of amateurs with a natural bent for surgery.

When lines of battle fought within swords' length of each other with swords, the great majority of wounds were incised wounds, with considerable gaping, thus permitting of good natural drainage, and therefore when such were the conditions there was probably less need for aseptic surgery than under more modern conditions; that is, when suppuration (pus formation) occurred, it could find an outlet, and there was much less danger of septic poisoning. Soon after the introduction of gunpowder for use in small arms, military surgeons believed that such wounds were poisoned wounds, and treated them by pouring in boiling oil to destroy the virus, and one can readily imagine with what torture to the patient. Ambroise Paré, a surgeon with the army of Francis I., on his campaign in Piedmont, on a certain occasion after a battle, ran out of oil, and spent a sleepless night worrying about the probable condition of his wounded by the next morning. Much to his surprise he found that those treated with a simple bandage were in better condition and suffering much less than those treated with the boiling oil. This marked the decadence of the boiling oil treatment.

Prior to the time of Paré, amputations were rarely attempted on account of the difficulty of controlling hemorrhage, and when a limb was amputated the cut surface was seared with a red hot iron to stop the bleeding. Paré introduced the method of tying the arteries with a ligature, such as is used to-day, and abolished the red hot iron and made large amputations practicable.

The next grand advance in the treatment of wounds was introduced by Lister, who, from a study of the experiments of Pasteur, who demonstrated that fermentations were caused by certain vegetable organisms, stated in 1860 that the evils observed in wounds were caused similarly by vegetable organisms which gained access to the wound from the air, instruments, hands of the surgeon, etc., and found the proper nidus for their growth in the wound secretions, and he proceeded to attack these organisms by destroying the plant itself, either before or after it entered the wound, or by rendering the soil on which it grew unfavorable by drainage of secretions from the wound and by increasing the physiological resistance of the tissue.

The methods of Lister have since 1860 undergone considerable modifications, but the principle of treatment of wounds to-day is that of Lister, and is known as the antiseptic and aseptic methods. The former aims to destroy the vegetable organisms either before or after entering the wound: the latter aims to prevent their ever gaining access to the wound. These were the governing principles in the treatment of wounds at the time of the China relief expedition, modified by extraneous conditions which will be later commented upon.

The purpose of these notes is not to present a technical paper on the gunshot wounds of this expedition that will be of interest to surgeons, but to present the features of such wounds suggested by this occasion that may prove of interest to soldiers from a layman's standpoint, and the incidents and conditions attending the receipt of these wounds.

The first troops, exclusive of marines, ordered to China, were the Ninth U. S. Infantry, and I was detailed as surgeon of the regiment, and reported for duty June 22d. By June

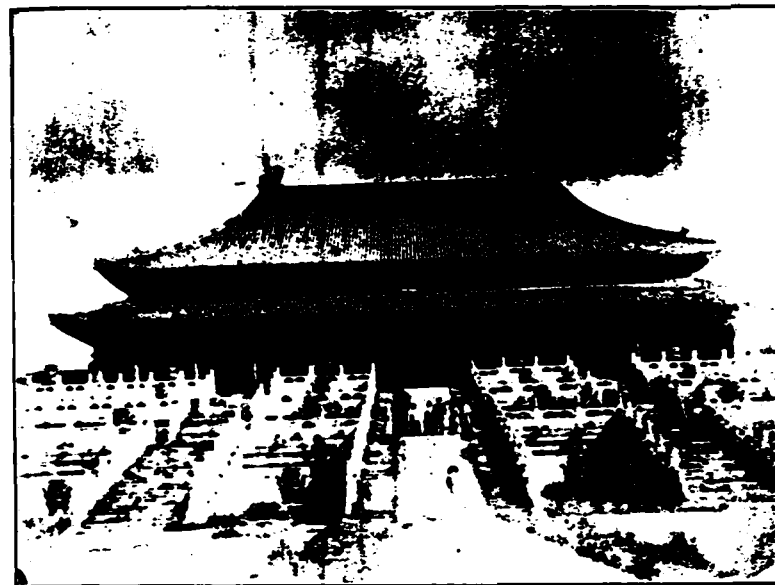
25th, all the regiment had assembled at Manila, and prior to its arrival the medical supplies were packed and ready for shipment. Sixteen tons of medical supplies were provided, which at first glance would seem an excessive amount for one regiment, but we knew the history of the Seymour column, its repulse by Chinese troops and the great difficulty it experienced in making good its retreat to Tientsin. This made it apparent that supplies would probably be needed for a base hospital and for stations on the route to Peking, and a hospital at Peking. As no other medical supplies were available until the arrival of the Fourteenth Infantry on July 27th, two weeks after the battle of Tientsin, it can readily be seen how embarrassed the medical department would have been after that battle if this apparently excessive quantity had not been brought with the one regiment.

The regiment embarked on the *Logan* June 26th, and sailed for Taku the next day. The Ninth Infantry had been in the Philippines about eighteen months and their service had been very arduous, and it had left the regiment in bad physical condition for an active campaign. A number of men had secured their return to duty from hospital in order to accompany the regiment, who were suffering from malarial cachexia and tropical diarrhoeas, and it is quite customary for the American soldier to conceal his sickness by not presenting himself at sick-call until after the expedition he desires to accompany is well started. Their enthusiasm for a fight or adventure leads to the most remarkable and rapid improvement of those sick in hospital on receipt of orders to go, an improvement far beyond the skill of the medical profession to effect, and this should be borne in mind by both doctors and company commanders when orders come for a regiment to go on an expedition, and the fact that it was not borne in mind was the source of some embarrassment on the China expedition.

Two officers and several enlisted men physically unfit were weeded out in Manila, sixty-one were too sick to disembark on arrival at Taku, and by July 26th there were two hundred and fifteen men sick in camp at Tientsin. This condition of the men has an important bearing on the surgi-

cal results in the cases of those wounded, as it could not reasonably be expected that the results would be as good as in the case of men wounded under more normal conditions.

The medical personnel with the expedition consisted of four medical officers, one a major of volunteers (captain of regulars), one first lieutenant and two contract surgeons, and twenty enlisted men of the hospital corps including one hospital steward and two acting hospital stewards. One medical



EMPEROR'S PALACE, FORBIDDEN CITY, PEKING.

officer and four privates went over on the *Port Albert*, the stock ship with one hundred soldiers on board, and did not arrive with the ambulances and wagon transportation till some days after the battle of Tientsin. The *Logan* reached Taku on July 6th, but could not run in nearer shore than eleven miles. We could not secure lighters till the 9th, and then only sufficient to land the first and second battalions, the third remaining on the *Logan* and did not join us in time to take part in the battle of Tientsin.

It was twenty-six miles from Taku to Tientsin by rail, and sixty miles by the river. The Pei-ko makes so many loops in its course that it was not unusual to see boats that had preceded you apparently behind you. The first battalion left Taku the morning of the 10th, and reached Tientsin that evening, the lighter in tow of a tug. The second battalion was not so fortunate, as the lighter became unmanageable when the tide was against us, and finally, after running aground and turning around a few times, in spite of all the tug could do, we tied up to the bank for the night in a curve of the river. Soon after daylight the morning of the 11th, and while we were still tied up to the bank, we suddenly saw a large steel lighter towed by a powerful tug flying the English flag, bearing down on us, and it was perfectly evident that as she swung around the curve she would surely collide with us.

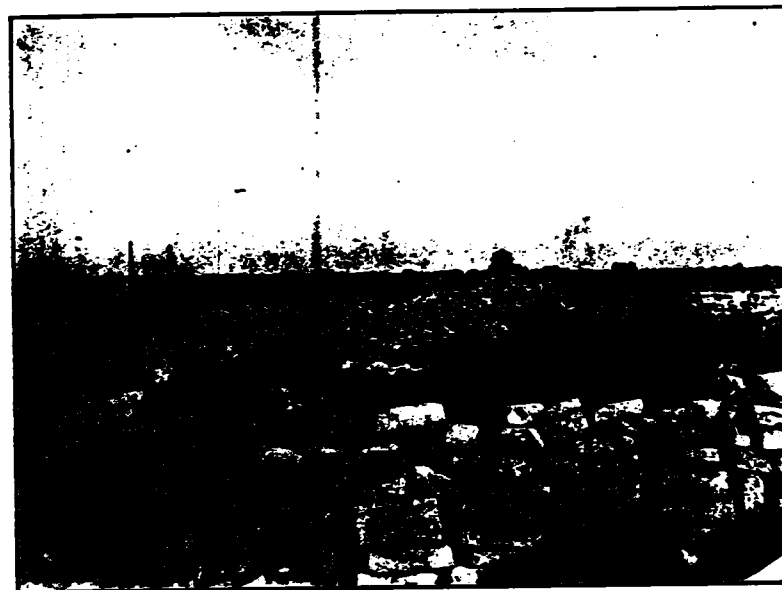
Those of the officers who were sleeping on the lighter abandoned the ship very quickly, and the steel lighter struck us a glancing blow, stoving in the side of the stern of our boat, but fortunately above the water line. Nearly all the reserve ammunition and the medical supplies were on this lighter, and if she had received a more direct blow would have been cut in two, with consequences too dire to contemplate. As it was, it was quite interesting to see whether we could keep her bailed out sufficiently to reach Tientsin, which we did, however, about 10 P. M. on the 11th.

All the way up bodies of dead Chinamen were floating down the stream, and it was not unusual to see the dogs devouring such bodies as lodged on the river banks. All the afternoon of the 11th we could hear quite a heavy artillery and small-arms fire in the direction of Tientsin.

During the night of the 11th and on the 12th every effort was made to separate the medical supplies from the general cargo, with special reference to boxes of bandages, dressings, instruments and litters, also in equipping an operating room in the bank building, which was to be used as a hospital. It was quite evident to the dullest mind that a fight of a general character was imminent, as the Chinese were shelling the positions of the foreign troops in the foreign settlement so

actively that it was necessary to stop it. About 3 P. M. of the 12th two companies of the Ninth Infantry, with two privates of the hospital corps, were sent to help hold the railroad station. About the same time orders were received for an attack on the native walled city of Tientsin the next morning.

The officers of the Ninth were quartered that night in a large mortuary establishment containing many camphor-wood coffins, and some of the coffins had Chinese bodies in them;



BOXER BARRICADES, ON WALL ABOVE U. S. LEGATION.

it was rather suggestive to men going into battle the next morning. The officers turned out at 2 A. M. the morning of the 13th, and the troops were formed at 3 A. M. First aid packages were issued to every one and two litters to each company, to be carried by the company litter bearers.

The English and Japanese joined the Americans soon after 3 A. M., and the march for the native city began. After marching for about three miles by a roundabout way, the column debouched on a grassy plain, and our objective was

evidently a mud wall about fifteen feet high. As we approached the wall we began to receive a long range fire from the native city of about one and one-half miles range, and one man was killed and seven wounded in the first battalion before reaching the wall.

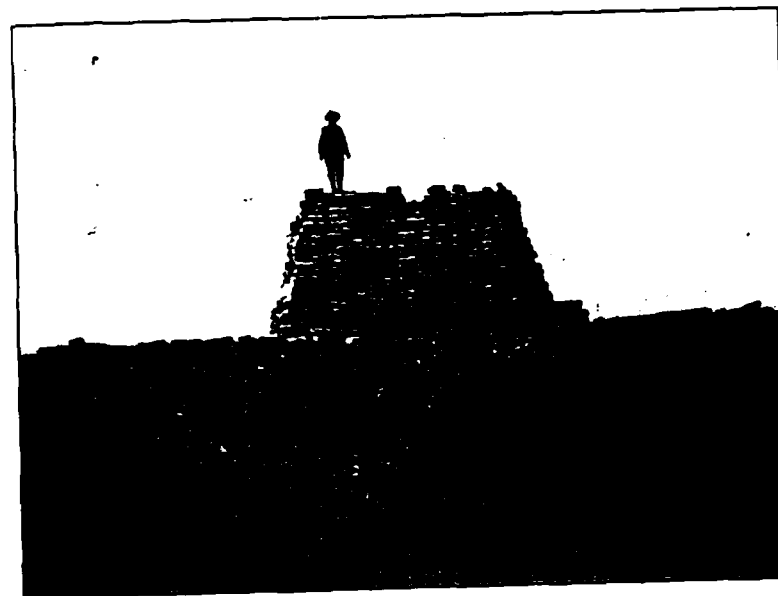
The first battalion had an assistant surgeon, one acting hospital steward and three privates of the hospital corps, and the second battalion, one surgeon and the same number of enlisted men. The assistant surgeon and his men were delayed by the seven men wounded in that battalion before reaching the mud wall, so after the two battalions went over the wall and started across the plain to the city wall only one surgeon was present and four men of the hospital corps, in addition to the company litter bearers. The Ninth formed on the extreme right of the allied line with the Japanese touching our left. The battalion of American marines, 348 strong, were some distance further to our left and we could not see them. The two companies detached to guard the railroad station, and the sick left in camp and other details only enabled us to put about 420 men of the Ninth in the fight.

The end of our line extended very nearly to the corner of the face of the wall we were to attack, and a long straggling village extended down from this corner almost at right angles to our right flank.

As we began to advance and the fire became severe, it looked to me as if the enemy were using regulation army litters as ammunition, as a great many litters were in the air and falling around, as every company litter bearer chucked his litter as far as he could throw it and the movement seemed to me to be general and simultaneous, and each bearer became deeply interested in his rifle. Our men began to drop now and first aid dressings were applied as they fell.

Scarcely had we advanced before we received a severe flank fire from the village which necessitated a change of direction at right angles to the general advance, to attack the village. As we advanced against it our men went down fast, and two of my men probably forgot to change direction or got turned around through some mistake, so that in a few

minutes I had only two with me. Fortunately this part of the field was cut up by irrigation ditches, half full of water, so that we would catch a wounded man by the arm and leg on each side and partly lift and drag him to the nearest ditch. Those not totally disabled found the ditches themselves in a way that looked like intuition to me: anyway, when I reached a ditch, I found wounded men in it to dress. Men shot through the abdomen or chest who could not sit up in the ditches.



BOXER TOWER, ON WALL, PEKING.

which were half full of water, we would put at the edge of the ditch so the bank on the further side would protect them, and we would stand in the ditch to dress such cases, as we did not mind the water.

The change of direction soon left an interval between the Ninth and the main line. This interval was not great for the reason that our line (the Ninth) on approaching the village found that a body of water intervened that could not be forded. The line then scattered itself into the ditches, be-

hind burial mounds, etc., and held its position until dark and then withdrew, taking with them all the wounded then on the field, behind the mud wall.

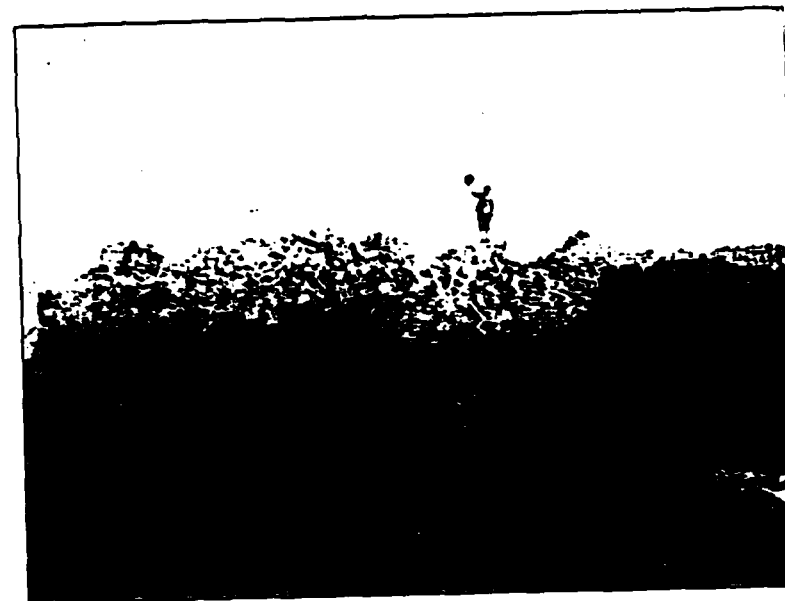
It became necessary to remove an officer who was shot in two places and who was being held up in the water, because the men holding him up were becoming exhausted, and as now the advance of the Ninth had stopped, it was necessary to establish a collecting station behind the mud wall to refresh the wounded and examine the dressings before forwarding them to the hospital in the foreign settlement.

On reaching the mud wall the assistant surgeon was sent to take my place in the field. Earlier in the day the senior naval surgeon was sent in to the hospital to receive the wounded. About 3 P. M. the third battalion arrived, but was not put in the fight. Men were sent to camp to bring out a large number of Gold Medal cots, bouillon, and several cases of mineral water, as it was known that the water in the ditches was brackish and the wounded could not drink it. As the wounded arrived and were refreshed and inspected, they were put on the Gold Medal cots and carried to hospital by the fresh battalion. The Gold Medal cot makes an excellent litter, provided six men carry it, as one man on each side is necessary to support the hinge in the side poles, and on arriving at hospital each man is on his bed and only floor space has to be found, thus avoiding much confusion and delay. By 12 o'clock that night every wounded American was dressed and in hospital on a bed.

It would have been most unwise to have attempted to remove the wounded from the field during the fight. The litter squads would have been exposed on a level plain to fire from front and flank and each group would have constituted an excellent target. Many lives would have been sacrificed of both wounded and bearers. As it was the wounded were removed without the loss of a man.

It is the consensus of opinion among surgeons that under present conditions it will be impracticable to remove the wounded under fire except where the ground is exceptionally favorable. Makings states in his recent work on Surgical Experiences in South Africa as follows, viz:

"Removal of the wounded from the field of battle: My experience was opposed to hurried action in this matter, although it is necessary to gather up the wounded before nightfall if possible. As a rule wounded men should not be removed from the field of battle under fire, at any rate when the troops are in open order at a range of one thousand yards or more. I saw several instances in which mortal wounds were incurred by previously wounded men or their bearers during the process of removal, while it was astonish-



BARRICADE OF MARINES, ON WALL, PEKING.

ing how many scattered wounded men could lie out under a heavy fire and escape by the doctrine of chances. The erect position and small group necessary to bear off a wounded man at once draws a concentrated fire, if fighting is still proceeding."

And again the same writer states:

"Billroth and Bardeleden were of opinion, after their experiences in the Franco-German War, that it will be no longer possible to remove the wounded during the battle, as the bearers would be more exposed than the men of the fighting

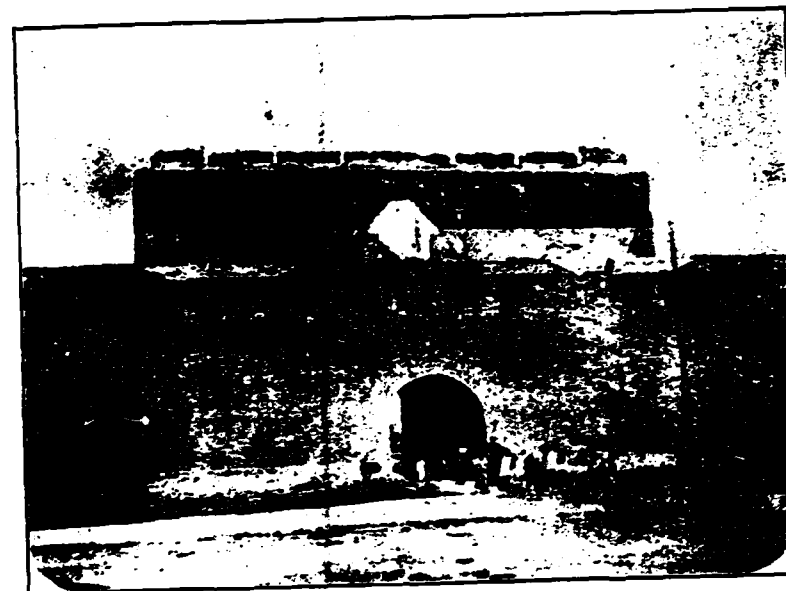
line; that the most that can be aimed at is that in the future the wounded shall be attended to within twenty-four hours; and that the present system must be abandoned."

At Tientsin nearly 22.8 per cent. of the Ninth engaged were hit, and it would have required most of the fighting force to have removed them during the fight. The Chinese army evacuated Tientsin during the night of the 13th, and the allied forces entered the next morning. Ninety-six men of the Ninth were hit and twenty-seven of the marines. One officer of the Ninth, the colonel, was killed, and one officer of marines, a captain. Four officers of the Ninth were wounded and three of the marines. Seventeen enlisted men of the Ninth were killed and seventy-four wounded. Three enlisted men of the marines were killed and twenty-three wounded. The percentage of casualties in the Ninth, 22.8 per cent. and in the marines 7.7 per cent. But one man of the Ninth was hit by artillery fire, and that was a slight wound in the thigh by a piece of shell. Six marines were hit by artillery fire, five of the six wounds being from shrapnel.

The bank building used as a hospital becoming too crowded, the Tientsin Hotel was taken possession of and used also as a hospital. By July 24th all the wounded with a few exceptions, had been taken to Japan on the *Solace*, and subsequently to the United States.

Before the battle of Tientsin, at the request of the senior medical officer, the commanding officer had cabled for the hospital ship *Relief*. Her arrival would complete the line of transportation for the wounded from the battlefields of China to San Francisco. The base hospital of 300 beds was located at Tientsin, because our supplies, etc., were there. The advance to Peking was to be along Pei Hoe River, therefore the wounded and sick could be floated in junks to the base hospital, which had an outlet in the *Relief* stationed in Taku Bay, and the sixty bed hospitals on the transports bringing supplies, etc., furnished an outlet to the general hospital, San Francisco. This plan prevented congestion at any one point and worked very satisfactorily.

On August 4th the allied army set out from Tientsin for Peking about 20,000 strong, the Americans 2,000 strong, consisting of the Ninth Infantry, two battalions Fourteenth Infantry, one light battery (six guns) F. Fifth Artillery, one troop Sixth Cavalry (Cabell's), detachments of engineers, signal corps and hospital corps, and a battalion of marines. There were ten surgeons with the expedition, including three naval surgeons with the marine battalion, thirty-four



CHIEN MEN GATE, PEKING.

men of the hospital corps and two naval apprentices, corresponding to our hospital corps men, and eight Chinese litter bearers to each company, under guard to prevent their running away, one four-mule escort wagon, one push cart for the hospital corps detachment with the light battery, and a hand cart also for the marines, three ambulances, and three junks for reserve medical supplies and hospital tents, to follow by water.

Having but one wagon, and knowing from experience

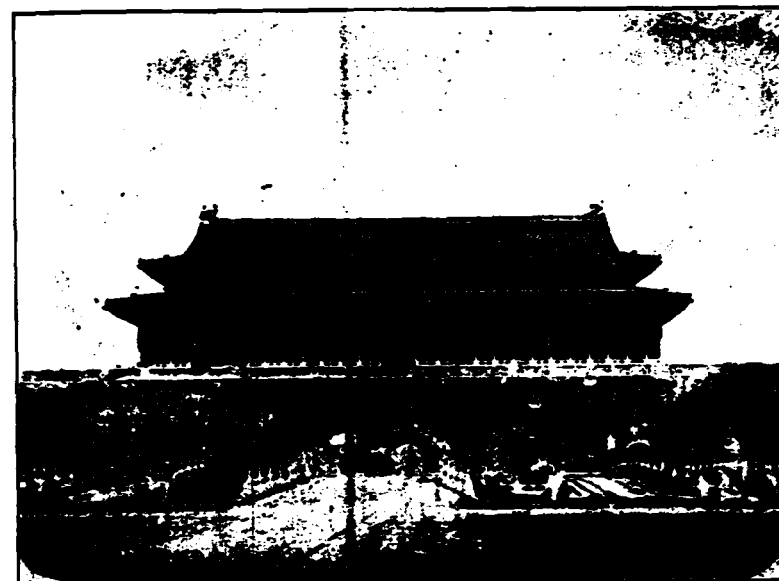
the uncertainty of reaching the wagon train in a crisis, the plan was adopted of arranging the medical and surgical chests and detached service chests as seats on each side of each ambulance; eight patients could sit in the ambulance, and by placing folded blankets over the chests two could lie down. In this way the capacity of the ambulances was not decreased, and at the same time medical and surgical supplies were immediately available as the ambulances followed the regiments. On reaching camp one ambulance was located in the rear and one in the center of each regiment and became a dispensary. This arrangement proved invaluable throughout the campaign. Each company was provided with large cans carried by Chinese coolies for the purpose of providing boiled water for the men, but our men, like those of all other armies on the march, drink water wherever they can find it.

Six miles out from Tientsin the battle of Peitsang was fought on August 5th, but the Americans were not engaged and suffered no casualties. At Yangtsun on August 6th, our loss was fifty-nine wounded, seven killed, and one death from heat exhaustion during a charge, the man dropping dead. During the fight the ambulance followed up the regiments just short of the artillery fire of the enemy, gathering up the wounded as we drove the enemy, and carrying them as far forward as possible. The wounded were moved constantly to the front in three successive stages, the last being the camp of our troops for the night.

By dusk all the wounded were in camp, the operative tent pitched, the surgeons and hospital corps men called in from the regiments and the work of preparing the wounded for transportation by junks to the base hospital begun. At two o'clock the night of the fight we began loading the wounded, and in the course of the next day all the wounded and sick were shipped to Tientsin on Gold Medal cots placed on deck and protected from sun and rain by canvas stretched over a long boom.

The army suffered no further casualties till the attack on Peking, August 14th, when we had eight men wounded and none killed. On August 15th, during the attack on the Forbidden City, we had six killed and seventeen wounded.

Peking was taken on the 15th, and the only casualties sustained after that was during a fight of the Sixth Cavalry with Boxers, in which six cavalymen were wounded. The Chinese troops were armed with the Mauser, a small caliber rifle, though some irregulars with them were armed with gingalls (two men guns shooting large lead bullets), and other non-descript weapons, but so very few of our men were hit with them that they need not be taken into consideration.



TAI NGAN MEN GATE, PEKING.

After the battle of Yangtsun in cutting some shrapnel bullets out of our men, I was surprised to find a rim around the equator of the bullet as if the moulds had been imperfect. Such wounds of the abdomen were fatal, and severe in other parts. I was unable to tell whether this shrapnel was from Chinese or English artillery as at Yangtsun we suffered more from the English artillery fire than from the Chinese, our men being fired on by the English battery through a misapprehension.

X The first aid package was most valuable for the reason that each man had one, and could either dress his own wound or have a comrade do it for him, and at once had an aseptic dressing applied even when it was impracticable for the surgeon to reach him. The reputation, however, of the first aid package is coincident with the use of the small caliber bullet which makes a small wound with little oozing and quickly sealed with coagulated blood. In larger wounds made by pieces of shell or shrapnel or rifles of large caliber, the dressing soon becomes saturated with blood and the blood undergoes putrefaction very quickly in the summer heat, and infection occurs. Some wounds became infected from the soaking of the dressing by the dirty water in the ditches in which the wounded found cover.

The foreign armies seem to have discarded the triangular bandage in our package, but I think this is a mistake for three reasons: Firstly, because the large bandage covers the dressings so that the wounded man cannot see the blood which soaks the gauze bandage, on seeing which he becomes restless, frightened, and demands more attention from over-worked surgeons than is necessary. This seems a small point, but practically is a very important one. Secondly, the dust sifts through the gauze dressings and is apt to infect the wound. The same observation as to dust was observed in the South African campaign by Makings, who says: "The exclusion of dust was impossible, and it not only found its way into open wounds, but permeated bandages with ease. Often when a bandage was removed, an even layer of dust moistened by perspiration covered the whole area included with a coating of mud." Thirdly, the large cotton bandage makes a good tourniquet.

X The American army had by far the best field litter amongst the allies, and it attracted considerable attention. From the battle of Tientsin to the close of hostilities, one hundred and ninety-nine were wounded in the American army, exclusive of marines, as follows, viz:

Location	No.	Killed in Battle.	Died of Wounds	Discharged on Surg. Cert. of Dis.	Duty.	Otherwise.
Head	30	13	4	6	7	
Chest	24	5	2	6	7	*1
Abdomen	15	5	3	2	2	
Upper extremity	46	1	3	18	24	
Lower extremity	34	1	6	30	46	*1
Total	199	31	18	62	86	*2

* Result unknown.



TIENTSIN GATE—STORMED BY JAPANESE.

It will be of interest to see how the mortality now compares with that of the regions given above, prior to the adoption of small caliber rifles and also the proportion of killed to wounded, etc. It will be observed of that one hundred and ninety-nine wounded only eighty-six, or forty-three per cent., ever again served with the colors. It would seem to be a matter of considerable importance for governments to have data on which to base an approximately correct opinion as to how many of the wounded could be counted to

serve again. It is rather a strange fact that the only published data on that point is for the English force, during the Crimean War, and these figures show that forty-seven per cent. returned to duty cured. But in the China campaign, where the small caliber rifle was used, only forty-three per cent. returned to duty. I do not know, however, whether the English had as liberal a pension system as we have, which is a temptation not to get well enough to serve again. An examination of available data gives the following results in each hundred hit, prior to the adoption of the small caliber rifle: Killed, 20; died of wounds, 12; to duty, 47; discharged for disability, 21.

For the China campaign these figures would be in round numbers, as near as can be calculated considering the two who did not serve again as discharged for disability: Killed, 16; died of wounds, 9; to duty, 43; discharged for disability, 32.

It appears then that with the small caliber rifle less are killed, less die of wounds. On the other hand less return to duty and more are discharged for disability. From these figures the rather startling fact presents itself that fewer of the wounded will serve again when hit with the small caliber bullet than with the large, the loss being fifty-seven with the former, and fifty-three with the latter. During the South African campaign, up to September 15, 1900, out of seventeen thousand and seventy-two men hit, two thousand nine hundred and ninety-eight were killed, or one to four and sixty-nine one-hundredths; during the China expedition one to six and four-tenths. The percentage of mortality of those hit in the head, etc., was, including killed and died of wounds, as follows, viz:

	China Expedition.	Spanish-American War and Philippines, 98-99.	Civil War.
Head	56.6 per cent.	23.9 per cent.
Chest	41.6 "	27 per cent.	27.8 "
Abdomen	73.3 "	*70 "	43.7 "
Upper extremity	8.7 "	6.5 "
Lower extremity	8.3 "	13.3 "

* United States army in 1900.

This table shows a large mortality in wounds of the head from the small caliber bullet as compared to wounds from the large caliber, soft lead bullet in the Civil War. This difference is due to the fact that nearly all wounds of the head, excluding grazing and indirect wounds, with the small caliber bullet will penetrate the skull, which was not the case with the soft lead bullet. The small caliber bullet will pass through the head up to two thousand two hundred yards and



RUINS OF THE LEGATION, AFTER BOMBARDMENT.

penetrate the skull cavity up to two thousand nine hundred yards.

Chest wounds in the China expedition reached a high rate of mortality as compared with those of the same character during the Spanish-American War and in the Philippines—41.6 per cent. in the former and 27 per cent. in the latter. The mortality during the Civil War for all wounds of the chest was 27.8 per cent., but for the penetrating wounds of the chest cavity was 62.5 per cent.

For abdominal wounds the mortality corresponded closely to that of similar wounds by small weapons in the U. S. army in 1900. Penetrating abdominal wounds in the Civil War presented a mortality of 90 per cent. Wounds of the small intestines during the Civil War were fatal. Wounds of the large intestine, are not so fatal because its contents are less fluid than the contents of the small intestine, and the peritoneum may not become infected in the former case. The mortality of all wounds of the abdomen during the Civil War was 48.7 per cent. With the small caliber bullet but few bullets will fail to penetrate the abdomen even at extreme ranges.

It is estimated that 8½ per cent. of those who are killed on the field die of hemorrhage. Most of these are from wounds of the large vessels in the abdomen and chest or of the neck, and for which practically nothing can be done on a battlefield. The number of deaths from what may be called preventable hemorrhage, that is, from wounds of the arms, legs, etc., where pressure can be quickly applied by tourniquets, etc., is extremely small. In the Crimean War, in the British army, only $\frac{1}{10}$ per cent. died from preventable hemorrhage, and in the Civil War only $\frac{1}{100}$ per cent. I saw but one such case in the China campaign, in which the femoral artery was cut. It could only have been a few minutes from the time he was shot till a tourniquet was applied, and when he reached the dressing station a few hundred yards in the rear, it was found that the tourniquet applied when he was shot absolutely controlled the hemorrhage, but he died within half an hour after reaching the dressing station. Enough blood was lost in the few minutes before help could reach him to cause death.

X It is a very strange fact that the statistics of battles show that the number of wounded, or rather the loss is inversely to the perfection of the weapon. The reason of this very probably is that the improvement in tactics to reduce the loss has surpassed proportionately the improvement in the weapon. Total number of deaths up to September 25, 1900, was seventy-two: By gunshot wounds, 66½ per cent., and by disease 33½ per cent.

I append as a matter of possible interest the losses of the marines, U. S. navy, during the troubles in China in both the first (Seymour expedition) and second expeditions for the relief of Peking, and also those constituting the Legation guard:

Marines, U. S. Navy.	Date.	Injured.	Killed or Died of Wounds.	Wounded.	Discharged to Duty.	Invalided from Service.	Force Engaged.	Percentage of Casualties. (Gunshot.)
First Expedition to Peking	June 20	30	5	25	21	4	112	26.7
Engagements about Tientsin	June 26							
	June 30	17	5	12	10	2	131	13.7
Battle of Tientsin	June 27							
	July 13	27	5	22	19	3	348	7.7
Second Expedition to Peking	Aug. 4	4	1	3	3		620	.64
	Aug. 14							
Marine Guard at Peking	June 20	16	5	5	6	2	56	28.5
	Aug. 14							
Miscellaneous wounds.		8	1	7	6	1		
Total		102	25	77	65	12		

THE USE OF EMERGENCY RATIONS IN THE PHILIPPINES.

By CAPTAIN WILLIAM R. GROVE, SUBSISTENCE DEPARTMENT,
FORMERLY COLONEL THIRTY-SIXTH U. S. V. INFANTRY.

THE term "emergency ration" does not appear to be clearly defined, but is commonly used to describe a product condensed to the minimum weight and size without reducing its nourishment to a lower degree than is necessary to maintain the health and strength of a soldier, when he subsists exclusively upon it for very short periods of time, ordinarily not more than five consecutive days. As its continued use would be detrimental to health, it is issued only—as its name suggests—in emergencies, which are usually caused by paucity of proper transportation for the ordinary rations, which weigh from three to four times as much as the emergency ration.

The supply of such a ration to troops in war has, in recent times, become a matter of great importance. The increased range and effectiveness of modern weapons, and the consequent necessity in time of war of quickly securing and intrenching important positions, makes the very rapid movement of troops essential. The corresponding increase in transportation facilities now afforded by railroads has added greatly to the ability of an army to quickly assemble with ample supplies, and this method will doubtless be still further improved in the future, yet it is certain that upon arriving at the vicinity of a battlefield troops must take their assigned positions and conform to the changes necessitated in the progress of the battle, by marching, and the movements must be at such a rapid pace that men should carry the least practicable encumbrances. No system of transportation can be devised for the efficient supply, under such circumstances, of regulation rations as now issued by the great

armies, all of which are interested in preparing a ration of sustaining qualities and such lightness of weight as to enable a soldier to carry on his person, without serious discomfort, a supply sufficient for several days. To lighten the pack carried by the soldier is to increase the pace and length of his march.

Our army has, in recent years, used in considerable quantities two emergency rations. One of them—that now manufactured and exclusively used—is the result of the exhaustive labors of a board of officers. It contains the quantity of nutriment determined by scientists as necessary to maintain human life and strength, and its constituent elements are so divided as to furnish a proper proportion of the various nutrients required by the human system, thereby supplying, when water is added, everything necessary for the subsistence of men for short periods of time. It is much better than any ration of the kind heretofore issued by any army. Practical tests have demonstrated its merits. It is known as the government ration.

A fair test of the efficacy of the other emergency ration was made in practical work by several regiments in the Philippine Islands, among them the Thirty-sixth Infantry, United States Volunteers, and it is the use of it in the latter regiment this article will discuss. This preparation was known as the standard emergency ration. In general, though not in detail, it was similar to the government ration. It consisted of a cake of compressed sweetened tea, a very small paste-board box each of salt and pepper, and three cakes—one for each meal—of a preparation having a dry, brownish appearance, each cake containing bacon, pea meal, evaporated beef, hard bread, potatoes and onions, each component part evaporated and powdered, the whole then assembled and pressed firmly together into cakes having the appearance of closely packed sawdust. The three cakes, the tea and the condiments were packed in a rectangular-shaped tin box, measuring about $4\frac{1}{2} \times 3 \times 2\frac{5}{8}$ inches. It made a package rather difficult to carry when the soldier had no haversack, and the latter was seldom used in the tropics. The weight of the package was about twenty ounces. Its inconvenient shape

has been corrected in the can used for the government ration, which fits nicely into a pocket.

When first used it was unpopular with the soldiers, and when they were asked to express an opinion as to its palatability and sustaining qualities, a large majority of their replies were to the effect that they did not like it and did not believe they could subsist upon it. It is probable that they feared a favorable comment from them might result in a steady emergency diet, and the same unfavorable opinion would doubtless be expressed at the first trial of any food preparation having a similar object. After the ration had been used a few times at intervals it gained in popularity, until it was finally eaten with relish by men whose appetites had been stimulated by marching.

The fertile valleys of Luzon furnished abundant ration supplies for small marching columns, but in the mountains practically nothing of an edible nature could be obtained. To establish a camp so far away from the closely inhabited valleys that its location might not be divulged by any loose-tongued or corrupted native who might be near, was an object common to guerilla bands and to the insurgents after the united resistance to the American forces had ceased. In pursuance of that object they frequently selected camping places far into the mountains, their supplies of rice being carried to them from the valleys by the natives. If they camped in the mountains it was there they must be hunted by the Americans, and in such work the emergency ration was invaluable, for it was impracticable to carry an adequate supply of food in any other shape.

The physical efforts required of men climbing mountains in a tropical country were so much more severe than ordinary marching that some compensating reduction from the routine requirements had to be made, and experience demonstrated that the best thing to do was to lighten the burden the soldier had to carry. This idea was pursued so far that the soldier of the regiment did not carry knapsack, haversack, bayonet or scabbard; he carried only his marching uniform, which was usually blue flannel or chambray shirt, khaki trousers, ponche sometimes, underclothes and socks if de-

sired, campaign hat, towel, shoes, leggings; also rifle, waist and shoulder belts of ammunition, first aid package, canteen, tin cup, the half of the meat can having a handle, this necessary article being carried by inserting the handle in one of the loops of the cartridge belt and permitting the meat can to dangle on the soldier's hip, where it in no way inconvenienced him; in a pocket of the shirt or a hip pocket of the trousers were carried knife, fork and spoon. The lightening of the soldier's load to such an extent was practicable only in the tropics, where the nights were not severe.

This arrangement made no provision for rations, and whenever possible they were carried on mules or by native burden bearers, but on the occasions when no such transportation was available or practicable, the necessary number of cans of emergency ration were stuffed into pockets or tied to the cartridge belt. A man could thus attach four or five cans to his person without great inconvenience, whereas it was impossible to carry as many days' rations of the ordinary kind, as the packages of the latter were in no way suitable for such work. The constant stream of perspiration from the men, the sun and rain from above, the perpetual crossing and recrossing of streams which had to be forded, during which operation it was next to impossible to keep ordinary rations from becoming wet, and the important fact that the variety of articles comprising it required a haversack to contain them, all contributed to make the carrying of the regular ration in that climate a burden. The emergency ration was packed in a strong, water tight can, and resisted all of these destructive elements.

Our columns were usually small, and were generally accompanied by Chinese or native burden bearers. Two of these men usually followed a company and carried a tin boiler, a couple of frying pans, a butcher knife, large spoons, etc. With this light burden they could ordinarily keep pace with the marching column. Each soldier carried on his person one or more cans of the ration, the number depending on the length of the march anticipated, and upon halting for a meal several cakes of it were thrown into the boiler with plenty of water and soon cooked to a thick porridge, after

which it was ready to serve. Five minutes boiling made it palatable, but the time required to thoroughly cook it was about thirty minutes. While some men would eat more than the allowance of this porridge there were others who ate much less, and in a company of infantry it was found that by using one cake per man for each meal, cooking the whole lot in one vessel and then allowing each soldier to gauge his own appetite there was an abundance for all, and often a quantity left uneaten. When no large boiler was available each soldier cooked his own cake in his tin cup. This method is objectionable, no matter what the article to be cooked, for there are men who cannot be made good cooks, and while some men would be eating food but half cooked, that of others would be scorched. In either case such food is bad for the health of the man.

An announcement on the label of the can made it appear that the ration could be eaten raw, or made into porridge, permitted to cool and then sliced and fried. These suggestions were acted upon. For the midday meal we frequently found ourselves in the mountains or foothills with no water supply convenient. In such cases the cake was eaten dry, or stirred in the cup with water from the canteen, and under such circumstances was relished. As for the fried cake, it was seldom eaten for the reason that it had first to be boiled, then thoroughly cooled before it could be sliced, thus requiring several hours of time, which made the use of the ration in this form practicable only by eating at breakfast the porridge left from the previous evening, and in the hot nights of the Philippines it was difficult to prevent the cooked mixture from souring before morning.

After trying all methods of cooking that experience or suggestion presented we always returned to the porridge as being the best and most palatable way to serve the ration. It is believed that the same conclusion will be reached with our new ration, as this seems to be the natural way to prepare and serve a product of this character. In the process of boiling the evaporated particles again take up practically the same quantity of water that had been eliminated in the

original evaporation, thus returning the food to as near its original character as possible.

The tea component was a very popular one, and men particularly fond of that beverage were caught in the act of opening the cans and abstracting the tea, which article was seldom available from any other source, coffee, and not tea, being carried by most commands. Our new emergency ration has sweetened chocolate as a substitute for tea and coffee. It is said to be as stimulating and more nourishing.

When starting on an expedition of uncertain length, or in a country little known, it was a habit with our companies and detachments, especially when mounted, to supplement the regular rations carried by bull carts or pack-train with a supply of emergency rations, which could be carried without much trouble, and which very often were a great convenience, as their possession enabled a command to continue the pursuit of an object without serious discomfort much longer than could have been done without them. An instance is recalled of a detachment leaving camp with one day's supply of regular and three days' of emergency rations. The command returned at the end of four days with three-fourths of the emergency ration untouched. This occurred in a region which proved more prolific of rice and corn meal than was anticipated.

In some of the small settlements in the wilder parts of the island a can of emergency ration could be traded to the natives for an abundance of rice, and even chickens and eggs. The ration itself was not so attractive to the natives, but they considered the can a wonderful thing, and it was treasured as a household ornament. A considerable proportion of the people in the semi-wild interiors had never seen a can prior to our advent in their midst.

With our small commands conditions were seldom such that we could not obtain something with which to increase the palatability of the ration, and constant effort was made to obtain a chicken or goat to throw into the boiler with the emergency cake. Rice also furnished a welcome addition to the pot, and assimilated nicely with the ration cake. In fact, almost any addition was welcome. In the quarters of our soldier

packers at Lingayen, P. I., a set of rules was posted by the chief packer for the observance of his assistants while about the building. One of the sentences read: "Any stuff fetched in will be cooked." This rule is a good one to use with an emergency ration, as it is presupposed that a command will obtain everything possible from the country in which they are operating, the emergency cakes being used only when nothing else is obtainable.

In no instance was the health of a soldier permanently impaired by the use of this ration. Some were slightly nauseated at first, but soon accustomed themselves to the taste, and while such men never grew fond of it, any of them could eat it when there was no alternative but to tighten the waist belt.

When necessity decreed that light rations should be carried troops in the Philippines often preferred hard bread, bacon and coffee to the emergency ration. Such a combination was very useful and has many desirable features, but its weight was twice that of the emergency ration, and the hard bread was a troublesome article to carry on the person. As the question of preference between two rations whose component parts are staple articles is largely one of weight, the emergency ration was usually chosen. In a campaign of any considerable number of days, where wagon or other transportation is available, the hard bread, bacon and coffee combination would no doubt be the better one in every case in which its weight did not prohibit its carriage.

It has probably occurred to every troop or company commander who has handled troops in the field, that his troubles would be materially lessened and his command much better subsisted if rations could be issued to him in packages each containing one meal for one man, put up in such a manner that the contents could not be easily crushed or exposed to heat and moisture; in other words, packed in a tin can. Such a ration would be a blessing to troops, and might contain everything absolutely necessary but fresh meat. The emergency ration we used had some such advantages, but its utility was decreased by the fact that each can contained three meals, and after it had been once opened and a cake

removed the two remaining could be but poorly protected, as the lid of the can was so constructed that it was of no further use as a cover. This source of annoyance has, along with other defects, been avoided in the new ration can.

In the countries where the battlefields of the future are apt to be located, there are few places which do not afford some sort of subsistence for troops, and if a command starts on a march with five days' supply of emergency rations it will be very apt to find each day enough to supply at least a part of the command with the articles upon which the inhabitants of the country live, and if such articles are so distributed that each organization can get a supply of fresh beef, flour or vegetables, or all of them, every two or three days, there should be no serious consequences to health from using an emergency ration, such as we now have, for an indefinite period of time. This would greatly simplify the transportation problem, but would be resorted to only in an extremity, for the loss of morale in any body of troops needlessly exposed to such conditions would probably be a controlling factor in the early abandonment of the arrangement. In our experience it was found that the soldiers were very willing to subsist on the emergency ration when on marches which prevented the proper supply of the regular articles, and although some ten thousand cans were used at various times by the regiment, its popularity constantly increased, the early prejudice giving way to an appreciation of its advantages. The soldier saw, as clearly as did the officer, that its use enabled him to march without carrying an excessive pack, and to accomplish purposes which would have fallen short without it.

THE OFFICERS' RACE FROM BRUSSELS TO OSTEND.

ALTHOUGH the United States is the country where the cavalry raid had its birth and development, and although in no other country has it ever been practiced on a grand scale in war, we seem to occupy ourselves less than Europeans in discussing this kind of performance, laying down rules for its employment or practicing it on a small scale in time of peace.

The word "raid" has, in Europe, taken on a meaning (as well as a pronunciation) which makes it hardly recognizable by its fathers, and on the occasion of the most recent so-called raid, that from Brussels to Ostend, Generals Merritt and J. H. Wilson being both in France, I wondered if they recognized their old friend in this modern infant

In France cavalry raids, bicycle raids, artillery raids and infantry raids, consisting of anything from a battalion to one man, have been in vogue for a long time, and no one can fail to admire the spirit which prompts these trials of endurance and the grit with which they are carried out. They are always undertaken voluntarily, and the necessary authority for a body of troops to make a trial could not be had unless it had given proofs of condition and training, and this preliminary training involves much voluntary hard work and deprivation. The officer who has the moral and physical qualities which enable him to get his company or battalion in condition for a one or two hundred mile dash, and carries it through in record time, not only finds himself a somewhat distinguished man in the army, but is likely to be promoted ahead of his less enterprising or able comrades.

Since our Civil War, long distance rides have been a good deal in fashion amongst European officers, but the records I have before me do not show any such carried out with a body of troops.

The Brussels-Ostend ride, last August, is the only race of this kind on record that was international in character, except the Vienna-Berlin ride in 1892, won by an Austrian officer in seventy-one hours and twenty minutes (375 miles). Some of the other records are:

- 1890. Cossack, 2,500 miles in 62 days.
- 1889. Cossack, 1,664 miles in 30 days. (Two horses).
- 1885. German, 71 miles in 9 hours.
- 1882. Italian, 56 miles in 5 hours and 12 minutes.
- 1862. French, 157 miles in 21 hours.

The Brussels-Ostend international military race was gotten up by a sporting club of Ostend, under the protection and patronage of the King of the Belgians, who enlisted the official interest of the various European departments of war.

Conditions of the Race.—The conditions of the race were as follows: Open to all commissioned officers on the active list of all armies; officers only to ride the horses actually owned by them some months before the time of the promulgation of the announcement and at the time of the trial; in other words, mounts to be *bona fide* chargers acquired before any idea of preparation for this race could have actuated the owner. The minimum weight allowed was 165 pounds, including saddle and bridle. Most of the competitors exceeded this minimum.

The Prizes.—There were a dozen prizes offered, varying in value from 4,000 to 500 francs. The King of the Belgians, the French army, various jockey clubs, the towns of Ostend and Brussels, etc., etc., offered prizes. One of the prizes was for the first to arrive at the 100 kilometer post: the King's prize was for the winner of the 132 kilometers: the French army offered a magnificent thoroughbred to the Belgian officer who should come in first.

Eliminating Trials.—Each country selected its competitors in such way as it deemed best, provided the officers and their mounts fulfilled the conditions required of all competitors. A glance at the method mapped out for the French officers by the War Department is interesting as an illustration, and because these men showed superlative form.

Sixty-two officers offered themselves for the preliminary trials; the intention was to select twelve from these, but the choice was so difficult that this number was raised to twenty; however, three of these fell out before the final race. All were of the cavalry except two, who were artillerymen.

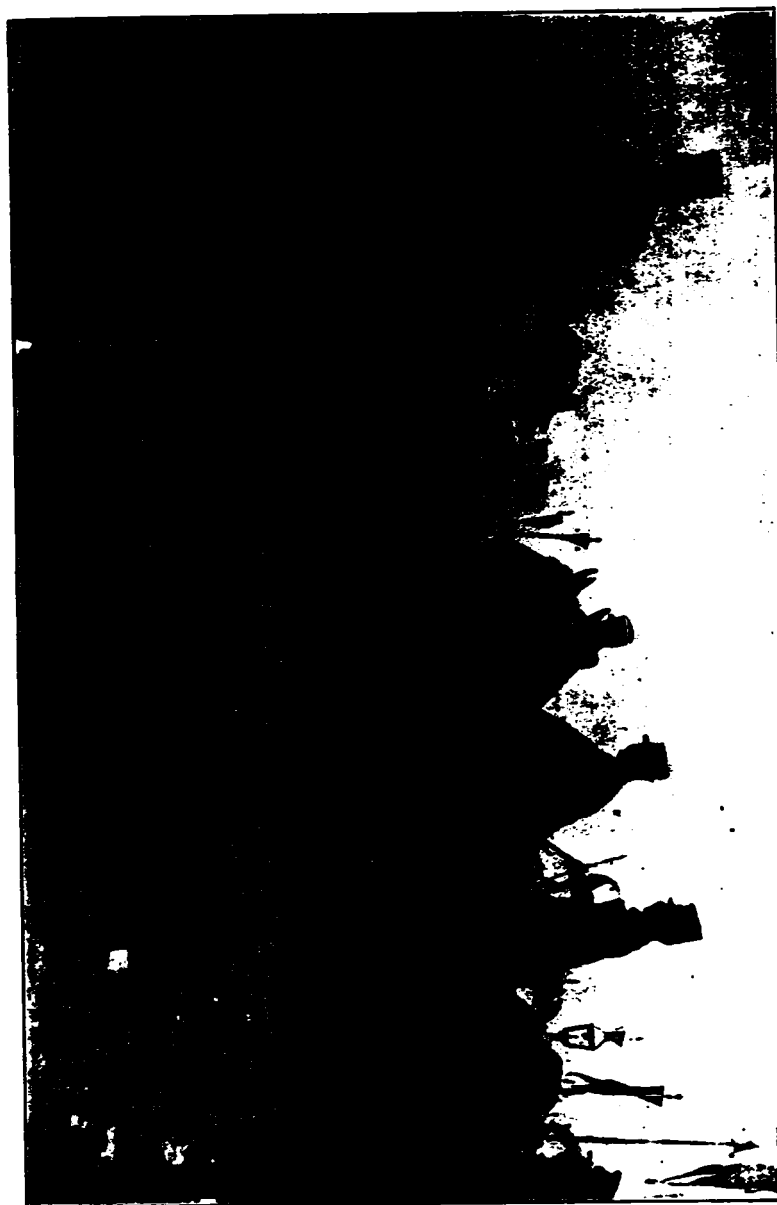
The preliminary trials prescribed were: 1st. Cover fifty miles in four hours, using relays; rider's condition at the finish to be minutely noted. Example: Lieutenant Gombert, using nine horses, rode from Salon to Arles in one hour fifty-seven minutes. At the end, his physical condition was considered perfect. The horses used were from his own platoon.

2d. Cover seventy-five miles on one horse in less than twelve hours, horse and rider's condition at the end to count in classification; time required, so long as under twelve hours, not to count. Example: Lieutenant Deremetz (who came in second in the Brussels-Ostend) rode from Ste. Menehould to Vitry-le-François, seventy-five miles, in eleven and one-half hours; horse and rider in excellent condition. In these eliminatory trials officers were required to ride their own chargers, *i. e.*, the horses they proposed to enter for the final race.

The Final Competitors.—For several days before August 27th, the date set for the contest, the competitors began to arrive at Brussels. Their number in all was sixty-one; thirty-two Belgians, seventeen Frenchmen, six Dutchmen, two Swedes, one Norwegian, one Englishman, one Swiss, one Russian—forty-eight cavalrymen, thirteen artillerymen. Some German and Italian officers had come to Brussels apparently intending to take part in the race, but at the last moment, as though acting under orders from higher authority, they withdrew. Some of the Belgians and Dutchmen were field officers over forty-five years old.

It rained for several days before the race and did not stop until two hours after the start. The road is mostly flat but very hard in the middle, the sides being, on account of the rain sticky and slippery. The men started in batches of five at a time at five minutes interval. The first starters left Brussels at 6:55 A. M.

THE START AT BRUSSELS.



All the arrangements at the starting point and along the road seem to have been entirely satisfactory. There were eleven stations along the 132 kilometers of road where the contestants could dismount and get some refreshment for rider and horse. At three of these there were veterinaries and farriers. The judges at the start and finish consisted of an international committee.

The Results.—Of the sixty-one officers to start fifty reached the 100 kilometer (62½ miles) mark and twenty-nine reached Ostend (82½ miles). The following is the final classification:

1. Madamet, French Lieutenant	6 hours 55 minutes	82½ miles.
2. Deremetz, French Lieutenant	7 " 22 "	82½ "
3. Haentjens, French Lieutenant	7 " 33 "	82½ "
4. Romieux, French Lieutenant	7 " 36 "	82½ "
5. Kielland, Norwegian Captain	7 " 55 "	82½ "
6. De Beaufort, Dutch Lieutenant	7 " 57 "	82½ "
7. Joostens, Belgian Lieutenant	8 " 14 "	82½ "
8. Gibson, Swedish Lieutenant	8 " 29 "	82½ "
9. Marchand, Belgian Lieutenant	8 " 31 "	82½ "
10. Maria, Dutch Lieutenant	8 " 45 "	82½ "

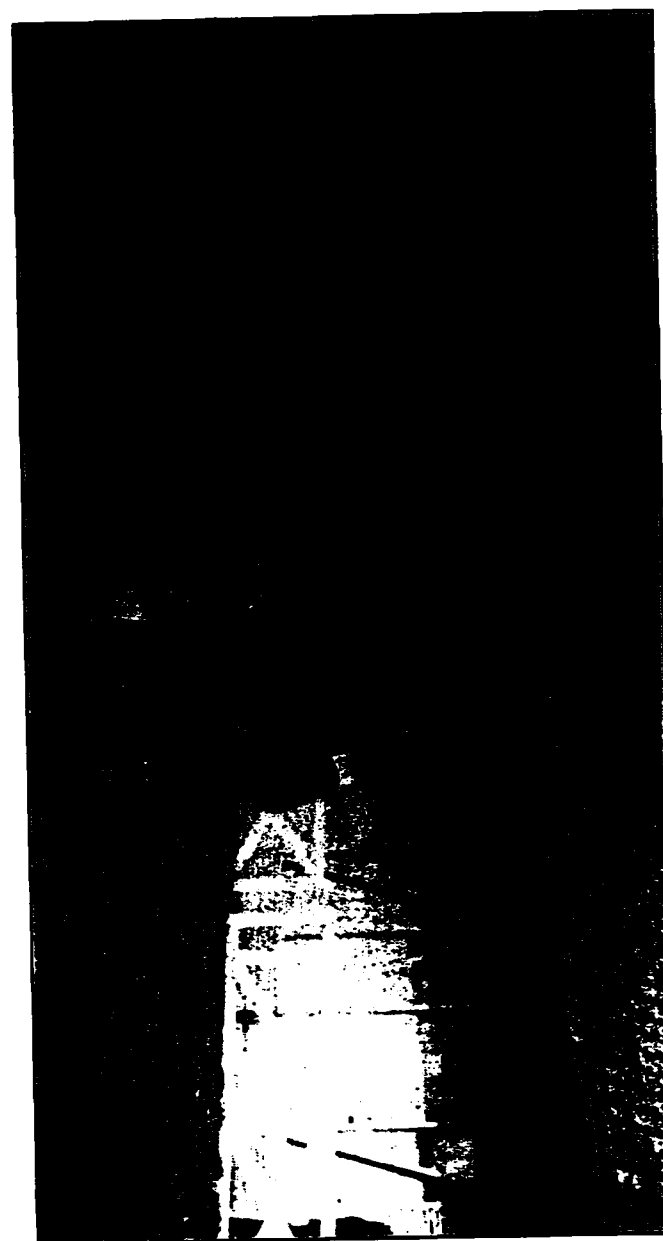
Of the twenty-nine in at the finish twelve were Belgians, ten French, four Dutch, one Norwegian, one Swede and one Swiss; one was a major, two were captains and the rest lieutenants.

The average speed of the winner was eleven and eight-tenths miles an hour for seven consecutive hours. The average speed of the next five men, taking a mean, was ten and eight-tenth miles an hour. The winner made the first sixty-two and one-half miles in four and three-fourths hours; many exceeded this rate for the first sixty-two and one-half miles; some even started off at a fifteen and one-half mile gait. Those who started too fast simply finished their horses before the end was in sight.

Many good judges say that the average rate for Lieutenant Madamet would have been twelve and one-half miles an hour if the roads had not been so bad.

The Winner.—Lieutenant Madamet trained himself and his horse methodically for six weeks before the race. At first he rarely used the gallop, although this was the gait he decided on for the race. He worked "Courageux" long and

LIEUTENANT MADAMET AND HIS MOUNT.

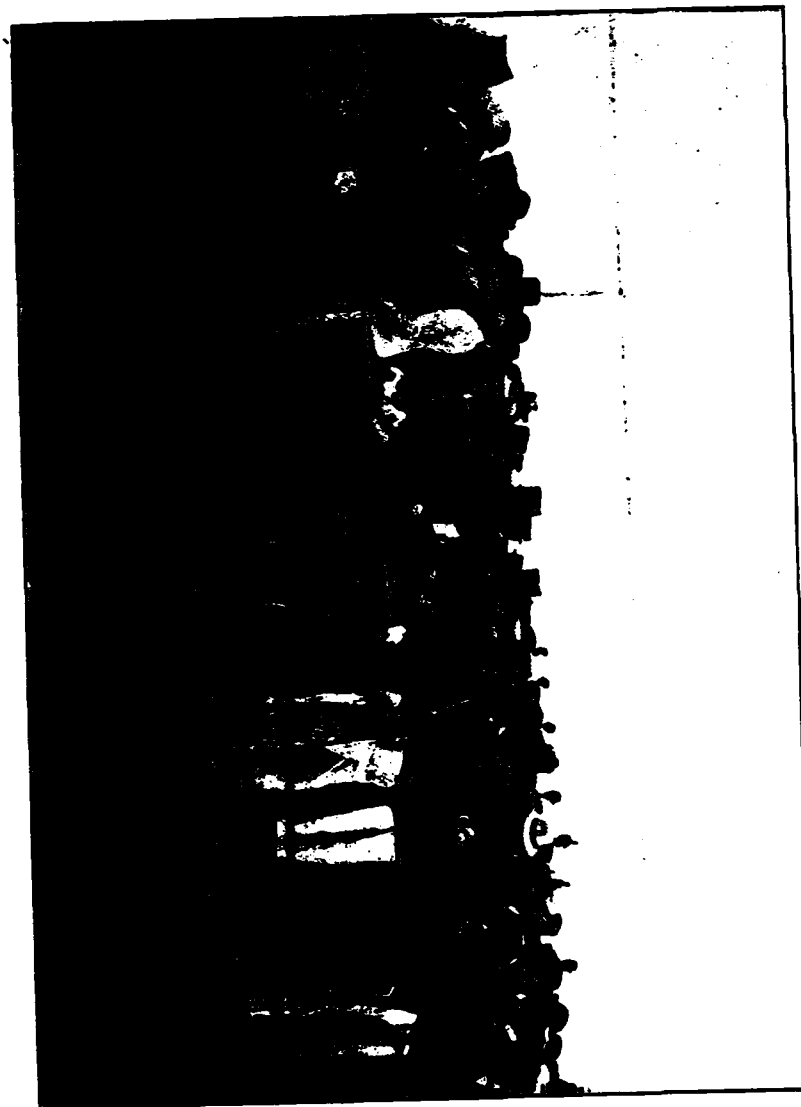


regularly to harden his muscles, galloping him fast for about two miles twice a week. Later on he began to give him regularly fast gallops on hard ground, noting when he began to blow. In this way he decided on one and one-half miles as the best distance for these heats at the gallop. The only hard test given "Courageux" was the preliminary seventy-five miles in eleven and one-half hours, prescribed for all French contestants; he also rode him fifty-seven miles on a stretch one day at the trot and walk.

Lieutenant Madamet's method the day of the race was thought out beforehand and followed. His general plan was to let his horse take his natural extended gallop and keep this gait for about one and one-half miles, at the end of which time, or as soon as the animal began to blow, he dismounted and walked alongside for two minutes, then mounted and resumed the gallop. This method was also followed by the majority of the French officers, notably Lieutenant Romieux, who came in fourth, his method being exactly the same. Lieutenant Madamet was quite fresh when the race ended, and his horse, while very tired, was not played out, and the next day but one his master rode him over the Ostend race course and put him through five minutes of haute école before the jury; he was fresh and supple. The horse is twelve years old.

The Horses.—Exact particulars as to the breeding of all the horses are unfortunately lacking to the public. Of the seventeen French officers, six rode horses of English thoroughbred stock (born in England or in France), eight half-bred horses, two Irish, one Norman. Of the first four to arrive, Nos. 1, 2 and 4 were thoroughbreds, No. 3 an Irish hunter. The starters were thus divided as to origin: Nineteen Irish hunters, thirteen English thoroughbreds, twenty-nine half bred; in the latter class were put the two American trotters. Thirty-two horses did not finish: of these six were thoroughbreds. One American trotter, after making what his rider thought a poor showing at the trot, was put to the gallop and took ten hours to cover the distance. This was a pity, as he might have made a better showing at a

ARRIVAL AT OSTEND.



waiting game. The other, a fine Kentucky mare, made thirty-one miles in good style, but could go no further.

Several riders made the first fifteen miles in less than an hour, but of these some never finished, and others took three hours to do the last twenty miles.

The conditions of road and weather were most unfavorable. It had rained for days and the first four hours of the ride was in a driving rain; it then cleared and the August sun came out and the atmosphere was reeking hot. The road was of Belgian block in the middle, of deep sticky mud on the sides.

Lieutenant Madamet seems to have paid particular attention to the preparation and hardening of his horse's feet for this long gallop on paved roads, and he made much of his distance on the stones where others chose the mud.

Courageux is said to trot about thirteen and one-half miles an hour and gallop seventeen. Lieutenant Madamet never rode over three miles on a stretch without dismounting and walking his horse, or else stopping to let him get his wind. When the heat became intense at 11:30 A. M., he rested him for some ten minutes.

It seems incontestable that a good horseman on an exceptionally good thoroughbred horse can be counted upon to cover sixty miles in five hours, and that under really unfavorable road conditions and in bad weather; for longer distances, as say eighty miles, a speed of ten miles an hour is the most that can be counted on.

The doctors and veterinaries who examined the men and horses at the regular "contrôle" stations, affirm as the result of their observations that men over thirty stand the fatigue better than men in the twenties, and that (as was to be expected) aged horses alone have the requisite stamina; most of those that finished were over ten years.

Tonics, kola, hyperdermics, etc., for man and beast were of benefit only to restore failing strength; they were useless taken as preparation or preventative against fatigue.

Besides the French, the Belgian, Dutch and Scandinavian officers showed good horsemanship, but suffered perhaps

THE INTERNATIONAL COMMITTEE OF JUDGES.



from want of system in their training or want of matured plan for riding the distance.

Every man, whether he rides once a day, or once a month, whether he rides a real horse or merely a four-legged animal, will form and express an exact opinion as to the value or uselessness of the Brussels-Ostend contest, and the opinion of others will make little impression upon any of us. Nevertheless, the ride having been made, we are free to deduce from it certain facts fairly established and which American officers may usefully consider.

1st. The value of the thoroughbred horse for war purposes. As far as the writer knows, there is not as much discussion on this subject in our army as in others. This is probably for the same reason that it is idle to decide whether you prefer an automobile to a four-in-hand, when you feel you can only afford the street cars as a means of locomotion.

In France a belief in the thoroughbred has been gradually displacing the old faith in the cross-country horse par excellence, the Irish hunter or the Anglo-Arab or Anglo-Norman. Many thoroughbreds are bought each year by the remount and more and more officers provide themselves with these horses. All have agreed on their superior speed and heart, but many contested their bottom and hardiness. The Ostend-Brussels ride proved conclusively that their stamina is as good as their courage, and I do not believe many horsemen will now be found in the French army who would not prefer the thoroughbred for all cavalry, except perhaps such weight carriers as the cuirassiers. Time and again officers have assured me that all French experience goes to show that the thoroughbred is not as delicate an animal as the poorer bred horse, and in a pinch will do more on less food and care than his humble brother.

However it is not at all likely that any great body of cavalry will all be mounted on thoroughbreds. European officers imagine that the United States with their prodigious wealth and contempt of cost might mount their whole army on thoroughbreds if they thought it advisable; happily for our prestige, few of these officers know how little of our money we pour out for horses or realize that our mounts are

LIEUTENANT MADALET.



LIEUTENANT HERBERT.

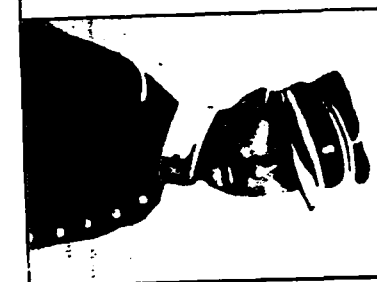


THE WINNER.

LIEUTENANT HONJANEN.



LIEUTENANT HOMERIN.



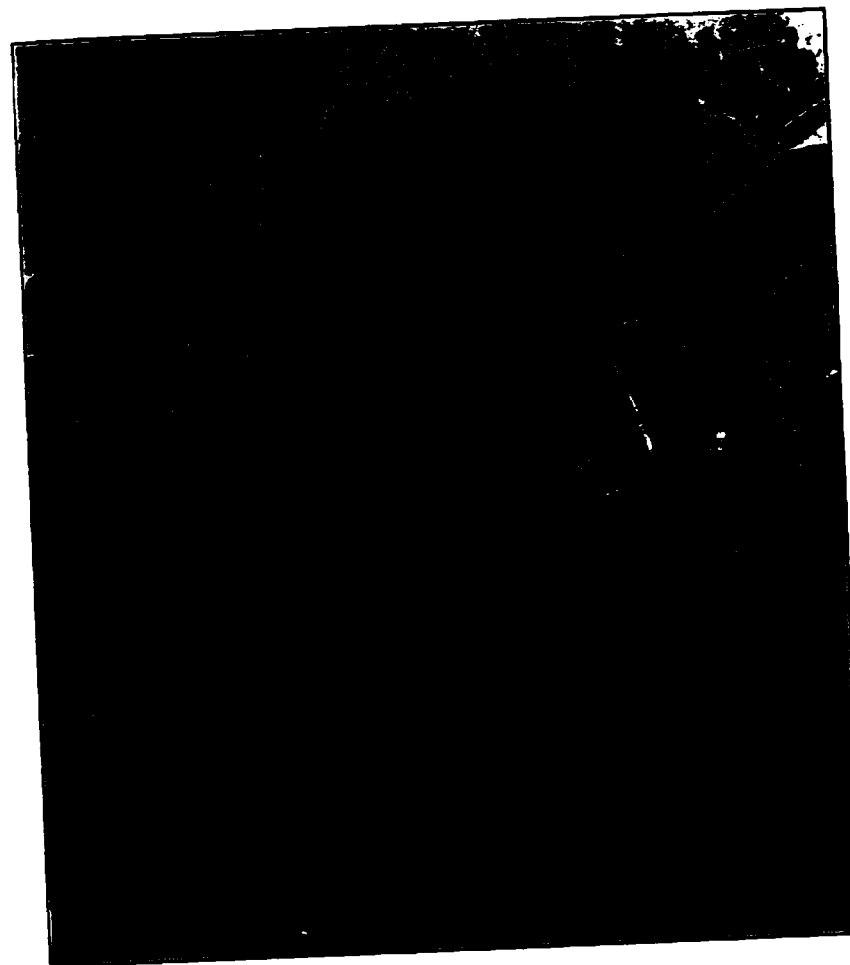
not nearly as good as those of even very poor European powers.

The best mount for an officer, especially a staff officer, nevertheless stands clear of these considerations. If a general knew that he had men on his staff who could take a message fifty miles in less than five hours it would surely give him no little comfort.

X
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2d. The gait for long distance rides. The average American would probably say the trot was the best gait for anything over fifty miles; the Brussels-Ostend race points conclusively to the gallop, and that up to eighty miles. The conditions of the road were favorable to trotters, and good judges state that of the two American horses, one at least was a superb animal; yet their performance bears no comparison to that of the galloping thoroughbreds. From a purely theoretical consideration also, does it seem possible that a trotter could do eighty-two miles in seven hours? That would mean a four and one-half minute gait for six hours with one hour out for rest; the horse to be *ridden* of course and not driven. Those who know the powers of the trotting horse should be able to give some answer to this question.

MB
A very important and practical question here presents itself; apart from the service of covering and reconnaissance, most cavalymen seem agreed that the most important work their arm will have in future campaigns is a rapid movement around a flank, followed by an attack, perhaps on foot, or else a raid against communications. Here time is the all important thing, and the best gait for getting there as quickly as possible is what the cavalry leader must know. Is this gait the gallop alternating with the walk or the trot alternating with the walk? The Brussels-Ostend experience says the gallop for the individual horseman; is there anything to show that this does not hold good for a body of horsemen?

3d. The saddle. From the standpoint of the horseman though not from that of the cavalryman, it is interesting to note that as far as information can be had, the English pad saddle was used by all the officers competing. There being



ARRIVAL OF LIEUTENANT MADAMET AT OSTEND.

no pack to carry, all seemed to consider that this saddle was the best to ease the horse in such a test of endurance.

As practically all the winners used the gallop, comparisons as to sitting or rising to the trot cannot be made.

It may not be uninteresting to note here a conversation I recently had with one of the aides of General Dunop, who has won and holds a great reputation as a cavalry general. This aide is one of the best riders in France, whether in the manège or on the steeple chase course. He told me of exhaustive experiments held at the War School in Paris to determine the effect on the horse of sitting or rising to the trot. At that time rising was not practiced in the French army.

These experiments were held on a balancing machine contrived to record the downward thrust of a horse trotting. The experiment was made with a man sitting the trot and the same rising. I now forget the difference in pounds recorded in favor of the man rising, but it was considerable, certainly over ten pounds. After a long series of these tests, it was decided to teach French recruits to rise, though their saddle is not adapted to this method much more than our McClellan. This decision was arrived at solely from considerations affecting the wear and tear on the horse and the dynamic effect on his back and legs of the close seat as compared with the English seat.

4th. When a man can ride a horse eighty-two and one-half miles in seven hours and that horse shows himself to be in first rate condition the next day, his opinion on how to select, train and ride a horse must command the respect of all people; when that man and his three comrades, who accomplished almost as brilliantly the same feat, are the product of a school which is the exponent of certain perfectly definite ideas in the matter of horsemanship, that school and those ideas are worth studying by all horsemen.

Such a school is Saumur. The international military tournament at Milan last spring enabled the graduate of Saumur to prove their incontestible superiority over all European competitors in manège work, steeple-chase riding, use of weapons and general form in horsemanship; the

Brussels-Ostend ride showed no less their superiority in selecting and preparing horses for long distance tests of endurance. The French, then, have every reason to believe that they have the best school of military horsemanship in Europe. Is there a better one in America? As far as I know we not only have no better school, but we have none at all in the proper sense of the word.

As to whether or not we need such a school for mounted officers, the cavalry arm is best qualified to answer. Some thoughts on what would be the influence of such a school are given by the writer in the January number, 1903, of the CAVALRY JOURNAL; and for these suggestions and his temerity in treating of such matters at all he begs the indulgence of his expert comrades of the cavalry.

RECOLLECTIONS OF A MILITARY POST.

BY LIEUTENANT-COLONEL S. T. NORVELL, U. S. CAVALRY, RETIRED.

IT was established in the summer of 1858, on Cedar Creek, Cedar Valley, Utah, about sixty miles from Salt Lake City, and was named Camp Floyd, in honor of the then Secretary of War.

The plan of the post was in the form of a camp, with few modifications, in accordance with regulations at that time in existence, being in column of troops, batteries and companies, according to arms. The post was on the left bank of the creek, the flank of the column being about one hundred yards from it; the other flank about the same distance from the line of company officers' tents, thus forming a street, used as a parade ground, nearly a mile long. In rear of the company officers' line was that of the field officers; then another line occupied by regimental bands, hospitals, quartermaster's and subsistence storehouses and offices. Regimental guardhouses, facing outward, formed the next line; a wagon road extending the whole length of the camp was in front of the guardhouses, and across, facing the latter, were the regimental sutler stores. In extension of the latter line, on the right facing the creek, were the depot storehouses. Across the left of the camp, head of the column, and distant from it 200 yards, on a slight rise, was a line designated as "Department Headquarters."

The organizations composing the garrison were posted as follows from department headquarters: Ordnance detachment, Tenth Infantry, Seventh Infantry, Fifth Infantry, Battery B Fourth Artillery, Battery C Third Artillery, Second Dragoons.

Brigadier-General Albert Sidney Johnston commanded the Department of Utah; Lieutenant-Colonel Charles F.

Smith, the Tenth Infantry and post; Lieutenant-Colonel P. Morrison, the Seventh Infantry; Major Seth Eastman, the Fifth Infantry; Captain John W. Phelps, Battery B Fourth Artillery; Captain John F. Reynolds, Battery C Third Artillery; Lieutenant-Colonel M. S. Howe, the Second Dragoons. The department staff officers were Major Fitz-John Porter, Adjutant-General; Lieutenant-Colonel Geo. H. Crossman, Chief Quartermaster; Surgeon W. S. King, Medical Director; Captain Simpson, Chief Commissary; Captain Jesse L. Reno, Chief of Ordnance; Captain Simpson, Chief Engineer; Captains Paige and Turnley, Assistant Quartermasters. These officers were present when the post was established; subsequently changes took place, but a majority of those named remained until the command was broken up.

By October 1st the tents of the troops were replaced, nearly on the same ground, by adobe buildings; the depot storehouses and several of the sutler stores were built of lumber "in the rough." The quarters of officers and the barracks were erected by the labor of troops. The post presented a fine appearance, but would not bear close inspection, for owing to the lack of tools and proper materials the buildings were rather crude.

The valley for miles was covered with a dense growth of sage brush, varying in height from two feet to above a man's head, and for more than a year the fuel for the post was obtained from that source. When it became scarce, wood (cedar) was hauled from the mountains from six to ten miles distant. Quartermaster and subsistence stores were supplied from St. Louis. Freight from Kansas City and Fort Leavenworth cost twenty-two cents per pound. The soldier's ration at Camp Floyd was worth seventy-five cents. Beef was furnished "on the hoof," the cattle being brought from Kansas. The post was an expensive one to supply, for everything had to be hauled in wagons for upwards of twelve hundred miles. Russell, Majors & Waddell were the freighters from Kansas City and Fort Leavenworth. The mails—once a week—were brought by stage from the former place, and were about twenty-two days in coming; quicker communication had to be by courier. In 1859 the "pony express" was established,

and then letters came through in ten days; but few could afford to avail themselves of this mode of communication.

Across the creek from the post a settlement took root known to the soldiers as Frog Town. This place was inhabited by whisky dealers, gamblers and discharged soldiers. It was also the "City of Refuge" for persons inimical to the Mormons. As there was no town organization, good order had to be maintained by the military. A bridge across the creek connected the settlement with the post. By damming the creek a large pond was created, which was used as a swimming bath. Below and against the dam a number of closets were built extending from bank to bank, and by an arrangement in each, shower baths were obtainable.

Probably the first attempt ever made to establish a canteen in the army originated at this post. The causes that led to it were the quality of whisky manufactured in the country and surreptitiously sold to soldiers, and the demoralizing effect upon them, causing drunkenness, desertion and other offenses. To control the trouble, an officer of the Fifth Infantry proposed a brewery, with a room attached for the sale of beer to enlisted men. The idea was perfected by the regimental council of administration, and was approved by the regimental, post and department commanders. Beer was sold at five cents per quart, but had to be consumed at the place of sale. The effect was magical, drunkenness being reduced to the minimum. In less than two years the regimental fund of the Fifth Infantry was added to by about twenty-five hundred dollars, that amount being the profit derived from the sale of beer. It will please temperance people to learn that the fund referred to was invested in bonds in a State that endeavored to secede from the Union, and was lost to the regiment.

As soon as the garrison was under shelter, the post became a grand school for military instruction. In January, 1859, a general order was issued from post headquarters reminding the garrison that *now* was the beginning of the season for military instruction; that it must be pursued with vigor, and it then prescribed the course to be followed, entering into the minutest details. In January, 1860, a similar

order was published, though the necessity for it was not apparent, as for two years the season never ended.

Instruction embraced everything in tactics from the school of the soldier to brigade drill. It was at this period that a general change occurred in the army from Scott's to Hardee's tactics, though the latter had been used for several years by the Ninth and Tenth Infantry, those regiments having been organized in 1855 as "Light Infantry." Recitations for officers and non-commissioned officers were carried on hand in hand with the drills. Target practice, in accordance with a manual prepared by Captain Henry Heth, Tenth Infantry, was pursued for a period in each year. This manual, by the way, was about the first regular target system instituted in our service. It was the guide for many years, and some of its features are retained to this day. Great attention was paid to guard duty, and the instruction was thorough. There was a dress-parade every day in the week except Saturday: at these parades all orders from headquarters of the army, department, and post were published. It would be impossible to do this nowadays, but then there were few orders issued. At that time commanding officers and adjutants had ample time to attend to military duties; now, nearly the whole time of these officers is required for paper work.

Saturdays were cleaning up days; morning being passed in policing the post, afternoons were devoted by the men to policing themselves, their arms, accoutrements, and clothing. Sunday morning inspection was invariably by troop, battery and company. On the last day of the month, in the cavalry and infantry, the inspection was by regiment. At the bi-monthly muster for pay, the command was united, and under the post commander passed in review before the department commander, after which the organizations were turned over to their respective commanders for inspection and muster. At the Sunday morning inspections the enlisted men had to account for their clothing—not a difficult matter, for in those days soldiers were not allowed to have in their possession more than two suits, one on their persons and the other in their knapsacks.

Guards were of two classes—exterior and interior. The first was the "general," or, as it was designated, "depot guard," with a field officer-of-the-day, two sergeants, three corporals and thirty privates. A first lieutenant commanded the guard, with a second lieutenant as "supernumerary." Mounted with this guard was a detachment of one subaltern, three non-commissioned officers, and fifteen privates, equipped—including rations—for twenty-four hours' duty at the prison for military convicts. The prison was about a mile from the post, and was within the jurisdiction of the field officer-of-the-day. The depot guard furnished a detachment of one corporal and three privates, posted at the bridge leading to Frog Town. The duty of this guard was to prevent soldiers without passes from visiting the settlement; also to receive prisoners arrested by provost sergeants for disorderly or other misconduct. Parties arrested were sent to the depot guard-house, and from there to the guard-houses of the regiments to which they belonged. Sentinels from the depot guard were posted at points not covered by police or interior guards.

Each regiment and battery had a guard of its own, and these were the interior or police guards; each had its officer-of-the-day.

There was a provost marshal under the immediate orders of the post commander, and he had as assistants six sergeants detailed from the various regiments.

The field officer-of-the-day exercised authority over all guards when necessary.

As the army was in an enemy's country—at least so regarded—duty was performed accordingly.

The discipline enforced at Camp Floyd was, to a great extent, a revelation to the command. From the close of the Mexican War to 1857 the army was distributed all over the country in small detachments, and there were enlisted men of many years' service who had never witnessed a drill above that of a troop or company. Even officers were "rusty," some of them not having been on a battalion drill since graduating at West Point. There was but one school of instruction maintained, and that was at For-

tress Monroe for artillery only. The manual of the pick and shovel was better understood than any military exercise. Officers had done the best they could in imparting instruction to small bodies of troops, but it was up hill work.

The Utah expedition caused the establishment of Camp Floyd, and the officer in command was wise and energetic enough to take advantage of the concentration of so many troops, to make the post a school for military instruction. Strict discipline was gradually introduced and was imbibed without causing the slightest discontent or grumbling. Everything ordered was with the view of educating the soldier in his profession; to cause him to take pride in the performance of his duties and in the uniform he wore. Punishment for military offenses was uniform in all organizations by court martial. For instance: Members of the old guard were granted passes for twenty-four hours, "attending drill" being the only reservation. Every soldier knew that a violation of a pass meant "five dollars and ten days"; that drunkenness, unaccompanied by any other offense, was "five dollars" straight. Deserters forfeited all pay and allowances due; were branded on the left hip with the letter D, one and one-half inches long; received fifty lashes, well laid on, with a rawhide; were dishonorably discharged and drummed out of the service, and were then confined at hard labor, usually for the unexpired term of their enlistment, wearing a ball weighing twenty-four pounds attached to the left leg by a log chain six feet long. As soon as they were drummed out, they became convicts, and to prevent association with well-behaved soldiers, were at once confined in the military prison heretofore mentioned.

The military prison, probably the first ever established in the army, was built of stone by the labor of convicts; was a square enclosure, the walls being of great thickness and about sixteen feet in height. Within the enclosure was a sufficient number of Sibley tents to accommodate the prisoners; also one for a cook, who had charge of the rations. He was a convict. The regulations for the prison were very strict. While at work the prisoners were not allowed to converse with one another; sentinels over them were not

allowed to utter a word not necessary for the execution of their duty. Irons were examined at retreat and at reveille, and once during the night; also before they were sent out to work and when they returned. They were fed and clothed well, and cleanliness was exacted. If a prisoner escaped (and several did) the officer-of-the-guard, the non-commissioned officer in charge of the relief, and the sentinels on post, were tried by court-martial, but so faithfully was duty performed not a conviction ever occurred.

Great attention was paid to guard duty. Each relief or post was carefully instructed, first by a non-commissioned officer-of-the-guard, and then by one of the commissioned (subalterns) officers—the depot guard is referred to. The same attention was paid to the interior (police) guards. At night, after 12 o'clock, the field officer-of-the-day made the "grand rounds." When it happened that a sentinel on post failed to know his orders, those responsible for his instruction passed a bad quarter of an hour. Twice a year the Articles of War were read to the whole command, the date being announced in an order from post headquarters; at other times, when the weather was too bad for outdoor exercises, the Articles of War were read in quarters. Frequently the reading of the Articles of War took the place of a sermon on Sunday. The command was without a chaplain. There were drills five days in the week: mornings were devoted to company, and afternoons to battalion drills. No one was excused from drills except members of the guards and "general" prisoners, one cook for each mess and the regimental baker. There being a large number of civilian employees, there were but few extra duty men. Occasionally there was a brigade in lieu of a battalion drill.

A military store-keeper of the Quartermaster's Department, Captain Montgomery, arrived at the post about the time it was established; then all clothing in the possession of organizations was turned over to him, and henceforth, all required for issue to enlisted men was drawn upon requisition of troop, battery and company commanders. There was no limit to the number of requisitions; if one man in an organization required one article of clothing, it was furnished

at once. In this way large requisitions and issues were obviated; the men were always equipped, and the aforesaid commanders were not burdened with keeping clothing on hand for issue—in fact it was prohibited. The plan worked well.

There were no ladies at the post for a year after it was established, and then only one, and she, oh my, was a belle! A few laundresses, not half a dozen in all, wives of old soldiers, accompanied the expedition to Utah. From long experience they were quite capable of taking care of themselves, and never caused the command any trouble or anxiety.

In the course of time a theater was built by the voluntary labor of troops, and it would have been a credit to a town of 15,000 inhabitants. It was occasionally used as a church, for there were several officers in the command of religious tendencies, who held services periodically. A traveling troupe of theatrical people from California gave nightly performances for several weeks, and so there was some little relief from the monotony of military life.

Soldiers are keen to see the ridiculous side of everything, and derive much amusement therefrom.

In the days of Camp Floyd—and before and since—there was a diversity of opinion among officers as to the application of the company fund. The older company officers believed in the creation of a large fund for a rainy day, while the younger believed in getting rid of it, not desiring the responsibility of its care. The writer knew of an old company commander who had been years in accumulating a large fund. Suddenly he was ordered away, and had to turn over the fund to a young lieutenant. The latter, within twenty-four hours after receiving it, expended the whole in the purchase of 500 bushels of potatoes, a quantity that would have lasted his company a year if most had not spoiled in the meantime.

On Christmas, in 1859, an effort—entirely successful—was made to give the enlisted men an extra fine dinner. This necessitated the expenditure of company funds. One old captain of the Fifth Infantry, who had nursed his company fund for years, sent for his first sergeant. "Sergeant,"

said he, "I have determined to give the company a good Christmas dinner, and among other articles I have figured on are potatoes. I think two per man will be sufficient, will they not?" "Hardly," said the sergeant, "two potatoes for a man are a small allowance." "What!" exclaimed the Captain, "not enough? Well, give 'em three, and let 'em *bust*."

It was a grand sight to witness a dress parade of the various organizations. All "calls" were first sounded at post headquarters, and were repeated successively in all regiments and batteries. Parade was formed on their respective grounds by the different organizations, and then was seen a line nearly a mile long, extending from one end to the other of the parade. It was the same for all formations, even for that of "falling in" for fatigue. It was an offense for an organization to be kept on drill after the sounding of recall, "for," said the commanding officer, "no military duty should be treated as a punishment, and it becomes such if rules are violated."

So strict was discipline at this model post that, without intending to criticize the action of the officers concerned, the following anecdote is related of an occurrence that took place on the last day of February, 1859. An order had been issued for a combined review, in full uniform, at 8 o'clock A. M. On the designated morning a storm, accompanied by snow, arose. An hour or so before the troops were to be assembled, an officer in command of a mounted organization, having great feeling for his horses, sent an orderly to the post commander to inquire if the review would take place. The answer was that "the order had not been rescinded." A few minutes afterwards a similar inquiry was sent by a battery commander. This last message broke the camel's back, and the answer was to the effect (the exact language used unknown) that if there was to be no review the command would be notified in ample time. It is safe to say that the post commander considered both messages as unmilitary and a reflection upon his common sense. The review was held at the appointed hour, and in full uniform; that the ceremony was considerably shortened made no difference; the damage—to uniforms—was accomplished, and until the facts that

caused the review leaked out, there was a good deal of quiet criticism of the post commander. The result was that the battery commander resigned from the army. That he had long contemplated resigning was well known, but it became also known throughout the command that the answer to his inquiry was the cause of his immediate resignation. The other officer who "wanted to know," pocketed the post commander's reply. The lesson was a severe one, and the post commander was never annoyed thereafter by inquiries as to what he was going to do.

In the days of Camp Floyd, discipline in the army was maintained by the severity of punishment authorized by army regulations. The latter were never violated by Colonel Smith, but, at the same time, were faithfully enforced. Every man in the command—commissioned or enlisted—knew what to expect for infractions of the law. Offenses were never condoned, and when mercy was exercised it followed conviction—never preceded it. There was never a more contented garrison than that of Camp Floyd from 1858 to 1860, and this result is the strongest kind of an argument for the faithful execution of the regulations for the government of the army.

To Colonel Smith was due the credit for making Camp Floyd a model post and its garrison a model army. General Johnston, the department commander, recognizing Colonel Smith's qualifications for command, never interfered with his (Smith's) administration of the affairs of the post. As an artillery officer in the Mexican War; as commandant of cadets at West Point; as lieutenant-colonel of infantry, and as a major-general of volunteers, he filled every position with great credit. As he was the hero of Fort Donelson, he would have become, had he lived, the hero of the army—on the Union side—of the Civil War; at least, so the writer of this paper believes.

Of the officers serving at Camp Floyd many subsequently became prominent in the United States and Confederate armies. Besides Albert Sidney Johnston and Charles F. Smith, were Fitz-John Porter, John C. Robinson, John F. Reynolds, Jesse L. Reno, A. T. A. Torbert, Gabriel R. Paul,

William Chapman, John W. Phelps, Thomas H. Neill, Carter L. Stevenson, Henry Heith, Henry P. Sibley, John Pegram, John S. Marmaduke, Daniel Ruggles, John M. Jones, R. R. Garland, and others whose names are not now recalled. It is hardly necessary to say that the experience obtained under Colonel Smith assisted materially in qualifying these officers for the positions they were subsequently called upon to fill.



THE TEXAS RANGERS.

For many years the State of Texas has maintained and supported a mounted force known throughout the country as Texas Rangers. The force was organized "for the purpose of protecting the frontier against marauding and thieving parties, and for the suppression of lawlessness and crime throughout the State." The services of this organization have been invaluable to the people of that State. To secure a more permanent and effective organization, the Legislature, in 1901, revised the act under which the force was maintained. Its main features are given below, and will undoubtedly interest cavalrymen, particularly those who have served with them on the Texas frontier.—[EDITOR.]

SECTION 1. *Be it enacted by the Legislature of the State of Texas:* That the Governor be and is hereby authorized to organize a force to be known as the "Ranger Force," for the purpose of protecting the frontier against marauding or thieving parties, and for the suppression of lawlessness and crime throughout the State.

SEC. 2. The "Ranger Force" shall consist of not to exceed four separate companies of mounted men, each company to consist of not to exceed one captain, one first sergeant and twenty privates, and one quartermaster for the entire force. The captains of companies and the quartermaster shall be appointed by the Governor, and shall be removed at his pleasure; unless sooner so removed by the Governor, they shall serve for two years and until their successors are appointed and qualified.

SEC. 3. The pay of officers and men shall be as follows: Captains, one hundred (\$100) dollars each, per month; sergeants, fifty (\$50) dollars each, per month; and privates forty (\$40) dollars each, per month. The payments shall be made at such times and in such manner as the Adjutant General of the State may prescribe.

SEC. 4. The Governor shall appoint a quartermaster for this force, who shall discharge the duties of quartermaster,

commissary and paymaster, and shall rank and receive the pay of a captain.

SEC. 5. This force shall always be under the command of the Governor, to be operated by his direction in such manner, in such detachments and in such localities as the Governor may direct.

SEC. 6. The Governor is hereby authorized to keep this force, or so much thereof as he may deem necessary, in the field as long as in his judgment there may be necessity for such a force; and men who may volunteer in such service shall do so for such term not to exceed two years, subject to disbandment in whole or in part at any time, and re-assembly or reorganization of the whole force, or such portion thereof as may be deemed necessary by order of the Governor.

SEC. 7. That the quartermaster, or if so directed by the Adjutant-General, company commanders, shall purchase all supplies hereinafter provided for, and shall make a certificate on the voucher of the party or parties from whom the supplies were purchased, to the effect that "the account is correct and just, and the articles purchased were at the lowest market prices."

SEC. 8. Each officer, non-commissioned officer and private of said force shall furnish himself with a suitable horse, horse equipment, clothing, etc.; *provided, that if his horse is killed in action it shall be paid for by the State at a fair market value at the time when killed.**

SEC. 9. That the State shall furnish each member of said force with one improved carbine and pistol at cost, the price of which shall be deducted from the first money due such officer or man, and shall furnish said force with rations of subsistence, camp equipage and ammunition for the officers and men, also forage for horses.

SEC. 10. The amount of rations and forage shall not exceed the following, to-wit: For each man's daily allowance, twelve ounces bacon or twenty ounces beef, twenty ounces of flour or corn meal, two and two-fifths ounces of beans or peas, one and three-fifths ounces of rice, three and one fifth

* Editor's italics.

ounces of coffee, three and one-fifth ounces of sugar, one-sixth gill of vinegar or pickles, one-sixth ounce candles, one-third ounce of soap, two-thirds of an ounce of salt, one-twenty-fourth of an ounce of pepper, four and four-fifths ounces of potatoes, sixteen-twenty-fifths of an ounce of baking powder. The forage for each horse shall not exceed twelve pounds of corn or oats, and fourteen pounds of hay per day, and two ounces of salt per week; provided, that when in case of emergency the members of said force are employed in such duty that it is impracticable to furnish the rations herein provided for, each member of said force so employed shall be allowed for his necessary actual expenses for such subsistence not to exceed one dollar and fifty cents (\$1.50) per day; and provided further, that when it becomes necessary to move the members of said force from one place to another by railroad, the actual necessary expenses of such transportation shall be paid.

SEC. 11. The officers, non-commissioned officers and privates of this force shall be clothed with all the powers of peace officers, and shall aid the regular civil authorities in the execution of the laws. They shall have authority to make arrests, and to execute process in criminal cases, and in such cases they shall be governed by law regulating and defining the powers and duties of sheriffs when in discharge of similar duties; except that they shall have the power, and shall be authorized to make arrests and to execute all process in criminal cases in any county in the State. They shall, before entering on the discharge of these duties, take an oath before some authority legally authorized to administer the same, that each of them will faithfully perform his duties in accordance with law. In order to arrest and bring to justice men who have banded together for the purpose of committing robbery or some other felonies, and to prevent the execution of the laws, the officers, non-commissioned officers and privates of said force may accept the services of such citizens as shall volunteer to aid them, but while so engaged such citizen shall not receive pay from the State for such services.

SEC. 12. When said force, or any member or members thereof, shall arrest any person charged with the commission

of a criminal offense, they shall forthwith convey said person to the county where he or they stand charged with the commission of an offense, and shall deliver him or them to the proper officer, taking his receipt therefor, and all necessary expenses thus incurred will be paid by the State.

SEC. 13. The Governor and Adjutant General shall cause to be made such regulations for the government and control of the organization herein provided for, and for the enlistment and employment of non-commissioned officers and privates, as they may deem necessary, to the end that the force so provided shall be as effective as possible.

SEC. 14. All laws and parts of laws, both general and special, in conflict with the provisions of this act, are hereby repealed.

SEC. 15. The fact that the Revised Statutes are indefinite, and that a defect exists, in that the privates of said force have no authority to execute criminal process, creates an emergency and an imperative public necessity that the constitutional rule requiring bills to be read on three several days be suspended, and that this act take effect and be in force from and after its passage, and it is so enacted.

EXISTING REGULATIONS.

The "Ranger Force" as authorized by the foregoing act, was organized on July 8, 1901. It consists of four companies known and designated as Companies A, B, C and D, "Ranger Force." Each company, until further orders, consists of one captain, one first sergeant and eight privates.

The following are a few of the most important regulations governing the "Ranger Force":

1. The "Ranger Force" is not intended to supplant the ordinary constabulary, and its operations will be confined to arrests of persons charged with the commission of felonies and the carrying of concealed weapons, and to the prevention of breaches of the peace.

2. The members of the "Ranger Force" are forbidden under penalty of immediate dismissal from the service to take any part whatever, either directly or indirectly, in aiding or abetting the election of any candidate for official position.

3. The members of the "Ranger Force" will keep within the bounds of discretion and the law under all circumstances. Each company commander will promptly discharge any member of his company who may make unreasonable display of authority, or who may use abusive language to or be guilty of unnecessarily harsh treatment towards those with whom he comes in contact in his line of duty, or who does not possess the qualifications required by paragraph 4.

4. All discharges and causes thereby will be reported to the Adjutant-General without delay.

5. Company commanders will inspect the horse of each enlisted man and report to the Adjutant-General its value, and require that such animal be suitable for the service demanded.

6. In order that the Adjutant-General may be constantly informed as to the location of the officers and enlisted men of the "Ranger Force," and to enable him to concentrate such of this force as may be available in the event of an emergency, company commanders will report to him by letter the names and purpose of details requiring an absence from company or detachment headquarters for a longer period than twenty-four hours; also the name of the Ranger in command of the detail and the probable period of absence, and when known, his new postoffice or telegraph address. Such reports to be made as far in advance of departure of detail as practicable. Return of detail will also be reported.

CARE OF ANIMALS.

THE DISEASES MOST PREVALENT IN THE PHILIPPINES AND
TREATMENT OF SAME.

BY CAPTAIN ARCHIBALD W. BUTT, QUARTERMASTER, U. S. A.

WHILE the death rate among animals in the Department of Land Transportation may appear to be large, it must be remembered that it is the depot for the entire division, not only shipping out serviceable horses and mules for active duty, but also receiving unserviceable animals from all points from which they can be shipped, and from points where proper hospitals have not been built, or where veterinarians have not been stationed.

During the fiscal year 1901, there were not more than forty deaths from contagious diseases, while during the fiscal year 1902, 207 horses and fifteen mules have been destroyed by inspector for glanders, and fifty-two horses and six mules have died of the same disease before final action could be had by a board of survey and inspector general.

And here it is urgently recommended that some authority be vested in the responsible officer which will enable him to destroy an animal when such animal is pronounced by two or more veterinary surgeons to be suffering from glanders, or other contagious disease. I am convinced that the rapidity with which glanders and surra has spread among the American stock in the Philippines is due to the necessarily slow process of securing the action of a board of survey, followed by the authoritative inspection and destruction by an inspector general.

The inspector and the board have to rely on the responsible officer and veterinary surgeons in the end, but by the delay occasioned by the tedious process of securing action

through military channels, the last stages of the disease is often reached before final action is taken, and the disease possibly spread through an infinite number of channels.

It is my experience that the responsible and accountable officer has the interest of government animals more to heart than any board can possibly have, and his certificate, with affidavits of two or more veterinary surgeons, should be all that is necessary to permit him to use his own methods to protect government stock, for which he has been made accountable and responsible.

When the horses of the Fourth Cavalry were ordered turned into this corral from the north line, fully one-fourth of these turned in became diseased from glanders, it being prevalent among these troops, which had been fed largely on grass. I had between 3,000 and 4,000 animals in the pens at Pasay, and isolate the suspected cases I would: the disease could not be held in check without the most prompt and vigorous measures. Owing to the alarming conditions which arose from this menace, I was forced to take independent action, backed by affidavits of an unanimous board of veterinary surgeons.

This being without the proper law and legality, the commanding general of the division issued orders for me to act as a special inspector in conjunction with a board of veterinary surgeons, and all agreeing to destroy such infected animals for the good of the service.

Had it not been that my action was supported by the commanding general in the destruction of these infected animals, and that he appointed me special inspector, I am of the opinion that this herd would not have been preserved for the campaigns of Batangas, Samar and Mindanao. An old regulation, contained in paragraph 790, Army Regulations, may be sufficient and ample latitude for handling infectious and contagious diseases in small garrisons or in time of peace, but it is thoroughly inadequate to meet similar conditions in time of war or in corrals, where as many as 5,000 animals are running together at one time.

Of these several thousand animals handled during the past fiscal year in this department, 613 were either killed by in-

spectors or died from natural causes. This is far in excess over the death rate of the preceding year, but it must be remembered that nearly all of these animals had been turned into this department after from two or three years of arduous campaigning over mountain trails, rice paddies and tropical swamps. Many had no shelter, and a great number subsisted on grass, not over-nutritious, and on unhulled rice instead of oats.

Land transportation being almost the only means of supplying the troops in the fields, there being only one railroad on the islands, unserviceable animals had to be turned into this department and serviceable ones given in exchange. Owing to the good facilities of treating animals in this department, many horses and mules, which otherwise would have died, have become strong and serviceable and fit for issue, but while many have recovered, still many have failed to respond to treatment and have ultimately succumbed, thereby increasing to a great extent the death rate in this department. I would not recommend any change in this system, but these facts should be known when taken in connection with the "death and diseases" of public animals in this department.

It is interesting to note that of the 613 animals condemned, killed, died or destroyed within the past year, 502 have been horses, and only 111 mules. Of these horses 259 died or were killed for glanders, and 21 mules.

Forty-seven (47) died of debility, while thirteen (13) died of tetanus. Owing to the sanitary conditions in this department there have been only a few deaths from tetanus, but it is one of the most fatal and prevalent diseases on the islands, and will be treated under a separate heading, along with other diseases especially prevalent in this Archipelago.

One hundred and thirty-four (134) deaths have been the result of fever, while the majority of the remaining have been from hoof trouble and from the result of wounds, which are fatal to animals in this climate. But each of these diseases most fatal in the Philippines will be treated under a special heading.

Until recently the proper care of public animals in the Philippines have been inadequate, owing to the fact that the several posts and quartermaster's corrals throughout the islands have not had the necessary protection from inundations and inclemencies of the seasons. The animals in many instances were compelled to stand in water and mud almost to their knees, and from which they were compelled to eat their feed. Exposure and lack of care necessarily reduced the condition of the animals subjected thereto, thereby the better fitting them for the reception of diseases. During the last year these obstacles, in a great measure have been overcome. The animals in the majority of places have been provided with shelter from heat and rain, and due attention has been paid concerning situation, drainage, ventilation, etc., of such buildings.

In a number of instances, the proper care of animals, affected with contagious diseases, such as glanders and surra, have been sorely neglected; especially is this the case concerning those having glanders. They have not been properly separated or isolated. These pens should be built on the plan of a yard within a yard and at a safe distance from healthy animals. A great mistake has been made in not having stock destroyed immediately, after they had been reported as glandered by qualified veterinarians. This leaves those affected to spread the disease through the medium of the air, water-buckets, and the attendant's clothing or hands. On several occasions large numbers of glandered horses and mules have been kept from three to five weeks after having been reported by the veterinarian in charge as affected with said disease. This deplorable state of affairs is probably due to the fact that the officers composing the condemning board do not realize the seriousness of the situation.

Proper care has not always been exercised in the selection of qualified veterinarians for these islands. At one time in the history of American occupation of these islands, many of the veterinarians were men who were totally ignorant with regard to the proper application of the knowledge which they as veterinarians should possess. The diseases of this climate are of such a character that by the unedu-

cated practitioner, they have unquestionably been pronounced of a seriously contagious nature and *visa versa*, which in reality they were not.

FOOD AND WATER.

The question of food and water is one of grave importance, owing to the fact that the present state of agricultural industries are such that scarcely any food is grown which has the proper constituents necessary to keep the animals in serviceable condition. It has been demonstrated beyond a reasonable doubt the best feed for animals doing work in any climate, is good wholesome hay and oats.

Grass is the natural food for horses. It is composed of a great variety of plants differing widely as to the amount of nourishment contained, some being almost entirely without value as food, and eaten only when there is nothing else obtainable; others are positively injurious or even poisonous. None of the grasses are sufficient to keep the horse in condition for work. Horses thus fed are soft, sweat easy, purge, and soon tire on the road or when at hard work. To growing stock grass is indispensable, and acts as an alternative when given to horses accustomed to hay and oats, and must be given in small quantities at first.

I am of the opinion that the grasses of this country are far inferior to those of America, owing to the fact they are grown in low lands which, in nearly all cases, are covered by stagnant water, thus forming a good culture medium for various disease germs. This is one of the principle methods by which horses and mules become affected with surra, which will be treated fully in this report.

In the fall of 1899 when the Fourth Cavalry made its northern expedition, many of the horses were fed exclusively on native forage with the result that on their return the greater portion of them were rendered unserviceable and a larger percentage had to be placed in hospital for treatment. While much of the grass in these islands lacks nutriment, and some is positively injurious, yet there are some sections where the grass is good and affords fine food for the animals. It is for this reason that there has been such a divergence of

opinion among army officers as to the advisability of feeding grass as forage in the Philippines.

We are now making a thorough test of the grass in and about Manila. The daily allowance is the full ration of oats: three and one-half pounds of hay and twenty-five pounds of grass. I have been feeding this now for upwards of two months and the only result so far is to soften the animals and in a few cases to scour them. If it has no greater evils as a result than what has been apparent, I should say that this ration could be continued without much detriment to the animals and with great economic results to the government.

The rainy season, now setting in, is the season when germs propagate in this climate and diseases develop, so as to whether or not glanders and surra will result from feeding grass in this department cannot be determined with any degree of accuracy, without a longer test of the feed as ration.

ABILITY TO STAND THE CLIMATE.

From my observation taken during the last two years and a half, it has been demonstrated that American horses stand this climate with the same vigor and strength as in any tropical country. I would not like to convey the idea that horses can perform laborious work with the same ease they can in a northern atmosphere, yet the amount of hard and fast work they withstand is surprising. Animals thrive here, have good life and spirit when receiving the care and attention that is due them, and will live to attain as great an age as they would in America. It is also a notable fact that animals keep in better condition on a smaller amount of food than would be required under the same conditions in the States. Contrary to what might be expected, the tropical sun does not seem to be more injurious than the summer sun in many parts of America. Horses are driven for hours in the heat of the day at a rapid gait without causing serious inconvenience.

FLOORING.

It is an undoubted fact the natural floor for a horse to stand upon is one of ground. There are several kinds of

flooring used, but none of them can supply that rest and moisture that is essentially necessary for a healthy foot.

The board floor is objectionable on account of its slipperiness, the expense of construction and maintenance, and the impossibility of keeping it in a sanitary condition. A floor should be durable and water proof, but in this climate, where the stables are open, the best kind of flooring to recommend is the ground floor. It should be filled in or raised above the adjacent ground, kept even on its upper surface, having good drainage and always kept clean.

DISEASE OF THE FEET.

The diseases of the feet causing the most trouble in the Philippines may be considered under four divisions, namely: Thrush, quittor, canker and laminitis.

THRUSH.

Thrush is an inflammatory condition of the fatty frog, characterized by an excessive secretion of a purulent character from the cleft of the frog. *Causes:* Allowing the animal to stand in filthy stables or yards. May be present in cases of navicular arthrites, due to the irritation caused by the navicular bones. Hard work on rough and stony roads may also cause the disease, as may changes from dryness to excessive moisture. It is oftener met with in draught animals, and is more common in warm than cold climates, and very common in the Philippines. There is a very offensive discharge from the cleft of the frog and presents a very dark yellow, or almost black, appearance. There may be lameness, but invariably this symptom is absent, and is only noticeable when the animal steps on a small stone, then only for a few steps.

The treatment consists of removing the cause. Place the animal in a dry stall, clean the parts thoroughly and treat antiseptically. Calomel, in the majority of places, has proven almost a specific, and should be applied in sufficient quantities by dusting it over the parts affected. This done, a pledgit of oakum should be placed over it and bandaged on in such a manner to cause slight pressure. This disease re-

sponds to treatment very readily, when it is not due to navicular disease, in this climate.

QUITTOR.

Quittor is a fistulous opening at the upper portion of the hoof, extending down between the sensitive laminae and the insensitive laminae, sometimes penetrating deeply and involving the bone. It occurs as the result of injuries of various kinds, either directly or indirectly. Too many horses confined in a small corral are liable to produce the condition by stepping on one another's feet, thus producing injuries. Usually the first symptom noticeable is lameness, generally well marked. On a closer examination a tumefied swelling can be observed just above the coronary band. This swelling, in a few days, becomes soft and a discharge of pus takes place, leaving a fully developed sinus, which has a tendency to heal.

The first step necessary in the treatment of quittor is the removal of all exciting causes. Crowding animals into small corrals, where injuries to the coronet are likely to happen from tramping, especially among unbroken range horses, must be avoided as much as possible.

CANKER.

Canker is a malignant growth of a fungoid nature, the result of injury, and is characterized by a separation of the sensitive from the insensitive sole. A growth of an extremely vascular nature springs up and extends over a portion of the foot, causing a considerable amount of suffering. In the Philippines this disease is usually found to be of a malignant form, while in the States it is more or less benign.

On an examination, foot is found to be hot and tender, the frog soft and spongy, and in a short time the growth makes its appearance. It is very vascular, and is sometimes accompanied by a very fetid discharge. The whole of the sole and frog may become involved, and the animal is more or less lame. The disease has a great tendency to spread and ultimately, if not checked, the whole of the horny tissue becomes deformed or degenerated.

The treatment is very tedious and not always successful. It requires a long time and is difficult to cure. The knife should be used freely in cutting away all semi-detached and useless portions of the frog and sole. A great many different remedies have been tried, but the best results are to be obtained from the application of formalin butter once daily, for three days followed by equal parts of antimony butter and compound tr. myrrh, or the black oil. These dressings to be used three days, alternately, and the foot packed with oakum and bandaged in such a manner as to cause pressure on the diseased parts. After the diseased condition is subdued by proper local treatment, as stated above, constitutional remedies are advisable.

Laminitis, an inflammation of the sensitive laminae and structure of the foot, is very common in the Philippines and very fatal.

The first symptom noticeable in a well marked case is rigorous, which is quickly followed by pyrexia, usually well marked. The pulse is found to be increased in rapidity and slightly fuller than usual, and as the disease advances, may be found to be from sixty to eighty beats per minute, full and bounding. The fever steadily increases. Sweat bedews the body, the urine is high colored and voided in less quantities than usual, the countenance bears an anxious expression and indicates great suffering. An attempt to move the animal is done with great difficulty. Heat is observed in the feet and throbbing of the digital artery. Concussion to the foot produces great pain. On placing the finger in the mouth a feverish, clammy sensation is imparted. If it becomes necessary for the animal to change its position, he does so in a very gingerly manner.

To be successful in the treatment of laminitis in the Philippine Islands, measures adopted should be prompt and energetic. At first a sedative should be given consisting of Flemming's tr. aconite in ten to fifteen drop doses, one hour apart till the effect is observed on the pulse. Potassium nitrate is almost indispensable in the treatment of laminitis, and probably has a slightly sedative action in addition to its febrifuge and diuretic actions. When the animal is seen early in the disease great benefit is derived from the applica-

tion of hot or cold fomentations to the feet. After all acute symptoms have subsided and convalescence still is retarded, benefit may be derived from the application of a counter irritant to the coronary band.

GLANDERS AND FARCY, AND HOW THEY DEVELOP IN THE PHILIPPINE ISLANDS.

Glanders may be defined as being a well marked malignant disease of a contagious character brought about by the introduction into the system of a specific organism, the bacillus smaller. Farcy is essentially the same disease, but manifested in a different manner. Glanders has been spoken of by some of the early writers, and is one of the oldest diseases written of in equine pathology.

Glanders is quite common in the Philippines. The native ponies, as well as the American horses, are found to be its victims. We are of the opinion the climate of the islands is such as to favor the development of the disease, as there is no cold weather to destroy the germs that are scattered about. Disinfectants must be used vigilantly, and all necessary measures be taken to avoid the spread and contaminate the articles used about glandered horses. The spread of this disease has been greatly augmented by the ignorance of Spanish and native veterinarians, and the foolish sentimentality existing in these islands against killing animals. Instead of destroying a pony when it becomes useless from glanders, it will be turned out to rove at will in the country feeding on the grass to be found, and spreading the disease through a variety of channels. Undoubtedly the disease develops slower here than in the United States, and a native pony is often used many months after the disease is diagnosed. Conditions are improving daily, however, for the civil government has its veterinary surgeons constantly on the watch for glanders, and summary action is taken whenever it is located. There is no known treatment for glanders, every medicine supposed to be of some benefit having been tried. An animal showing any symptoms should be quarantined at once, and such treatment applied as will develop the disease in case the animal is so affected, namely: Mallein, purgatives, iodine

of potassium, etc. An animal found to be affected should be destroyed at the earliest possible date.

TETANUS.

This is a functional infectious disease, characterized by tonic spasms of the muscles, and is very common in these islands. It grows at body temperature, and finds entrance into the system through abrasions in the skin or mucous membranes; lacerated and punctured wounds are the most liable to give rise to tetanus in the Philippine Islands. The severity of a wound does not form any important part in causing the development of the disease, for slight wounds will sometimes prove to be all that is necessary. Wounds of the feet and limbs are more liable to bring about tetanus in this climate than those of other parts of the body. In some parts of the country it is rarely met with, while in others the disease occurs quite frequently, and sometimes assumes an enzootic form. In tropical climates cases of tetanus are more frequently met with than in cold regions. The first condition noticed is a slight stiffness of the movements of some parts of the body, limbs or neck. The ears stand more erect, and by raising the head the membrane nictans is permitted to pass over the eyeball, where it is plainly visible. Later on the movements of the jaws become impaired, the muscles become more contracted and rigid, the animals move with an unsteady gait, the limbs appearing stiff, extended and kept apart. The tail is carried somewhat elevated, the respiration accelerated, and the patient is easily excited and more or less distressed. Prognosis at the beginning is extremely difficult. If the disease has a tendency to run an acute course, the prognosis should be unfavorable. If the attack is slight and the patient is strong, there is a chance for recovery. In the Philippines this disease has a tendency in the majority of cases to run a more acute course.

The animal should be placed in a quiet place, free from any noise that will disturb or excite him. Give him plenty of water and food as he may take. Medical treatment does not appear to furnish any satisfactory relief. Gelsemium administered until the poison limit is reached may be bene-

ficial. Tetanus anti-toxin given early in large doses may be of some benefit. But in all the cases carried on under our observation during the last three years, this treatment is proven to be of no avail as a curative agent. Other treatments prescribed in the text-books should be resorted to as the case may require.

WOUNDS.

The utmost care should be taken of all wounds in the Philippine Islands. Not only as they heal less readily here than elsewhere, but very frequently result in blood poison. All wounds should be promptly covered, and left covered. It has been fairly well demonstrated that surra is carried by flies, and the disease is most frequently taken in from contusions, or wounds. Punctured wounds are, as a general thing, the most dangerous, as the depth is liable to implicate nerves, blood vessels, viscera and other vital organs. The separated tissues of such wounds are more or less torn, consequently giving rise to inflammation and suppuration, the pus having a tendency to bury deeper into the tissue unless drainage is established.

The treatment of wounds varies to a marked degree, and should be governed by situation, nature, variety and extent observed by the veterinarian attending the case. Wounds of horses in the Philippines are, as a rule, not so easily treated as in the States. Excessive granulations are more prone to develop, probably due to the warm, moist climate. When these granulations have a tendency to become established, their removal is essential, and such treatment applied as will retard the growth and induce a healing process that is natural to the parts affected.

There is a marked difference of opinion among veterinarians as to the best methods of treating wounds. Some believe they should be covered with a view that germs floating about in the air cannot gain access to the wounds. Others are of the opinion that in the majority of cases free open wounds with good drainage, exposed to the air, improve more rapidly with antiseptic treatment than those excluded from the air. Whatever may be the different opinions as to treat-

ments in other and fresher climates, the treatment in these islands and in all tropical climates should be uniform, in so far as to keeping all wounds covered and protected from the surrounding atmosphere.

A laxative diet is quite essential where wounds are extensive and more or less fever to contend with.

SURRA.

Surra is an infectious disease due to the introduction into the system of a parasite that propagates very rapidly in the system of different animals. This disease has been the subject of the most earnest investigation, both empirical and microscopic, in this department for the past year, owing to its appearance in an exaggerated form about that time throughout the islands. It has puzzled and nonplussed the officers and veterinary surgeons beyond any disease which has made its appearance in these islands. There has been a great deal of experimental work done in this disease, and none has been so earnest and so conducive to good results as the labors of Major R. D. Potts, Artillery Corps, Inspector General.

The life history of the parasite, as well as the natural mode of gaining access into the system, has not been well demonstrated.

The period of incubation varies according to the condition of the animals and also the number of parasites that first gain access in the economy.

In the opinion of some, horses contract the disease by eating infected grasses grown on low swamp lands or by drinking water drained from such lands during certain seasons of the year.

The best thought on the subject, however, leads one to the conclusion that the disease is chiefly carried by insects. Horses that are compelled to stand in mud for a considerable length of time, as those kept in muddy corrals or pastures, will contract sore limbs, such as mud-fever or other ulcerated conditions of the skin of the extremities, thereby providing a favorable seat of entrance for the surra parasite. Some writers are of the opinion that flies and other stinging insects may inoculate animals by carrying the parasite from

one to the other. An animal will develop surra in from three to eight days from the time the parasite has gained entrance into the system.

Symptoms: When first noticed, the animal has a dejected appearance, head down and eyes partially closed. On closer examination the temperature is found to be considerably elevated 104 to 106 degrees Fr. is not uncommon. The pulse is accelerated and full. On slight exertion, the respiration becomes labored, the animal sweats freely and shows signs of exhaustion. The visible mucous membranes are pale and in some cases become yellow. Small red spots are to be seen on the membrana nictitans and there is a continuous flow of tears. In most cases the appetite remains good, although hay and grass is preferred to grain. The food, however, does not seem to sustain the animal, as he becomes rapidly emaciated, showing marked weakness on exercise in the posterior extremities. In some cases the breath is very offensive, usually there is a continuously sexual excitement in both sexes, the flow of urine is greatly increased, highly colored and contains broken down red blood corpuscles. In later stages the animal lies down and is unable to rise without assistance. Some cases become comatose early in the disease, refuse to eat, are entirely indifferent to their surroundings, and stand braced against the side of the inclosure or hang back in the halter. They remain in this condition usually for six to eight days, when death supervenes.

On microscopic examination the disease-producing organism is found to be a worm one-fifth the width of a blood corpuscle in diameter and about six times as long, and moves with a snake-like movement. They are periodically, and only when the fever is 103 Fr., or over. The red corpuscles are greatly decreased in number, indicating that the organism lives at the expense of this element of the blood.

On post-mortem examination the lesions observed are not constant; the marked changes sometimes found are due to complications, which frequently occur. The carcass has a decidedly anæmic appearance: ecchymotic spots are often seen in various parts of the internal viscera. The heart con-

tains serious clots and the heart muscles are soft and flabby. Gelatinous exudates are found in the sub-cutaneous tissues in the various parts of the body, and the pleural, peritoneal and pericardial cavities contain a serious exudate. The liver and spleen are of a bluish cast, soft, but apparently normal in size.

• DIFFERENTIAL DIAGNOSIS.

To anyone who is at all familiar with this disease it should be easy to differentiate it from any disease with which we have to deal. It has been claimed by some officials that many horses afflicted with surra have been said to be glandered, and have been destroyed. No qualified veterinarian should possibly be mistaken in this disease.

Surra is differentiated from glanders by the extensive swellings, subcutaneously by the greater elevation of the temperature, the more pronounced weakness and emaciation, and the absence of the sticky discharge characteristic of glanders. It should not be mistaken for farcy, although in farcy one or two legs may be swollen. Eruptions that are plainly visible in this disease are never present in surra.

The disease runs a course of from ten days to two months, varying with the acuteness of the attack. The mortality of surra is one hundred per cent. No cases have recovered when the parasite was visible on microscopic examination. Some cases having all the clinical symptoms have been cured, but the diagnosis was not confirmed on microscopic examinations.

Treatment: Various remedial agents have been tried, among which are: Methylin, blue, quinine solution, iron, quinine and arsenic, normal salt solution, creolin, etc. It has been reported that bi-chloride of mercury, injected sub-cutaneously in one grain doses, four times daily, with iodide of potassium, and tonics given by the mouth, have effected cures.

We have tried all of these remedies without success. By beginning in small doses, which are gradually increased, we have given as much as eighteen drachms of bi-chloride of mercury twice daily, by intravenous injection, without producing any effect, either remedial or otherwise. Mercury

seems to prolong life and also destroy the germ, but does not bring about a cure. The preventative treatment seems to be the most successful, and is worthy of mention. Animals should have good food and pure water. Grass should be avoided, especially that which is grown on inundated lands, as that grass seems to be frequently infected.

Only recently the experiment has been made of injecting human blood into animals suffering from this disease, and the experiment was given publication to the effect that the animal would recover under this treatment. Subsequent experiments, however, do not substantiate this claim any more than it does the bi-chloride of mercury treatment.

The department repeats its recommendation that animals suffering with surra should be treated in the same hostile way as animals suffering from glanders. It is infectious, and in this climate kills quicker and spreads with greater rapidity. As soon as an animal is pronounced to be suffering with surra, and so demonstrated by microscopic examination, such animal should be destroyed.

TINA TONSIRAUS.

More commonly known as ring worm, and is called dhobie itch throughout the Philippines, is an infectious disease due to a vegetable parasite.

It is a disease of the skin most commonly met with about the head, neck and back and hips, but may attack almost any part of the body. It develops among horses of any age and those in good condition as well as otherwise.

The disease is contracted by a well animal coming in contact with an infected one, or by rubbing about the mangers or racks previously occupied by an infected animal, or by laying down in a stall in which an infected animal had been kept, and by biting or playing with each other.

Horses once affected suffer from an external irritation of the affected parts, consequently have a tendency to rub about the stalls or racks, thus affecting such parts of the buildings and fences with which they come in contact. Also the ground upon which they roll, and the harness used for grooming quite often conveys the disease.

The falling out of the hair which occurs after three or four days is usually the first symptom of it. This occurs over a small area to begin with, but later increases to a greater extent. The skin becomes rough and presents an erethematous appearance. Excoriations are seen on the surface from which a serious exudate escapes, that dries on the surface of the skin.

Treatment consists of keeping the animals clean and disinfecting the stalls in which they are kept. Good results are obtained by using an eight per cent. solution of creolin applied to the affected parts once daily. Nearly all cases respond readily to this treatment. Other remedies may be used, such as bi-chloride of mercury, one to 300 to which a little alcohol is added, oil of cade or a mild cantharides ointment.

JIM.

BY VETERINARIAN COLEMAN NOCKOLDS, FIRST U. S. CAVALRY.

JIM: Gelding, light bay, full mane and tail, eight years old, fifteen and one-half hands high, 950 pounds, girth seventy-three inches, size round leg below the knee seven and one-half inches, white star on forehead, white off hind fetlock, saddle marks and scar on withers, branded S on off and U. S. on near shoulder. Such is my description.

I am a troop horse belonging to — Troop of the — Cavalry, and yesterday was placed upon the condemnation list because of a wound received in action which has rendered me unfit for further service. I was born on the S ranch, which is situated in the middle of Wyoming, a lovely place for a horse running loose, among the grass covered hills and clear running streams which are found there. Although it sometimes gets very cold in the winter, we horses that are born there do not mind it very much as it tends to make us sturdy and healthy. My mother was a half-breed, her mother being a wiry little bronco, and her father an imported thoroughbred, as was also my father. I well remember him, how proud and beautiful he looked when herding my mother and her companions and their children during the late spring, at which time he was turned loose with us. He was a beautiful golden sorrel and his name was Fireball. My mother used to tell us about the great races he won in England before he broke down and was sold, but as the break-down never showed itself upon us children, I suppose it was not hereditary.

Those were happy days for us youngsters running wherever we pleased across dale and hill, and it was fun for us even in the winter time when we were put in the corral and

given hay. How we used to run and scamper in the snow. We did not know what trouble or sorrow was in those days. Occasionally during the winter days one of my mother's friends would lie down and be unable to rise, and would finally die. But although we saw her, I am afraid it did not grieve us much, as we would just look at her, snort, kick up our heels and run away, just as if she were not a poor dying horse.

I remember when only a few weeks old being driven with some other colts and mares into a corral where there were men with ropes, and they would catch the largest of us colts and burn their master's brand upon our shoulders. How they would struggle and fight when the lasso tightened upon their necks; sometimes they choked down; they were tied and the hot iron applied. Whew! How nasty the burning hair would smell and how some of the youngsters would shriek. But although very much frightened, we did not feel sorry for our unfortunate companions just as long as they did not burn us. One day I was singled out and the rope tightened. I jumped and tore until suddenly everything turned dark; when I opened my eyes I was lying down, hog tied, and the spittle, spattle, of the burning told me that the branding iron was being applied. So fierce were my struggles at this moment that I did not feel the burning, and the next instant was on my feet neighing for my mother who was standing out in front of the rest anxiously watching for me. Well it was not so bad after all; the burning deadened the skin, so besides a slight burning sensation for two or three days, it did not bother me a bit. Mother often used to talk to us of the horrors of the branding pen, but I really believe it was because she had to watch so many of us being branded, and was so anxious all the time that she thought it was worse than it is.

Well, for about two years more nothing out of the ordinary routine of round-ups, branding and picking out the likely three-year-olds occurred. We youngsters were always interested in those of our companions that were to be broken. What a variety they were, mostly of the light saddle and driving class. Some grew large enough to make good

brougham horses; then there were the clean leg, wiry little fellows that were suited for polo. Those interested me most because I wanted to be a polo pony, even if they did cut my tail off, but I outgrew myself. The drivers were broken by having a dummy jockey strapped upon their backs to give them mounts and accustom them to the bits: then they were handled with harness on, then singly, in pairs or tandem, whichever they were suited for, always driving them by the side of a steady-going horse the first few times. All behaved themselves fairly well, and were quickly broken, and soon were proud to be dressed in natty harness and willing to be driven, especially the leaders of tandems. Some with bad dispositions and worse tempers were never thoroughly broken, and suffered more or less all through their lives for being so mule-headed whilst young, as I know it was not the fault of the men who handled them, as there never was a better horseman or kinder master than my master, who always superintended the legitimate breaking himself. If they were to blame, I am sure nineteen out of every twenty horses would not have turned out first-class as they did on our ranch.

The saddlers did not have as much time spent upon their actual breaking as did the drivers—they were "busted." After a little preliminary handling a good rider would saddle them and mount. You should have seen how some of those three-years-olds tried to throw their riders. Occasionally a youngster fell and broke his leg. At another time a rider would be injured or killed, but they were exceptions. Well, after three saddles in the rough they were turned over to other riders to handle with a snaffle until they were on a fair way to being mouthed and bridle-wise: then they were thoroughly trained for every purpose for which they were suited.

At this time all that are being handled get oats, which, of course, is a great inducement to horses, although it is often several days before they become accustomed to their taste. The polo aspirants are docked by having their tails laid on a dull axe, which rests on a solid foundation, with its edge pointing upwards. The tail is then struck with a mallet, and is severed with one blow. The dull edge of the axe tends to rend the ends of the vessels, and thus prevent profuse hem-

orrhage. It does not hurt half as much as we often hurt ourselves by kicking, and then are always exercised the following day. Of course, there are instruments of many kinds for docking, but most of them are so sharp that the dock is afterwards burnt or tied up to prevent bleeding, and I have never seen a pony miss a feed from being docked at our ranch.

After a polo pony becomes a perfect hack, and can stop short, and start on a jump, and turn at a gallop, and becomes accustomed to the stick and ball, he is placed in a few cantering games, and is then ready for shipment and sale. When he goes into training in earnest (which in our country, where the polo pony is more thoroughly trained than in any other, takes six months) then the ponies are ready to be taken into a slow game. But as I am not built for a polo pony, I do not care to think of what I might have been.

At the age of two and one-half years I received my first lesson. It was on Sunday. My master and most of the hands were away. Some of the younger ones that worked on the place concluded to have some fun and ran a small bunch of us into the corral. One of the best riders on the place threw a rope on me and it tightened. Of course, I did not pull back, as I remembered the choke I received when branded, besides I was not feeling my best, although not sick, having recovered from a painful but necessary operation only a short time since. I felt very much frightened when he approached my head, and tried several times to get away, but each time could feel the rope tighten, and stopped. Soon a hackamore was put on, and it caused so much pain when I resisted that I stood still, and after all the blanket neither smelled badly nor hurt my back, but when the saddle was thrown on and the stirrups were flapping on my side, I was forced to jump and feel nervous. After two or three jumps and the resulting jerks on the hackamore, I found the saddle did not hurt after all, and stood fairly still; but when the girths, which were hairy, were drawn tight and cinched, it was no use, I had to try and get loose. Instead of jerking me he let me go, just holding to the end of the lasso. I soon found out that the saddle was on there to stay, and all the bucking and jumping and even rolling did not budge it, and after

getting thoroughly winded I concluded to let up. Instead of jerking and beating, my rider just patted and stroked my neck, a new sensation to me, but what I heard my older companions say was men's way of expressing good will to horses, much the same as one horse will rub the other with his nose when wishing to be friendly.

Suddenly my rider mounted so quickly that I had no time to think, and just let into bucking for all I was worth. The men on the corral fence encouraged me with their yells. My rider did not seem to mind, but I was wild and meant to get him off. During the breathing spells he patted my neck and talked to me so that I began to think he was afraid and wanted to coax me to stop my meanness, and I let into pitching harder than ever. This he evidently tired of presently, and instead of petting me he tightened upon the lariat and dug the spurs into my sides. I thought they would meet in the center of my chest, and this time I set to bucking in right good earnest, not thinking of anything but to get rid of my rider. The result was excruciating pain from the spurs and stopping of my breath by the pressure of the rope on my nose until I was glad to roll over sideways. When I jumped to my feet he was still on my back, and I was glad to cry quits and go off quietly with another horse that had a rider on his back.

It would be well if we all knew when we have enough. Lots of horses buck and fight for days, some lay down and refuse to get up, others stand still and refuse to move except perhaps to bite their rider's legs, some run away, and there are many mean tricks which horses indulge in, not only whilst being broken but in after life both out and in the stable. There is one thing which I wish my first rider had not done during one of my fiercest pitching bouts; he either purposely or accidentally caught me on the off shoulder with the spur. Of course this made me buck harder, but I never got over it, and am shy of my left shoulder even to-day, and if a man on my back were to touch me on the shoulder with his heel I would fly all to pieces. Of course the worse a horse cuts up the more he is punished, that is after his

breaker has found out that kindness does no good, and in the end the man generally comes out on top.

Well, I was not hurt by my experience, although it was not my turn, but when it did come about six months later, my breaker who did not know that I had been ridden was greatly surprised to find that I neither wanted to buck or fight but was ready to be handled at once without any preliminary showing. So really I gained by being ridden for fun, for like all bucking broncos I was extremely sore after my first experience and had plenty of time to get over it before being ridden again. Sometimes a horse never resists, but they are generally low spirited, dull natured animals.

After I had become bridle wise my master took me for his own use, riding around the ranch, rounding up, etc. I had many good gallops in company with my master. I could run a bit, too, as my owner has often run me through a bunch of horses on the prairie to head them, which is a piece of work that takes speed, and few horses can do it. With what handling I received from my master I soon became a perfect saddle animal from a stockman's point of view.

When I was five years old the Spanish War broke out. What an excitement it was for us salable horses. Of course we all wanted to go, and prices which had been very low for a number of years began to pick up. I was afraid of being under size for cavalry and that I would not be accepted, and was agreeably surprised when one day a contractor bought me and fifteen others from my master.

We never gave our old home a thought in the bustle of the next few days. First we were put aboard the cars to be shipped to the military post where were the board of officers and veterinarian who were to buy us. What a time we had boarding those cars. Although there was absolutely nothing to hurt us we all refused to go aboard, and only after repeated coaxing (in some cases with the whip), and one or two had to be pulled on by having a rope tied to the car door and passed around their buttocks. I found that after we were once in the car that the chief object of most of us were hay and oats and water. What selfish animals we horses are even during the most exciting times. On that journey we

would kick and bite each other rather than feed out of the same trough, and steal each other's food. The main thing that worried us on the cars was the standing and crowding. It was cool enough at night but was so hot during the day. After we had gotten used to the stopping of the train it seemed as if we had never been anywhere except in a car all our lives. It was very monotonous, as we could not see much through the cracks, and in some cars there were not even cracks, and it was very hard to breathe. I wish railroad men would have cars built that are ventilated a little better for horses to travel in; if so, we would not catch colds, influenza or pneumonia as much as we do now while traveling. In fact, rather than the present type of horse car (except during the winter) we prefer traveling in open cars, just as long as we were supplied with knee-caps and blankets for night. If horses with shoes on their hind feet were not so often put in with other horses on cars there would be less accidents. Of course the first-class palace cars are well fitted, but most of us have to ride in box or cattle cars—that is where racers, trotters and other valuable horses get the best of the every-day horse.

In due time we were unloaded, rather stiff and bruised through standing and knocking against the sides of the car and kicks, but we all passed muster, and were declared free from disease or blemish by the veterinarian, so we were turned into the depot quartermaster's corral to await assignment, our descriptions were taken, and we were branded "U. S." on the left shoulder. It certainly did burn, but only for a few seconds, and then just a dull ache for a day or so. I made lots of friends in this corral, and of course as everything in the way of army life was new to me, my ears were kept wide open. I must say I did not like the looks of the mules, and thought they ought to have been in a separate corral from us, although they wanted to make friends. I noticed that some old army horses that were there just ignored them, but during a chat one of them told me that mules were all right, and if it were not for them the army horses would often go hungry when traveling in the mountains, as the mules carried the grain for them on their backs.

They also hauled grain and hay to army posts in wagons where there were no railroads.

During one of our talks on the future, and in fact in all of them when the subject came up I could see that there was only one branch of the service for me, and that was the cavalry. The old troopers prophesied that I would either carry an officer or the guidon. They explained to me that the guidon was the man that carried the troop colors, and it needed a fast, handy horse to carry them, as there were so many quick movements for a guidon horse to make during drill. The artillery horses tried to persuade me that theirs was the only branch of the service, but I had a good excuse without hurting their feelings, that I was too light and would be fortunate to get into the cavalry. Some old stagers threw out dark hints about me being the right shape for a packer's horse, but I hoped not, as I did not wish to associate with mules. There was one raw-boned horse that some time had had a broken jaw. He had some experience with infantry, and said there were worse billets than mounting dough-boys, but a trooper told me he was used by the infantry because the cavalry wouldn't have him.

There were all kinds and conditions of horses in that corral. Some looked sick, and I know that a number had been bought by the quartermaster and turned in there without having been thoroughly examined by a veterinarian, and it seemed to me to be rather a dangerous procedure. We had plenty to eat and nothing to do whilst in that corral, and I gained lots of information which was very useful to me during the troublesome times that followed. Among the new horses in that corral was one eighteen years old which had been bought for eight, and quite a number of deformed animals which had been bought as sound. Some were absolutely worthless for anything.

One day a young cavalry officer, accompanied by a veterinarian and his troop farrier, came into the corral. He walked right up to me and said there is a likely looking one but a bit under size, but I guess I will chance him if he is sound. I was examined and passed, and led to my future home. As I passed into the troop corral all the horses which

were on the picket line lifted their heads and eyed me critically. They looked so nice and clean and fresh, after seeing those in the quartermaster's corral, that I at once saw I should not be disappointed by taking the cavalry. The only thing that puzzled me was why did they need such big and heavy horses to carry a man and climb hills with, as I had heard they would have to do. I was tied up to a picket line and left till feeding time, when I went with the rest to water and returned and was put in the stable with the rest for the night. The next morning I was groomed, watered and fed and then went out to horse practice, being led. The troop marched in columns of twos. When we returned we were tied up at the picket line until stable call at 4 P. M., when we were watered, groomed and fed, and then put in the stable for the night. Such is the regular routine stable arrangement for troop horses.

On the third day I was assigned to a likely looking soldier who had been in the service for a couple of months. I never heard any one talk to a horse as that soldier talked to me. He told me he had joined the service with the idea of becoming a good cavalryman, and that he was part horse himself, and he guessed we would pull together all right, and we were to be bunk mates for the future; that he would do what was right by me if I would by him, and that my name was to be "Jim." I nodded approval and rubbed his shoulder with my head. Although I knew by the way he handled me that he did not understand horses, something told me we should be friends. He seemed terribly afraid that I should bite him, but in a few days got over that timidity. My stable companion in the next stall had been in the service two years, and looked upon me with contempt, but the one in the off stall had served fifteen years and seemed to be kind, and talked, and we soon became fast friends. His name was "McGregor," named after his old troop commander who used to ride him and whom he carried through the Apache campaign. My old friend taught me lots of things, but at drill would often act very cranky with me because of my awkwardness. I soon became accustomed to the various calls, but there were none I liked as well as reveille and

stables. We were fed regularly, but only twice each day, which seemed a long way between meals at first, but as we kept in good condition it is evidently a good system, although I often wished we had a little hay to nibble on during the day.

My master took a good deal of care and pains in grooming me, but at first used the curry-comb too much on my back which made it very tender. He did not know that curry-combs are to clean the brush on and not to scarify the skin with. We went on horse exercise regularly every day, except drill day, but we all thought that a little more exercise (at least three hours every day) and some portions of that on the trot would keep us in better condition, so that we would be able to stand a long march if at any time it was necessary. Troop horses are often over-worked and often under-worked from want of special knowledge of the animal, and although looking well enough to satisfy most fastidious and inspecting eyes as far as appearance goes, would, under a few successive marches, if a little forced and heavy under full kits, suffer from the soft state of the system by becoming chafed and galled on the withers, loins and back, whilst those of delicate constitution would get off their feed and suffer from premature fatigue, colic and fever, and not only lose their flesh but much of the muscular strength they might possess at starting, requiring at least six months' comparative rest to bring them round again. Horses that are kept hard are not liable to suffer from these conditions. I soon became accustomed to the military routine and learned to drill, which I enjoyed very much.

There is one thing that I did not like, and that was whilst I was young in the service and ought to have been taught drill myself, I was ridden by a recruit. I think old horses that know the drill and can stand the pounding of a raw recruit, should have to carry them, and young horses that are learning should be ridden by experienced soldiers—it would be better all round.

I was a good looking youngster—small, and had perfect manners, and often was taken out of the troop for ladies to ride, which was unfair both to my rider and myself. As a

result, I am carrying a scar from a fistula to this day. My companions all agreed with me that assigned troop horses should be ridden by no one but their rider. The time I was suffering from a fistula there was no veterinarian at the post, and the farrier—a good old man, but who knew nothing of drugs or diseases, especially of a contagious nature, except in a sort of automatic fashion, from what he termed he had picked up—was allowed to use all kinds of burning mixtures upon me until it seemed as if my withers were a bed of hot coals, and it is a wonder I ever recovered. We horses cannot look after ourselves from a medical standpoint, or explain things like a man can. We generally do our best in the line of duty, and should have just as good veterinary care as a soldier has medical. I must admit things have improved a good deal in that line since the war broke out, but horses when sick are still placed in ignorant hands, and it causes us a great amount of unnecessary suffering, and is also a large annual loss to our government, which takes the lead in almost everything else, but is the worst equipped of any as regards veterinarians, veterinary medicines and supplies. Other countries have saved money by employing a sufficient number of veterinarians and having a properly organized veterinary department in their army. I am informed that our civil veterinary department is much the best of its kind in the world.

I soon made lots of friends among the horses in my troop, and it is wonderful how quickly the news spread when a new horse joined or strayed amongst us. Cavalry horses are very clannish and do not like intruders of our own kind or of people, especially civilians, who do not belong to our organization.

Now, the time came for me to be shod. I had excellent feet and had never required shoes, but the dry season and many drills on the hard ground wore my hoofs considerably. Of course I objected to having my feet handled, and was therefore placed in stocks, an arrangement that every troop should have. When the canvas was pulled tight under my abdomen, over my back, in front of chest and behind my body, I found it was no use fighting, especially as each one

of my feet were tied to a post as their turn to be shod came, and I made up my mind that the next time I would not resist, but be shod in the ordinary way. It did not hurt, and I can't think why some horses struggle and bruise themselves all over every time they are shod. I wish that the shoeing-smith had not filed so much of the outside of the wall of my foot away, as I am sure my hoofs would have kept more elastic if he had not, and it was sometime before they gained their natural elasticity. Some horses have their feet entirely ruined in this way. After a few days my feet felt as natural as ever, but a good many horses thought that lighter shoes and less nails would have answered the purpose better and worn quite as long. They had learned that from experience before entering the army, and certainly those that had been on the track and in the hunting field knew what they were talking about.

There was great excitement amongst us when we received word that our regiment was ordered to the Philippines, which was about eight months after I joined. I liked the service and found most things very pleasant. Our saddles could have been improved by having more sizes. The shape of the tree is no doubt the best in the world for the purpose for which it is intended, and it is a very comfortable saddle for horses which it fits, but there are always some horses to be found in every troop that the regulation sizes and shape saddles will not fit. This evil might in a great measure be remedied by having a number of saddles with adjustable side-bars issued to each troop. To prevent them from slipping either backwards or forwards and the loss of blankets, saddles could be lined with sheepskin with the wool left on, and no trooper ought to be allowed to go on a protracted march without breast-straps, and in many instances cruppers. This is clearly evident by the number of times troopers without them have to fall out to adjust their saddles, and on our first long hike in the Philippines our colonel lost his horse through the saddle slipping back whilst climbing a hill. Fortunately the colonel slipped off behind, but the horse reared backward, fell over the precipice and broke his neck. I have seen the saddle slip backwards while horses were swimming streams, and become

entangled with their hind legs, endangering both their lives and that of their riders. This could not have happened if they had been provided with a breast-strap, nor would the packed saddle slip over the horse's head if it was provided with a crupper. A crupper might lacerate a tail, but what is that compared with the life of a soldier, or even a fistulous wither. Of course, it is in tight places where such things occur. On an ordinary parade, as a rule, cruppers and breast-straps are not needed. Surcingles, which every kit is supposed to have, no doubt help to steady the saddle to a great extent, but they will not take the place of the other articles when the horse is so shaped as to need them. Whatever shape a horse is, they ought to be carried when marching in a rough or unknown country.

The regulation service bit is the most aggravating thing in our equipment. It never fits except theoretically, and is continually turning upside down in our mouth at the least shake of our head. This is a dangerous thing to happen when we are excited, as in a charge or under fire, and we certainly could not be stopped if running away by pulling on a bit that is upside down. Why can't we have practical bits to be used in active service as well as at exercise, or when going to water. I heard that much has been said lately about the Pelham bit for army horses, and lately it has been discussed as a suitable bit for yeomanry and mounted infantry in the British service. It may do for infantry, but where the Pelham bit suits one horse, it is objectionable to ninety-nine. Most horsemen agree that the Pelham bit is not the best bit. What we want is the bit and bridoon.

A trooper can learn to handle two reins just as easily as one, and what a relief to both ourselves and the trooper towards the end of a long day's march if the latter could steady himself a little on the rein without wrenching our jaws; besides, he could always have us well in hand with the snaffle, and we would not fret. The bit need only be used when we are at drill or need some extra control, as during excitement under fire or under charge.

After a few days of bustle and work we are once more put aboard the cars; this time I was not afraid, especially

when I saw most of my companions walk aboard as unconcerned as if going in a stable. Our patience was sorely taxed by delays before reaching the western coast, but we bore it bravely as troop horses should. One thing that soothed us considerably was that our attendants were not strangers, but soldiers in the uniform we had become accustomed to and learned to love. My rider who was fast becoming a horseman was with me and I got lots of attention, and was jealous when I saw him pet the other horses. We were taken straight from the cars to the reservation and picketed out. In a few days most of our heads were sore through not being used to the ground picket line. It is not much trouble to raise it and would save us horses sore heads. Some of us ate out of nose-bags for a time, and it is awfully stuffy, but we soon become accustomed to it.

Of course we are anxious about going on board the transport, as none of us have ever been on one before. What is that the loudly dressed young man is saying to those officers? Glanders! he must be mistaken, as we have never had glanders in our troop, and I know the box cars were thoroughly cleaned by the soldiers before we were put on board; nevertheless we were all tested, that is the form was gone through, as I am quite certain that my temperature was taken neither before nor after the hypodermic injection that caused such an abscess, the result of which I was put in quarantine with many others, and would never have come out with my regiment if the stable sergeant and my rider had not stolen and taken me on board with the last bunch, and I have not yet had the glanders. Many horses have told me since that they went through the same experience.

The day for us to go aboard came at last; what a bustle, hauling and jamming there was; it was really a remarkable piece of work on the part of the authorities to ship us all and in such a short time, while a few months before the government was totally unprepared for such work. We were led down to the boat and then led up the gang plank one by one, a much more comfortable and safe way of going aboard than by slinging. All but a few of us had reached that stage when everything goes, so went aboard and took

our places very quietly. We were led into narrow stalls with our heads facing the hatchway. There were two decks full of horses and a third below contained mules. In front of each animal was hung an iron feed-box: there was no way of getting out of those stalls until the end of the voyage, and what a time we had for those first two or three days. The motion of the vessel caused us to feel miserable and sick, but we soon recovered from that and became accustomed to our new home and regained our spirits and appetite. The chief thing we suffered from was the lack of good air, and some of us became sick with pneumonia and died. The most of us had colds, while others developed bowel troubles, due to want of exercise. Our food was not of the first-class; the oats were not full, and many of them became musty. Most of the bran became mouldy after the first few days out, while oat straw was given in the place of hay.

It is quite wonderful how so many of us crossed the Pacific alive, yet the average death rate of animals shipped was very low compared with that of other countries. The fitting of our stalls was not of the best: they ought to have been stronger, and it was fortunate that we did not experience any particularly rough weather. I heard that one transport lost every animal, due to the fittings breaking. It must have been a pitiful sight to see those poor animals, many of which were impaled by the broken woodwork. The electric lights were placed quite close over our heads, and bothered us considerably, and combined with the gases from the decomposed excreta, caused some eye troubles which were never entirely recovered from.

Although there were many iron tubes, wind-sail and electric fans on our deck, we suffered very much from lack of fresh air. The veterinary surgeon visited us often, but could not do much to alleviate the sufferings of the sick, because there had been no place provided for them. The officers and soldiers were good to us, and would pet and talk to us by the hour. A few of my companions had ship staggers, which singular affection is said to be due to the inability of the horses to vomit. It is really congestion of the brain.

They acted as if crazy and were very violent, but by tying them down and by pouring water on their heads and along the spine and giving a nerve sedative internally they all recovered. Some of us lost nearly all of our hair through irritation caused by urine dripping through from the top deck. After we had been aboard three weeks I think we could have stood it for months just as long as the boat kept moving. Our leg weariness had worn off and we had become accustomed to the rolling of the boat. It was quite a sight to see us swaying backwards or forwards or sideways when the sea was rough. As soon as the ship stopped many of us became sick; the air no longer came down the ventilators, and the electric fans stopped. The heat became intense, and it was wonderful how the manure accumulated. For some reason just as soon as anchors drop it doesn't seem to be necessary to clean out the stalls any more.

At last the long looked for day arrived when we were to be unloaded. Coming up on deck it was some time before we regained the use of our eyes, and became accustomed to the light. How tempting the green trees and grass on the shore looked; we were put into a large box, one by one, and lowered into the water, while a soldier in a row-boat took the rope attached to our halter and piloted us ashore. The sudden immersion was too much for poor old Major, who had not been feeling very well lately, and was stricken with paralysis. In spite of the efforts of the men to keep his head above water till shore was reached, he was drowned. Most of us enjoyed the bath and swim, but either the shore was farther off than it looked or we were weakened by being aboard ship, as most of us were played out by the time we reached the land. "Buster," one of the gray troop, was an exception, as he did not wait to be put into a box, but jumped clear off the deck into the sea and after swimming around the ship two or three times, struck for mid-ocean, finally turning shoreward, landed three miles down the beach and went galloping off into the woods just like a youngster, of course finally coming back to us, and was picketed on the beach and ate his oats at stables as if it was the most common thing on earth for a horse to be used as he was.

It seemed to us as if there were lots worse places than the Philippines. How the natives looked; they had never seen a big horse or mule before. The next day we were taken up town and tied to a picket line, stretched in the middle of the main street, and for the next two weeks did nothing but eat and drink. It rained every day alike, and we were soon standing up to our knees in mud, and every once in a while when the sun did come out it scalded our backs so that the hair came out. It was four months before the rain really stopped for good, and we did not do much duty during that time. Just the same we got poor, due to exposure and a bad class of food, most of it being more or less mouldy, and we were on half rations at that. The soldiers were soaked at every stable and had to wade in mud to get to us. Of course we could not expect them to give us the best care under the circumstances.

Just as soon as the rainy season was over and things dried off, we started to hike, and began to pick up and look better. One reason was that our food supply had improved both in quality and quantity, and has been good every since, except those first four months. During the summer we were continually on the march from morning until night, in the hot sun and over mountains.

I used to pity my large coarse bred companions, and envy the little native pony, who was loaded heavier than we were but could go easier and farther on less feed and not be as tired as ourselves. I had the advantage of being light, well-bred and strong, but often thought what ideal cavalry horses those little polo ponies left behind would have made. Our troop commander rode a little mare (bronco) bred in Arizona, and although she carried the same weight as we did, went better, traveled further, and climbed places with ease that would make big, lumbering, coarse-bred horses blunder about and breathe as if their last hour had come, and she kept in better condition on the short rations than any of us.

We could not help thinking what mounts those little horses would make for cavalry operating in this country, where there are so many hills and rough places. Miniature horses are what is needed—14½ hands high, with courage

written on their countenance and docility in their eyes; strong neck and shoulders set into a short, powerful back and loins; wide hips and thick-set in the buttocks, well set on tail; legs short and straight, with clean bone and sinew throughout, and feet to match. How easily and quickly the trooper could mount and dismount, and they would be easier to get under cover, and not as liable to be hit because of their size; they make better climbers than we big horses; can carry just as much and go further on less feed. We are entirely unadapted for cavalry out here, and a little horse could be bought for less than half we cost, and is a great deal easier to ship. We big horses look nice on parade, and like to be made much of, and have showy accoutrements, but off the parade ground we are not in it. The days of the lists, when weight told, are no more. When on the march we were fed oats and would carry our first feed in the nose-bag on our saddles or necks, and the rest were packed on mules.

I never remember having been picketed, having hay, or being herded during the time we were away from the post, while in the Philippines. I heard that one of our troops started out from post to graze on a nice looking piece of grass just outside, and it did taste good, but they noticed something stinging their legs. At first they thought it was small flies; soon all were attacked in the same way, and with a big scamper the whole troop made for the corral, taking half a troop of herders with them. Their fetlocks—most of them—were covered with blood, the cause of which were a dozen or more land leeches clinging to their legs. Of course herding was not tried any more after this.

Having nothing but oats, and sometimes half rations, we would, if out more than a day or two, get thin and tucked up, and I have no doubt that those long marches on short rations, and under a tropical sun, were the main predisposing factors of some dreadful diseases that attacked us. Towards the end of the dry season we were put into sheds that were built for us, and served as good protection from the heat of the sun during the day and the dew and chilly nights. One objection to those sheds was their flooring, which consisted of dirt rammed down; this soon became uneven by pawing and sat-

urated with urine, which of course was unhealthy, and some of our feet became bad with thrush and quittors. These floors would be very dangerous in case contagious disease broke out among us. A good hard floor could be laid out of concrete and sand. Along the center of these sheds were haybins and galvanized troughs for feed. Some of the corrals are large, and we were turned loose in them during the day.

They had troughs made out of hollow trees, and constantly filled with water, which is a good thing for horses in the tropics. Some very nice looking grass was brought to us during the next rainy season. Most of it came to us fresh and wet, and we liked it, but some was very bad and brown in color and had an offensive odor. This grass had been wetted to make it weigh more, and the natives very often leave it laying in swampy water the night before. The result was it was full of the eggs of parasites and different kinds of bacteria that live in swamps, and the horses took a disease called surra, which is caused by a little worm-like organism getting into the blood and destroying the red cells. Some troops lost as many as ninety per cent. of their horses through it. Our troop, fortunately, escaped, but grass should not be fed until thoroughly dry, if fed at all.

The best forage that I have seen or tasted, except American hay, is the dry peanut vine. The natives in some sections have learned how to cure it so that it is good and does not cause disease. We wish we did not have to mount recruits out here. It is so hot, and it would be so much better for them and ourselves if they learned to ride before coming out. I have heard that even some of those new officers that came into the service had never ridden horses before, and even used to think it funny because the horses trotted. They had never seen anything except those fancy gaited animals, used for park purposes.

Some troops suffered terribly by having those officers, who knew nothing about horses, put in command of them, and many horses died from contagious and other diseases because there was no one to recognize the fact that they were ailing, and we have hard enough time out here even when we have experienced officers and veterinarians. It is won-

derful to see the difference and feel of a troop of horses that have competent officers. In our troop our officer knows every one of us, and he is very particular when we are the least bit sick to at once call the attention of the veterinary to it. He is also careful to see that the soldiers clean our hoofs out during the grooming hour, and a man is sure to have charges put against him for striking us unnecessarily. The trouble with the non-experienced officer in many cases is that he does not like to let the old experienced stable sergeant or farrier tell him when anything is wrong, for fear they should find out his lack of knowledge. I know even the oldest captain is not ashamed to take suggestions from one who is capable of giving it.

We did not get out much during the rainy season except on escort and regular routine duty, and the smell of the decomposed excreta on the floors began to get very bad. I am told that troops in India are supplied with one syce to every two horses, which they look after. They prevent the ground becoming saturated to a large extent by watching and catching the urine in earthen jars provided for that purpose, but this method does not appear practicable under our present system here.

During the next three months following the rainy season hiking began in earnest. The general commanding the brigade that I was in was determined to break up the insurrection which had been going on for so long, and capture, kill or compel every insurrecto leader to surrender, who had so long evaded us. This was duly accomplished in a most thorough and workmanlike manner, and every insurgent from the wily general down is either dead, a prisoner, or has surrendered. Day after day we plodded through jungle, over mountains, swam rivers and sometimes seas to get round impassable rocks on the coast, our gallant old Colonel always at our head. It was very hard on us, but we all started out in good condition.

Poor old "McGregor" had been transferred to the band, and it was a good thing for him. Of course, at night the conversation often turned upon the effects of bullets. I had often heard old "McGregor," who had been shot through

the neck in a skirmish with the Indians, say that the pain was not severe, but the shock was terrible. We were none of us afraid of the noise, as we had all had a turn at target practice, and almost every day we heard shots and the whistling of balls as they flew over our heads: then the air-tight compartments in the bamboo from which the houses were built would explode like small cannon whilst being burned. Of course, some of us were shot and killed: others, as well as ponies and soldiers, were killed by hidden weapons like sharp pieces of bamboo, which the natives set with a spring to trip against, and the arrow pierced its victim.

Quite a number of us were rendered unfit for the service because of injuries. Some of us lost our shoes and became lame and foundered, but of course this was the fault of our riders, who had forgotten to take the prescribed extra pair of shoes and nails along; and a troop horse should never start on a march without them. We often saw infantry; thank goodness they were not on our backs: they were stationed at outposts surrounding the zone in which the insurgents were supposed to be.

One time whilst in post, I saw a number of my old comrades, old "McGregor" amongst them, being auctioned off because of age or being crippled. The Filipino would buy them for little or nothing to work on their rice farms: after starving and working them to death they would eat them. I wish our government could look after us as well as they do our riders: other governments have homes and pastures, and pension off the old worn out chargers: it would be more merciful to shoot than let a native Filipino abuse us.

My master has lately been promoted to sergeant, and I am very proud of him. We often go out in charge of detachments, and I love to canter along beside my friends in the ranks, and am just as satisfied as a troop horse can be. Some day I hope to carry my master at the head of our troop with a first sergeant's chevrons on his arm.

One day word comes that a body of insurgents are near the post; twice before have they attacked our garrison, and this time we will give them a lesson not soon to be forgotten, as it is daylight: the other attacks were made under cover of

darkness. The trumpet sounds boots and saddles, and soon we are mounted and off on the gallop. Now we are nearing them; we can hear the crack of their rifles and whiz of the balls. The orders ring out sharp and quick, "trot," "walk," halt and dismount, and each number four takes the horses back under the best cover to be found. Between the volleys, shrieks of the wounded and dying can be heard; still comes the spit, spat, of the returning fire. For a wonder the Filipinos are making a stand of it. Something strikes my chest and I am frightened; the soldiers return and the orders are "mount," "forward," "march:" but why does not my master obey? The others are gone, but he stands and stares at me in a dazed kind of way; where does that smell of blood come from, and what is that warm red line running down my chest? A messenger from our troop commander rides up to know why my master is not with the troop: he sends word back that I am wounded, but why does he throw his arm round my neck and sob like a child? I am very much frightened and tremble all over, but feel no pain: soon our troop commander gallops up and looks at me, and there is a tear in his eye. "Take him back to the post, sergeant." And after binding up the wound with his shirt we start back together on our last march. My hopes were blighted: I shall never carry my master as first sergeant. On our way back we met our colonel coming at the head of "D" Troop on the trot; with him is the regimental veterinary surgeon, who dismounts, notices that the hemorrhage has stopped, gives directions what to do after arriving at the post, and gallops off to catch up with the troop, whilst back to the rear we go a very mournful procession; but I really think my master feels the worse of the two. After reaching the post I am given a stimulant, and upon the arrival of the doctor my wound is dressed and I am turned into the hospital. The first horse that I see there is old "McGregor," as fat as butter. He had been bought in by the veterinary and now just eats and sleeps and goes wherever he pleases; so he has received what he deserves after all, and the Filipino did not eat him, nor will they.

For the next few days I had to be kept under drugs to

relieve my nervousness, and at one time I was so bad that I was unable to get up for several days, and everyone said I would die; but although now doing well and getting fat, my leg will never be of any use; the ball is in the large bone of the arm and I shall be a cripple for life. At first when undergoing operations for the removal of the bullet, I dreaded the knife, but find that it does not hurt as much as it frightens.

It is now nearly six months since my admittance into the hospital, and the other day a board of officers and the veterinarian decided that I was unfit for the service, and recommended me to the action of an inspector. Most of the patients in here have either sore backs from ill fitting saddles or bad riders, or bad feet from the irritation of the mud; either necessitates the use of the knife, and it is wonderful the pain bearing propensities of horses; some will shriek and kick when the hypodermic needle is just pricking the skin, while others lay still under the most severe operations. Of course if chloroform could be procured it would not be necessary for them to suffer, but I am convinced that it is nervousness more than pain that causes horses to struggle. The veterinarian in charge does lots of grumbling, and I often see a pocket knife used to perform operations with, when a finer instrument would certainly be more convenient. It is a pity that a larger assortment of drugs and instruments are not supplied for the use of veterinarians in the army. There is a mare in the hospital suffering from tetanus, the result of an open joint caused by a kick. It is not a good plan to put mares in with a troop of horses: it unsettles them, and causes a lot of fighting and serious accidents. They should be kept away from the troops if used at all.

I am afraid I have registered a good many kicks, but compared with what the government does for us and how well we are treated they are nothing. If we never asked for anything we would never get anything. I have no doubt that all the defects will be remedied as far as consistent some day.

Life in the Philippines is not so bad for horses, since not having so much to do we have all laid on flesh and weigh as heavy as we did in the States; but even that has its draw-

backs, especially in a hot climate, as we suffer from heat and are soft. I think the time will come when there will be no large American horses out here for cavalry purposes, as they are not adapted to the country, and little hardy horses cost less and are more easily handled in shipping, and in every other way better adapted for this work. Perhaps after a while the government will start a stud farm, like they have in India; a half breed between good native mares and American horses of light breed or *vice versa* would be a useful cross for cavalry purposes.

Of course we that are out here will never see the States again. I am feeling low spirited this morning. I have thought much lately, which is something I am not in the habit of doing, wondering whether my mother fretted for me after I left the ranch; of those happy days there and at the posts in the States; the beautiful moonlit nights in the field when we tied to a picket-line, with our saddles and bridles behind us, and could look around and see our riders sleeping so peacefully on the saddle blankets, their clothes on, with nothing over them but the star-spangled sky, the lonely sentry walking back and forth at his post; it seemed impossible that we were in an enemy's country, and that enemy so treacherous that at any moment we might be alarmed by a bold attack, such as happened several times out here, and which always resulted in great loss of life; then there were those dark, rainy nights, when we would become chilled to the bones; again that small detachment told off after a skirmish to dig a hole, in which some mother's son who had given his life for his country was lowered, volleys fired, taps blown, and he was left alone in his glory.

I like to hear taps, and hope they will be blown over me when I die. The inspector condemned me yesterday, but from what the veterinarian said as to my condition no Filipino will ever work me; that is one comfort. My master went to the States some time ago, as his enlistment had expired. I missed him very much, as he often came to see me; and no one comes now except occasionally my troop commander, who pets and says kind things to me.

It is now time for me to be led out for my morning exercise. The veterinarian is going with me to-day, and we are going toward the river. I am often led down there to graze off the nice short grass which grows on its banks. A little further along they say old crippled and worn out horses are shot, and those that die are taken there and burned. We are quite close to that place now. Why does the veterinarian look at me so queerly as he strokes my neck? I put down my head to graze; he has a revolver in his hand. They sometimes come down here to shoot dogs that prey on portions of the dead horses not completely burned; but I must say he is going to shoot rather too close to my head to be pleasant. I guess I will move it.

There is a report; and the veterinarian mounts his horse and rides to his quarters with bowed head, muttering, "One more victim, and what for?"



Comment and Criticism.



MOUNTED RIFLES.*

COLONEL J. A. AUGUR, TENTH U. S. CAVALRY.

IT is immaterial whether the name "mounted rifles" or "mounted infantry" be given to this special arm, because the name means the same thing. It is a body of infantrymen mounted on horses, to be used for a specific object—mobility—to carry them to a certain point for a specified purpose, in regular warfare, and in guerrilla warfare to keep pace with, overtake and destroy these bands.

Our cavalry has demonstrated the fact that it is fit for both cavalry and dismounted work—a perfectly mobile force—and no better evidence of it can be given than the praise bestowed upon its excellent work by Sir Henry Havelock, in summing up the magnificent work of Sheridan's cavalry in the last few days of the Civil War.

However, the foreign critics will persist in calling our cavalry no true cavalry, as it combines fighting on foot, and it seems useless to try and combat this opinion. For our service it will be impossible to have two kinds of mounted force, and we must content ourselves with the present force, which combines both, yet is good cavalry, as has been conclusively shown, and it needs no champion.

In foreign countries, with large standing armies, there should be no difficulty in organizing such a mounted force, but it appears to me it would be far better to increase the cavalry, giving it proper equipment to be used for such emergencies. If mounted as infantry, they should carry the carbine instead of the rifle, which is lighter and just as effective for the ranges used. As this force involves the care of animals and equipment, it does not seem to be a practical gain

*MOUNTED RIFLES. By Captain G. H. Morgan, Third U. S. Cavalry, in CAVALRY JOURNAL No. 47, January, 1903.

to have two species of mounted men in an army when one such force, drilled to fight mounted, and on foot if necessary, is sufficient, provided they are sufficient in numbers. Because they were used quite extensively in the South African War, on account of lack of cavalry, does not necessarily imply that all armies must rush to the conclusion that this arm must form an adjunct to make them complete.

This mounted infantry was tried during our great war, 1861-1865, and did good service, yet we did not learn that it was so essential that we must make it another auxiliary arm, as vital to success. This echo of mounted infantry reverberates more particularly from our own experience, and to us is nothing new. Sir Charles Napier, in India, used a camel brigade, a mounted force which he made good use of, and which proved most satisfactory, and to whom he gave great credit; it was mounted infantry. The Velites of ancient Rome were mounted infantry for an occasion when a dismounted force was required for a specific object. So we can trace still further into antiquity and find where special men were mounted, yet nowhere can we find, as a result of using this special force, that any provision was ever made for making it a part of the permanent force. Hence the conclusion for us, that it does not appear any more pertinent why we should be compelled to adopt it into our service, when we have now what is better. We have now a force of cavalry, larger in proportion to the other arms than in any foreign army, yet for us in our peculiar condition, with a small standing army, it is none too large, and we must see to it that it is kept up to its standard of excellence.

For my part I do not think mounted infantry advisable, although I grant at times it would be advantageous; when necessary it could be organized for a war.

CAPTAIN EDWARD ANDERSON, SEVENTH U. S. CAVALRY.

Captain Morgan has dealt with a subject most vital to the cavalry. The proper tactics for cavalry in battle, viewed from the experience of the past five years, has been much discussed. Some cling to the old traditional use of shock action; others to its use mainly as mounted infantry proper. Cap-

tain Morgan gives no good reason for organizing and maintaining mounted infantry as part of our peace establishment, nor is there any reason for changing the name of our present mounted force. The splendid work done by our cavalry in the past endears the name to us, and it is broad enough in its scope to cover the mounted troops of our service, whatever the training may be, or the arms used. The *real* point at issue is not in the *name* of our mounted troops, but lies in the character of training and the tactics to be used under the conditions imposed by the new armament.

The primary use of cavalry in scouting, patrolling, reconnaissance, escorting convoys, gaining information of every description, and covering the operations of our own forces, is just as important as ever, and the tactics employed have not materially changed; nor has the time been lessened for training the individual man in these important duties so that he will be of value to the army behind him.

As for the battle or fighting tactics, it appears plain that any one who has made a study of the campaigns with the new armament during the past five years must be convinced that the days of shock action and close order formation on the battlefield, are practically over for cavalry, as they are for infantry, and that its principal reliance is now on fire action dismounted. Instead of offensive mounted shock action, it has for the basis of its efficiency in battle, dismounted fire action, and the horse, instead of being regarded as a fighting weapon, becomes the means of rapid transportation from one important strategic or tactical point to another, enabling the soldier to quickly seize and hold vantage points.

The South African War showed that cavalry which does not know how to scout and patrol had better be left at home. Scouting in the broad sense of the term and dismounted fire action appear to be the basis of future training for cavalry. Mounted charges may yet be used on rare occasions when the enemy is demoralized, out of ammunition, or completely taken by surprise; but for cavalry to make a mounted charge against troops who are dismounted and armed with the present magazine gun, would be to seek disaster. The target

is too great. The few times the mounted charge will take place does not seem to warrant the time and drill now devoted to this preparation.

Modern tactics for cavalry as well as for infantry are drifting towards a greater dispersion of the men, greater responsibility of subordinates, and especially in training the individual man to be the fighting unit. Tactics must be changed with armament. Certainly the tactics designed for a single loading gun with black powder are not adapted for the present more accurate magazine weapon with smokeless powder and longer range, and it was perfectly logical that cavalry should abandon the old formations laid down in the drill book, when in contact with the enemy, and adapt itself to the tactical conditions imposed by the new armament. The range of the modern rifle is now so great, and the dangerous fire-swept zone so extended, as to almost preclude the use of cavalry in the close formations heretofore used.

One dismounted man with magazine rifle can hold his own against twice his number of mounted men approaching him in the open. Even when cavalry is fighting against cavalry, the side which can first dismount and open fire action would appear to have the advantage. In battle, it is the man who knows how to shoot that carries his side to victory.

Instruction in the use of the saber and revolver are important, but the trooper must bear in mind that in fighting his carbine is his main reliance.

We of the cavalry must recognize the present requirements and shape our training accordingly. Our arm of the service must continue to maintain the high standard of efficiency it has heretofore borne. It would seem that many of the formations in our present drill regulations might be dispensed with as obsolete; the distance between the various units increased; the formations for attack and defense dismounted modified to meet the requirements imposed by the new armament.

Mounted infantry is out of place as part of our peace basis. It is essentially a temporary expedient for emergencies, and can be readily raised when needed, by mounting

regular infantry, and the expense thus saved. They would need only to be taught to ride and take care of their horses, as fire action only would be used, and this is taught them in time of peace. Enough cavalry officers could be spared from their regiments, when necessary, to do this work quickly and efficiently, as Captain Morgan did. Cavalry was never more necessary to the success of military operations than at the present day, but like the other arms of the service, its tactics must change with armament.

CAPTAIN CORNELIUS C. SMITH, FOURTEENTH U. S. CAVALRY.

After reading Captain Morgan's "Mounted Rifles," and comments on the same by various officers, in the JOURNAL for January, we are strongly impressed with the view that if the saber were done away with in the cavalry, and other mounted troops (mounted infantry, mounted rifles, carbineers, etc.) were provided with the revolver, all would then be about alike.

This is an age of progress, and sentiment must go to the wall. This being the case, why not, then, where cavalry or mounted infantry is concerned, endeavor to arm, be mounted, and train accordingly? It is probably only sentiment that keeps the saber, which is now a useless weapon, and the War Department has shown wisdom in ordering the cavalry regiments going to the Philippine Islands this year to leave it behind, and may it be left for good.

Without the saber, at the present period of the history of warfare, we believe that cavalry is just as efficient as a fighting arm, as it is with it, and no cavalry officer need feel that the usefulness of his branch is curtailed by its absence.

Mounted troops armed with carbine and revolver, or with rifle and revolver (carbine and revolver would be best), will be about what our present cavalry will come to, and the change will be a good one for practical soldiers, but a hard blow to the sentimentalists. When this change takes place then the only difference between cavalry and mounted infantry will be that the former has the carbine and the latter the rifle, but all could be made alike by giving the mounted

infantry the carbine, and calling the whole mounted force just what the War Department ordered.

The carbine for mounted troops is better than the rifle, from the fact of its being lighter and shorter, these advantages making it easier for a horseman to handle. Before we forget, let us ask, when the saber is a thing of the past, or before that time, that the carbine be carried by all cavalry regiments on the most practical side of the saddle—the left side.

Mounted infantry, if properly armed, mounted and trained, and in service permanently, in time of peace as well as in time of war, is not a makeshift, nor would it detract from cavalry in any way, for as before stated, they are virtually the same, that is, under the conditions stated in these remarks.

Some of the comments on Captain Morgan's article quote the Civil War, and other past encounters in their arguments to show that "cavalry did everything that mounted infantry could do, and some things which it could not do." This prompts us to ask (with the utmost respect for the past deeds of cavalry) the following question: Could the same cavalry, armed as we are to-day, do all this if the precise and deadly arms now used had been in the hands of the enemy? Better yet, let us put it this way: Could not any well mounted, well trained, and well armed mounted troops, call them what we will, pitted against good modern infantry, make as good showing as did "the cavalry which could do things that mounted infantry could not do?"

We were much pleased to note the views of Colonels Hall and Wagner in their comments on "Mounted Rifles" regarding the saber, and hope that many other officers will express similar views which, in course of time, it is believed, will carry enough weight to "knock out" this museum relic, as has recently been done for the English troops in Canada by Lord Dundonald, who had experience in the Boer War.

In concluding, let us say that these remarks are intended for the good of cavalry, and not as a disparagement, as they represent what we believe mounted troops will soon come to in the way of arms and training.

+ Editor's Table. +

In the January number of the CAVALRY JOURNAL (No. 47, Volume XIII) will be found a complete index of the CAVALRY JOURNAL from its beginning to and including No. 44, Volume XII. The index is arranged alphabetically, and is very complete and thorough in all respects. It will be found to be of great value to the readers of the JOURNAL, and it has certainly been of great benefit to the Council. This index was compiled by Lieutenant F. A. Roberts, Tenth U. S. Cavalry, who is on duty at the U. S. Military Academy, West Point, N. Y., and the work was prepared originally for the U. S. Military Academy library. Through Lieutenant Roberts' courtesy the CAVALRY JOURNAL was permitted to publish the index, and the Council extends thanks to him for this and for the labor involved in the preparation. Lieutenant Roberts' name was inadvertently omitted in printing this index.

One essay, entitled "Espuelas," has been received in competition for the prize of the U. S. Cavalry Association. The time when essays in competition for this prize must be in was extended to October 1, 1903. It was the intention to announce other prizes for essays and articles in this number of the CAVALRY JOURNAL, but the Council finally decided to delay the announcements and the titles until the July number, when all arrangements will have been made. The committee to judge the essays for the 1903 prize will also be announced in the July number.

Attention is invited to the list of contents for the July number of the CAVALRY JOURNAL, printed on the colored insert in front of this JOURNAL. There are nine original articles, six of them to be illustrated. Contributors of articles for the JOURNAL should not take it for granted from this list that there is no longer any need for material for publica-

tion. On the contrary, contributions are invited, and welcomed from all our readers, and will be given careful attention by the publication committee.

In connection with the arguments as to the proper equipment of cavalry, brought out in the original paper and the comments on "Mounted Rifles" in this and the January number of the CAVALRY JOURNAL, it is interesting to note what is said in the *London Times* of March 5, 1903:

"The War Office issued last night the following army order, signed by Lord Roberts, with reference to cavalry equipment:

"1. Regiments of cavalry will, in future, be armed with the carbine (or rifle) and sword. Regiments of lancers, dragoon guards and dragoons will retain the lance as at present, but it will only be carried on escort duty at reviews and other ceremonial parades; not on guard, in the field, at maneuvers, or on active service.

"2. Ten D. P. and ten exercise lances per squadron will be allowed for each cavalry regiment for use at skill-at-arms practices, tent-pegging, etc., and any lances in excess of that proportion now on charge under Barrack Schedule 30 and 31, will be withdrawn and returned to store. These practices will only be carried out as a means of recreation for the soldier, and time will not be devoted to them at the expense of training in equitation, shooting, swordsmanship and field work.

"3. In issuing these instructions, the commander-in-chief desires to impress upon all ranks that, although the cavalry are armed with the carbine (or rifle) and sword, the carbine (or rifle) will henceforth be considered as the cavalry soldier's principal weapon."

Captain E. W. Winans, Fourth Cavalry, sends the following comment on this:

"To us it appears surprising that this has not been done long ago. Strange as it may seem, however, this order has aroused a storm of protest in England.

"The *Saturday Review* of the 7th March says in part:

"* * * Where shall we be if our cavalry is ever pitted against that of another civilized power declining to accept Lord Roberts' dictum? Has he never read the story of the encounter of the Seventh Hussars with the French Lancers at Genappe on the eve of Waterloo? [Note the absurdity of quoting incidents in the time of Waterloo in connection with this argument.] We believe that Lord Roberts' action if carried to its logical issue is certainly preparing us for disaster in the next war we may be engaged in."

"and more to the same effect.

"The *Army and Navy Gazette*, a leading service paper says in issue of same date:

"The new order with reference to the future equipment of our cavalry cannot be regarded otherwise than with the deepest regret. * * * On the

face of it it bears all too clearly the hall mark of the extreme South African Military School, whose teaching has not yet been demonstrated as finally correct under all circumstances ;

"and goes on to say that on the few occasions where opportunity to use it occurred, the use of the lance was fully justified. Comments on the above would seem unnecessary and a waste of time.

"Let us only hope that foreigners will stick to the lance. I think that any captain of our cavalry would undertake to stop the charge of a lancer regiment with his troop."

In connection with the articles on surra and other diseases prevalent in the Philippines, in the January and this number of the CAVALRY JOURNAL, the following letters are of interest. General Wint was sent on a tour of investigation into India and other countries for the purpose of gathering information in regard to diseases affecting horses in the tropics. The results of his investigation will be awaited with interest. The following letters are published in Circular No. 6, Headquarters Division of the Philippines, and are written by General Wint to General Davis, the division commander :

"CONSULAR CAMP, DELHI, January 11, 1903.

"General Elliott gave his opinion that the disease was caused by animals—horses and camels—feeding on marsh grass, or from grazing on ground that had been flooded. That there is no known cure for the disease, but that it can be prevented by not using hay or grass taken from marsh land or land that has been flooded. At present surra is confined almost entirely to the low country at the base of the Himalaya Mountains, and certain sections are avoided by troops when on the march by making necessary detours, as did one command coming from the mountains here recently. No surra is known to exist to the east or southeast of here.

"No large horses are now sent to Burma, as nearly all that were died ; in one troop with seventy-seven horses, but seventeen escaped. There are very few horses now in Burma except the native pony. Meerut, about forty miles from here, and Umballa, a station that we can visit on our return, are large cavalry posts, and Karnal, in the same vicinity, is a remount station. At all of these stations the disease exists to some extent, or at least the disease called surra here. I visited this morning a number of native camps with General

Beatson. Several of the native officers whom I met gave about the same opinion of surra as did General Elliott, all agreeing that a bullet was the only cure."

"UMBALLA, January 18, 1903.

"No green fodder is now used for army animals in India : all grass is dry or made hay before feeding. Grass is cultivated for this purpose. 'Dhoob' is the best kind usually cultivated ; is also called 'huraili.' Aujan or chaman, a good grass, is brought from the hills. No grass cutters are used by the army : it was found that they, to save time and work, were liable to cut from infected places or grounds which were not well known and avoided : neither water or grass is used at these places. All stagnant water is considered dangerous. A cutting from the top of growing rice, if it has not been under water, is not considered dangerous, but is not used here. There is very little surra now in India, but kumri and anthrax exists to some extent. Kumri resembles surra in some ways and both are supposed to be caused or spread by water or grass from infected places."

There is another excellent article on a cavalry subject in this number of the JOURNAL, from Captain T. Bentley Mott, Artillery Corps, on duty as military attaché, Paris, France. This, and the article in the January number, give an excellent idea of cavalry work in France. The illustrations for "The Brussels-Ostend Ride" are reproduced by courtesy of the *Armée et Marine*, Paris.

PROCEEDINGS OF ANNUAL MEETING OF THE U. S. CAVALRY ASSOCIATION.

FORT LEAVENWORTH, KANSAS, January 19, 1903.

Pursuant to provisions of Section 1, Article VI, of the Constitution, the U. S. Cavalry Association met at 8 P. M. to-day, Major C. H. Murray, Fourth Cavalry, presiding.

The roll call showed the following members present and number of proxies held by each:

FIRST CAVALRY.		SIXTH CAVALRY.	
1st Lieut. P. W. Arnold	12	2d Lieut. J. P. Hasson	1
THIRD CAVALRY.		SEVENTH CAVALRY.	
1st Lieut. R. R. Wallach	4	1st Lieut. E. E. Booth	5
2d Lieut. C. A. Seane	6	EIGHTH CAVALRY.	
2d Lieut. J. E. Hemphill		Captain J. T. Dickman	65
FOURTH CAVALRY.		2d Lieut. H. S. Terrell	5
Major C. H. Murray	30	TWELFTH CAVALRY.	
Captain T. R. Rivers	28	1st Lieut. H. J. Brees	7
Captain R. A. Brown	12	2d Lieut. J. E. Abbott	1
Captain L. M. Koehler	5	FIFTEENTH CAVALRY.	
Captain L. C. Scherer	62	1st Lieut. S. Johnston	
1st Lieut. S. A. Purviance	1	MEDICAL DEPARTMENT.	
1st Lieut. D. McCaskey	3	Colonel Van R. Hoff	
1st Lieut. W. B. Pershing		QUARTERMASTER'S DEPARTMENT.	
1st Lieut. T. M. Knox	6	Major D. E. McCarthy	4
1st Lieut. W. A. Austin		ARTILLERY CORPS.	
2d Lieut. J. A. Degen		Captain G. W. Van Duesen	5
2d Lieut. G. R. Fortescue	1	SEVENTH INFANTRY.	
FIFTH CAVALRY.		2d Lieut. A. L. Briggs	1
2d Lieut. D. H. Jacobs	3		

making a total of twenty-eight members present, having besides their own votes the proxies of 273 absent members, or a total of 301 votes from a membership of 650.

The next business before the meeting was the reading of the—

ANNUAL REPORT OF THE SECRETARY AND TREASURER.

FT. LEAVENWORTH, KANS., January 19, 1903.

To the U. S. Cavalry Association, Ft. Leavenworth, Kansas.

In compliance with the provisions of Par. II, Article VI, of the Constitution, I have the honor to present the following detailed report of the business transactions of the office of Secretary and Treasurer:

Pursuant to my appointment by the Council I took charge of the office on February 15, 1902, and the financial transactions from that date to January 1, 1903, are set forth in the following two tables:

The accounts were audited on January 3, 1903, by an auditing committee appointed by the chairman of the Council, and found correct.

Account of money received and expended from February 17th to December 31st, 1902:

RECEIPTS.	
Balance on hand, former Secretary	\$ 366 70
Dues of members paid	253 73
Dues of associate members paid	64 00
Troop subscriptions	60 00
Other subscriptions	36 00
Journals sold for cash	3 00
Collections on advertisements	221 50
Total	<u>\$1,704 99</u>

EXPENDITURES.	
Printing journals	\$ 537 03
Cuts and plates	36 49
Postage and expressage	70 26
Printing circulars	151 40
Mailing journals	159 84
Advertisements	204 01
Balance on hand	415 30
Total	<u>\$1,704 99</u>
Gain in cash	45 60

Statement of value January 1, 1903:

ASSETS.	
Dues regular members not paid	\$212 00
Dues associate members not paid	42 00
Advertisements due	71 50
Postage paid at advanced rates	113 75
Balance of cash remaining	415 30
Total	<u>\$754 61</u>

LIABILITIES.	
Hudson-Kimberly Publishing Co.	\$ 25 27
Ketcheson & Burbank	14 60
Value of business	711 74
Total	<u>\$754 61</u>
Gain in value	\$344 95

MEMBERSHIP.

Before February 15, 1902, the Association was dormant, no business having been transacted from about April, 1900, to that time.

On that date the membership as determined from the books stood as follows: Total 395, of which number 3 were life members, 325 were regular members and 62 associates. Of the 325 regular members 245 were regular cavalry officers, 38 belonged to other branches, staff, etc., and 39 were on the retired list.

Efforts have been made to secure members and to get everyone interested in securing new members.

Shortly after it was decided that the JOURNAL should be resumed, a circular was sent to all cavalry officers not members; circulars have been sent to regimental and post commanders and their adjutants.

The October number of the JOURNAL was sent to every cavalry officer with a note to non-members, calling their attention to it and inviting them to join.

Since then other circulars have again been sent to all non-members.

The membership lists have been published in both the July and October number of the JOURNAL, together with a roster of cavalry officers, thus giving the names of non-members. Various circulars have been sent to members enjoining their aid in the efforts of the Council to secure members. Circulars and copies of the JOURNAL have been sent to every National Guard cavalry officer.

On January 1st the membership stands as follows: Total 650, of which number 8 are life, 583 are regular and 59 are associate members. Of the 583 regular members 475 are regular cavalry officers, 51 belong to other branches, and 57 are retired.

Considering only the regular cavalry officers the gain in membership has been 227. There are, however, still 305 cavalry officers, mostly second and first lieutenants, who are not members of the Association.

By regiments the membership is as follows:

First Cavalry	37	Ninth Cavalry	25
Second Cavalry	35	Tenth Cavalry	30
Third Cavalry	33	Eleventh Cavalry	19
Fourth Cavalry	38	Twelfth Cavalry	26
Fifth Cavalry	38	Thirteenth Cavalry	31
Sixth Cavalry	35	Fourteenth Cavalry	39
Seventh Cavalry	24	Fifteenth Cavalry	24
Eighth Cavalry	32		

Subscriptions other than membership have also been solicited, but this is a matter that will take time in order to build up a demand, and depends on the merit of the JOURNAL simply.

There are fifty-two subscribers, of which number thirty are cavalry troop libraries. Circulars in regard to subscriptions and copies of the JOURNAL have been sent to every troop, and 150 are still to be heard from. Circulars and JOURNALS have also been sent to the public library of every important city, but returns from this source are not encouraging.

There remains a great deal of canvassing and advertising to be done in the matter of giving every one entitled to regular membership a chance and

opportunity to join the Association, and finally to extend this same courtesy to those who would like to become associate members.

The field for the CAVALRY JOURNAL is not by any means exhausted on the lines indicated above, but they furnish the main support of the JOURNAL, and considering all the work involved, it has been impracticable to extend operations more fully.

THE JOURNAL.

No material was on hand for publication, but through the efforts of the Council enough was received to publish the July number; with the three months intervening before the next JOURNAL material was secured for that. Since then the assurance of the hearty co-operation of the Association everywhere, leads me to believe that enough material will be received for the next number in time to print it. There are many promises of interesting articles.

The CAVALRY JOURNAL was entitled to a new dress upon its reappearance, but it was not practicable to have it ready before the new year.

The masterpiece of a frontier cavalryman on the cover of the JOURNAL and the disappearing rider on the back are contributed to the JOURNAL with the compliments of Mr. Frederic Remington, a life member of the U. S. Cavalry Association.

In closing I wish to express my thanks to all the members, especially to the Council, for their enthusiastic support and their kind encouragement, under which circumstances it has been a pleasure to serve as an officer of the U. S. Cavalry Association.

Signed, L. C. SCHERER.

Captain Fourth Cavalry.

Secretary, Treasurer and Editor U. S. Cavalry Association.

Upon motion made and seconded, it was—

Resolved. That the report of the Secretary and Treasurer be approved.

Upon motion made and duly seconded, it was unanimously

Resolved. That the thanks of the U. S. Cavalry Association be tendered to Mr. Frederic Remington, a life member of the Association, for the splendid drawings presented to the Association for the cover pages of the CAVALRY JOURNAL.

The next business of the meeting was the annual election of officers for the ensuing year.

Major-General Wesley Merritt, U. S. Army, was then unanimously elected President of the Association.

Brigadier-General J. Franklin Bell, U. S. Army, was then unanimously elected Vice-President of the Association.

A ballot was then taken on the members of the Council, and upon the first ballot the following officers were found to have received more than the number of votes necessary to

election, and were declared as elected as the Council for the ensuing year:

Major C. H. Murray, Fourth Cavalry.
 Captain J. T. Dickman, Eighth Cavalry.
 Captain T. R. Rivers, Fourth Cavalry.
 Captain R. A. Brown, Fourth Cavalry.
 Captain L. M. Koehler, Fourth Cavalry.

The Association then proceeded to the reading of the remarks and comments sent in by the absent members of the Association.

Some comments followed upon these remarks, and it was agreed that the members submitting them should be asked to present their views in articles to appear in the JOURNAL, as the best means of giving them publicity and open the way for discussion.

There being no further business before it, the meeting then, at 9:15 P. M., adjourned.

L. C. SCHERER,
Captain Fourth Cavalry,
Secretary and Treasurer.

Book Reviews.

Frederic Remington's Novel.

"John Ermine of the Yellowstone" is the title of the book in which the artist, Mr. Frederic Remington, tells the pathetic story of a white man with Indian views. The army, and the cavalry especially, is to be congratulated on the excellent picture drawn of it in those pages, and the insight given into the daily life and duties of officers. There can be no doubt that stories of this kind will do much to make the service known and its work appreciated. Remington has done many a good turn for the army in calling attention to it by his well known and admirable drawings. Each one of these tells a story in itself, and makes friends for the army wherever it goes.

Now, we are still further indebted to Mr. Remington for this portrayal of army and frontier life. The principal scene of the novel is laid in the Tongue River Cantonment, when Remington was himself present.

John Ermine is a white man, brought up among the Crow Indians, who surrender him to a hermit, old Crooked Bear, to complete John's education. Ermine finally enlists as a scout and takes part in an Indian campaign. The love story comes after this, and is very real, but ends very unfortunately, and yet it is the only natural outcome one could expect.

Remington writes as well as he draws, and you know his drawings are absolutely correct to the minutest detail. He never draws horses or men in impossible positions, nor does he equip them except just as they should be equipped; and yet they are beautiful and pretty to look at, probably on account of the accuracy and truthfulness of detail. It is the same with the story. It is accurate and correct to the smallest words, and the description has the impress of truth. The

*"JOHN ERMINE OF THE YELLOWSTONE." By Frederic Remington. The Macmillan Company, New York. \$1.50.

characters are real, their actions are entirely natural, and the reader, when he has finished the novel, is convinced that everything has happened. Accuracy, however, is not the only charm. There is much pathos in the novel. The character of the hero is so straightforward, his appearance so prepossessing, his courage so great, and his heart so simple and lovable, that the reader must deplore bitterly the misfortune that finally overtakes him.

Remington has made good use of the knowledge acquired in his frontier life as a cowboy and rancher. The story is replete with intimate descriptions of pioneer Western life, Indian ways, soldier ways, and the conventional existence in the Western camps. Indian character is truthfully portrayed and correctly pictured in a way you can understand and feel. The description of a lot of Indian boys at play is very pleasing and realistic. In fact, every page of the book brings pleasant surprises to the army reader who has seen all these things in real life, and never imagined there was so much poetry and pathos in every day events.

The book is well illustrated in Remington's own style, and in all is a very pretty army story.

Catch Questions in Infantry Training.* A small book containing a number of catch questions on the Infantry Drill Question of the British army, designed for the use of the non-commissioned officer, so as to bring these points to his attention.

*CATCH QUESTIONS IN INFANTRY TRAINING. Revised edition. Gale & Polden, limited, London. 1902. Price, sixpence.

Army Hand Book of Physical Training.* This is a book containing leg exercises, free gymnastics, exercises with dummy rifles, physical drill with arms, bayonet fighting, parallel bars, vaulting horse, rope climbing, dumb bell exercises, jumping (with standards) and horizontal bar.

*THE ARMY HAND-BOOK OF PHYSICAL TRAINING. Gale & Polden, limited, London. 1903. Price, one shilling.

Physical Drill with Arms Made Easy.*

This little pamphlet is designed to give examples how to practice physical drill with arms in the barrack square. It is illustrated with various photographs of the principal positions throughout the drill.

*PHYSICAL DRILL WITH ARMS MADE EASY, and NEW BAYONET FIGHTING. Gale & Polden, Ltd. 1903. Price, ninepence.

Telling Off and Posting a Picquet.*

This small book is designed for the purpose of elucidating the points not covered in the "Combined Training." It contains notes and a short catechism on outpost duty; also, notes and plan of an advanced guard for a company. It is a revised edition and corrected up to January, 1903.

*TELLING OFF AND POSTING A PIQUET. Revised edition. Gale & Polden, Ltd. 1903. Price, sixpence.

The Non-Commissioned Officer's Guide to Promotion.*

Professional examination for non-commissioned officers before promotion has become compulsory in the British service. These examinations are held before examining boards. This book is devised to supply all the information necessary for preparing for examination, and also to assist the boards in framing questions.

*THE NON-COMMISSIONED OFFICER'S GUIDE TO PROMOTION. New edition. Gale & Polden, Ltd., London. 1903. Price, three and six.

The Scout's Alphabet.*

Consists of notes and queries on scouting, arranged alphabetically. The objects aimed at are: To facilitate teaching and learning reconnaissance work. To provide a handy book of reference, and to enable any man of average intelligence to answer questions that may be of use to his officers.

*THE SCOUT'S ALPHABET. By a Cyclist officer. Gale & Polden, limited, London. 1903. Price, one shilling.

Regimental Duties Made Easy.*

This book is one of Gale & Polden's Military Series, which form handy and complete guides to the various subjects prescribed for the promotion examinations. The second edition has been extensively revised, and is corrected to December, 1902.

*REGIMENTAL DUTIES MADE EASY. By Major S. T. Banning. Second edition. Gale & Polden, limited, London. 1902. Price, five shillings.

Catechism on Field Training.*

The aim and object of this book is to present in one volume the substance of many and varied subjects comprised in "company training." The Catechism claims to be a handy compendium of useful knowledge. It is arranged in questions and answers. A few of them may not be out of place in this review. Under the subject of "Defense of Posts:"

Q.—What are the various modes of attacking houses?

A.—They may be attacked either by day or by night, or set on fire.

Q.—How would loop-holing be done in the field?

A.—With crowbars, chisels, and hammers, or even with pickaxes.

Q.—What steps must be taken in hastily preparing a house for defense?

A.—

RHYME FOR THE DEFENSE OF A HOUSE.

If a house you would hastily defend,
To these few measures each in turn attend;
Remove inhabitants, thatch, and things that quickly burn,
Water and earth have ready at each turn.

The well barred doors and windows near the ground,
All glass removed, with obstacles surround;
Thirdly, sufficient loopholes everywhere,
In walls, doors, windows, under eaves prepare.

In partition wall communication break,
For possible retreat provision make;
Fourthly, the foreground from all cover clear,
From which an enemy might unseen draw near.

If for "a outrace" you decide,
Food, water, cartridges, collect inside;
A hospital for wounded men prepare,
Prop up the floors and cut away the stairs.

*CATECHISM ON FIELD TRAINING. By Captain Lascelles Davidson. Revised by Major S. T. Banning. Gale & Polden, limited, London. 1902. Price, two and six.

THE UNITED STATES CAVALRY.

FIRST CAVALRY—COLONEL ALMOND WELLS.

Adjutant, Capt. SAMUEL B. ARNOLD; Quartermaster, Capt. WILLIAM C. BROWN
Commissary, Capt. MILTON F. DAVIS.
HEADQUARTERS—MANILA, P. I.

All troops of regiment serving in Philippine Islands.
Under orders to return to United States.

SECOND CAVALRY—COLONEL WINFIELD S. EDGERLY.

Adjutant, Capt. THOMAS J. LEWIS; Quartermaster, Capt. WILLIAM F. CLARK
Commissary, Capt. RALPH HARRISON.
HEADQUARTERS—FORT MYER, VA.

Troops—A, B, C, D, I, K, Fort Ethan Allen, Vt.; E, F, G, H, Fort Myer, Va.; L, M, Fort Sheridan, Ill.

THIRD CAVALRY—COLONEL ALBERT E. WOODSON.

Adjutant, Capt. HENRY L. RIPLEY; Quartermaster, JOHN B. McDONALD
Commissary, Capt. GEORGE H. MORGAN.
HEADQUARTERS—FORT ASSINIBOINE, MONT.

Troops—A, D, I, K, L, M, Fort Assiniboin, Mont.; B, C, Fort Yellowstone, Wyo.; E, Boise Barracks, Idaho; F, Fort Yates, N. D.; G, H, Fort Apache, Ariz.

FOURTH CAVALRY—COLONEL CAMILLO C. CARR.

Adjutant, Capt. JAMES B. ERWIN; Quartermaster, GEORGE O. CRESS.
HEADQUARTERS—FORT RILEY, KAN.

Troops—A, B, C, D, Fort Riley, Kan.; E, F, G, H, Fort Leavenworth, Kan.; I, K, L, M, Jefferson Barracks, Mo.

FIFTH CAVALRY—COLONEL CHARLES L. COOPER.

Adjutant, Capt. LAWRENCE J. FLEMING; Quartermaster, Capt. NATHANIEL F. MCDONNELL
Commissary, Capt. LUCIUS R. HOLBROOK.
HEADQUARTERS—MANILA, P. I.

All troops serving in Philippine Islands
Under orders to return to United States.

SIXTH CAVALRY—COLONEL ALLEN SMITH.

Adjutant, Capt. JOHN W. FURLONG; Quartermaster, Capt. GEORGE L. BYRAN
HEADQUARTERS—MANILA, P. I.

All troops of regiment serving in Philippine Islands.
Under orders to return to United States.

SEVENTH CAVALRY—COLONEL THEODORE A. BALDWIN.

Adjutant, Capt. WILLIAM A. MERRICK; Quartermaster, Capt. SOLON P. VESTA.
Commissary, Capt. WILLIAM H. PAINE.
HEADQUARTERS—CHICKAMAUGA PARK, GA.

All troops stationed at Chickamauga Park, Ga.

EIGHTH CAVALRY—COLONEL LOUIS H. RUCKER.

Adjutant, Capt. ANDREW G. HAMMOND; Quartermaster, Capt. WILLIAM F. FLYNN
Commissary, Capt. CHARLES G. SAWTELLE, JR.
HEADQUARTERS—JEFFERSON BARRACKS, MO.

Troops—A, B, C, D, Fort Sill, Okla.; E, F, G, H, Jefferson Barracks, Mo.; I, K, L, M, Fort Riley, Kan.

NINTH CAVALRY—COLONEL EDWARD S. GODFREY.

Adjutant, Capt. A. M. MILLER, Jr.; Quartermaster, Capt. FRANK S. ARMSTRONG;
Commissary, HENRY B. DIXON.

HEADQUARTERS—FORT WALLA WALLA, WASH.

Troops—A, B, C, D, Monterey, Cal.; E, F, G, H, Fort Walla Walla, Wash.; I, K, L, M, Presidio Cal.

TENTH CAVALRY—COLONEL J. A. AUGER.

Adjutant, Capt. ROBERT G. FAYTON; Quartermaster, Capt. CHARLES H. GRIERSON;
Commissary, EUGENE P. JERVEY, Jr.

HEADQUARTERS—FORT ROBINSON, NEB.

Troops—A, B, C, D, I, K, L, M, Fort Robinson, Neb.; E, Fort D. A. Russell, Wyo.; F, Fort Washakie, Wyo.; G, H, Fort MacKenzie, Wyo.

ELEVENTH CAVALRY—COLONEL CHARLES MORTON.

Adjutant, Capt. STEPHEN H. ELLIOTT; Quartermaster, Capt. LUTHER HARDMAN.

HEADQUARTERS—MANILA, P. I.

All troops serving in the Philippine Islands.

TWELFTH CAVALRY—COLONEL WILLIAM C. FORBUSH.

Adjutant, Capt. ROBERT E. L. MICHIE; Quartermaster, Capt. JOSEPH E. CUSACK;
Commissary, Capt. EDWARD D. ANDERSON.

HEADQUARTERS—FORT CLARK, TEX.

Troops—A, B, C, D, Fort Sam Houston, Tex.; E, F, G, H, I, K, L, M, Fort Clark, Tex.
Under orders to the Philippines.

THIRTEENTH CAVALRY—COLONEL CHAS. E. P. HATFIELD.

Adjutant, Capt. WILLIAM J. GLASGOW; Quartermaster, Capt. WALTER M. WHITMAN;
Commissary, Capt. THOMAS M. CORCORAN.

HEADQUARTERS—MANILA, P. I.

Troops—E, H, I, K, L, M, Fort Meade, S. D.; F, G, Fort Keogh, Mont.; A, B, C, D, Manila, P. I.
Second and Third Squadrons under orders to the Philippines.

FOURTEENTH CAVALRY—COLONEL THOMAS C. LEO.

Adjutant, Capt. MATTHEW C. SMITH; Quartermaster, Capt. OREN B. MEYER;
Commissary, Capt. EDWIN M. SUPLEE.

HEADQUARTERS—FORT GRANT, ARIZONA.

Troops—A, Fort Du Chasse, Utah; B, C, D, Fort Huachuca, Ariz.; E, H, Fort Logan, Colo.; F, G, Fort Wingate, N. M.; I, K, L, M, Fort Grant, Ariz.
Under orders to the Philippines.

FIFTEENTH CAVALRY—COLONEL WILLIAM M. WALLACE.

Adjutant, Capt. FRANCIS C. MARSHALL; Quartermaster, Capt. LINCOLN C. ANDREWS;
Commissary, Capt. KENZIE W. WALKER.

HEADQUARTERS—MANILA, P. I.

All troops serving in Philippine Islands.

MEMBERSHIP OF THE UNITED STATES CAVALRY ASSOCIATION.

Numerous communications have been received requesting that the publication of the list of members be continued, and in deference to the wishes so expressed, the Council has decided to do so, especially because all the members are equally interested in the growth of the Association, and in the addition of new names.

The Council requests the active cooperation of all the members of the Association to aid the growth to the best of their ability.

FORT LEAVENWORTH, KANSAS.

April 1, 1903.

LIST OF MEMBERS OF THE UNITED STATES CAVALRY ASSOCIATION.

LIFE MEMBERS.

The Constitution no longer permits the creation of life memberships. This does not affect those who have been so elected.

Birby, Wm. H., Major, Engineer Corps.
Dodge, Charles C., General, M. G.
Grisson, H. B., Brig.-Gen., retired.
Norman, Wm. W., Colonel, Panjab Cav.

Parker, Dexter W.
Remington, Frederick.
Windsor, Henry, jr.
Wetmore, Wm. Bortum.

REGULAR MEMBERS.

(The following are eligible to regular membership: (a) Commissioned officers of the cavalry of the regular army. (b) Former commissioned officers of the cavalry of the regular and volunteer services, provided their records are honorable: general officers of the regular army and former general officers.)

GENERAL OFFICERS.

Major-Generals.
Young, Samuel B. M.†
Chaffee, Adna R.†
MacArthur, Arthur.†
Brigadier-Generals.
Wade, James F.†
Sumner, Samuel S.
Wood, Leonard.†
Grant, F. D.†
Bell, J. Franklin.
Fuentes, Frederick.†
Baldwin, Frank D.†
Wint, T. J.
Lee, J. M.†
Carter, William H.
Ellis, Tasker H.†
Sanger, Joseph P.

ADJUTANT-GENERAL'S DEPARTMENT.

Colonels.
Rabeock, John B.
Hall, William P.†
Lieutenant-Colonels.
Kerr, J. R.†

Majors.
Parker, James.†
Fountain, Samuel W.
McClernand, Edward J.†
Finley, W. L.

INSPECTOR-GENERAL'S DEPARTMENT.

Colonels.
Vroom, Peter D.†
Lieutenant-Colonels.
Knox, Thomas T.†

JUDGE-ADVOCATE- GENERAL'S DEP'T.

Brigadier-General.
Davis, George B.†
Lieutenant-Colonel.
Crowder, Enoch H.†

QUARTERMASTER'S DEPARTMENT.

Brigadier-General.
Ludington, M. I.†
Lieutenant-Colonel.
Pond, George E.†

Majors.
Miller, W. H.†
Hodgson, Frederick G.†
Bellinger, John B.†
Aleshire, James B.
Bingham, Gonzales S.
Cruse, Thomas.†

Captains.
Slocum, H. J.†
Knight, John T.†
Carson, John M., jr.†
Wood, Winthrop S.
Williamson, Geo. McK.†
Sewell, Robert.†
Slavens, Thomas H.†
Schofield, Richmond McA.†
Walcutt, Charles C.†
White, George P.
Crabbs, Joseph T.†

SUBSISTENCE DEPART- MENT.

Lieutenant-Colonel.
Smith, A. L.†

Majors.
Brainard, D. L.†
Bean, W. H.†

Captains.
McCormick, L. S.†
Davis, A. M.
Gallagher, H. J.

PAY DEPARTMENT.

Lieutenant-Colonel.
Dodge, F. S.†
Captain.
Whipple, H. S.

CORPS OF ENGINEERS.

Captain.
Potter, Chas. L.

ORDNANCE DEPART- MENT.

Chief of Ordnance.
Crozier, William.†

SIGNAL CORPS.

Brigadier-General.
Grealy, A. W.†
Lieutenant-Colonel.
Allen, James.

PROFESSOR MILITARY ACADEMY.

Colonel.
Wood, E. E.†

ARTILLERY.

Chief of Artillery.
Randolph, W. F.†
Captains.
Van Deusen, Geo. W.†

INFANTRY.

Captains.
Simpson, W. L., 6th Regt.†
Barber, Henry A., 25th Regt.

CIVIL LIFE.

Bresler, A. L., gen.
Johnston, J. A., gen.†
Ketcheson, J. C., capt.†
Lincoln, J. R., gen.†
Quay, A. G., maj.
Russell, F. W., lt.†
Augur, Colon. capt.†
Bacon, John M., col.
Baird, William, capt.†
Baton, Matthew A., capt.
Bell, James M., brig.-gen.†
Bernard, R. F., lt.-col.†
Biddle, James, col.†
Boutelle, F. A., capt.
Braden, Chas., 1st lieut.†
Breck, Sam'l, brig.-gen.†
Burnett, G. R., 1st lieut.†
Carlton, C. H., brig.-gen.†
Carpenter, L. H., brig.-gen.†
Carr, E. A., brig.-gen.†
Carroll, Henry, col.†
Clous, J. W., brig.-gen.
Cole, George W., capt.
Compton, Charles E., col.
Converse, G. L., capt.†
Craycroft, W. T., lt.†
Davis, Wirt, col.†
Dimmick, Eugene D., col.†
Evans, George H., capt.†
Fechet, E. G., maj.
Forsyth, J. W., maj.-gen.
Freeman, H. H., brig.-gen.†
Guest, John, capt.†
Harris, Moses, maj.†
Holabird, S. B., brig.-gen.†
Hoyle, George G., maj.†
Hunt, George G., col.†

PORTO RICO REGIMENT.

Majors.
Swift, Eben.†
Howse, R. L.†

RETIRED LIST.

Augur, Colon. capt.†
Bacon, John M., col.
Baird, William, capt.†
Baton, Matthew A., capt.
Bell, James M., brig.-gen.†
Bernard, R. F., lt.-col.†
Biddle, James, col.†
Boutelle, F. A., capt.
Braden, Chas., 1st lieut.†
Breck, Sam'l, brig.-gen.†
Burnett, G. R., 1st lieut.†
Carlton, C. H., brig.-gen.†
Carpenter, L. H., brig.-gen.†
Carr, E. A., brig.-gen.†
Carroll, Henry, col.†
Clous, J. W., brig.-gen.
Cole, George W., capt.
Compton, Charles E., col.
Converse, G. L., capt.†
Craycroft, W. T., lt.†
Davis, Wirt, col.†
Dimmick, Eugene D., col.†
Evans, George H., capt.†
Fechet, E. G., maj.
Forsyth, J. W., maj.-gen.
Freeman, H. H., brig.-gen.†
Guest, John, capt.†
Harris, Moses, maj.†
Holabird, S. B., brig.-gen.†
Hoyle, George G., maj.†
Hunt, George G., col.†
Huggins, Eli L., brig.-gen.†
Jackson, Henry, col.†
Jackson, James, lt.-col.
Kelley, Joseph M., maj.
Kendall, Henry M., maj.†
Keyes, A. S. B., maj.†
King, Chas., capt.†
Lee, Fitzhugh, brig.-gen.
Lockwood, J. A., capt.†
Loud, John S., maj.†
McCook, A. McD., maj.-gen.†
McGregor, Thomas, col.
Mackay, Edward G., maj.
Merritt, Wes., maj.-gen.†
Mills, Anson, brig.-gen.†
Norvell, S. T., lt.-col.†
Noyes, Henry E., col.†
Oakes, James, col.†
Powell, Philip P., capt.†
Pratt, R. H., col.†
Richards, James R., capt.
Russell, Gerald, maj.†
Sheridan, M. V., brig.-gen.†
Swigert, S. M., col.†
Viele, Charles D., col.†
Wagner, Henry, lt.-col.†
Waite, H. De H., 1st lieut.†
Wesendorff, Max, capt.†
Wheeler, James N., co.
Wheeler, Fred, maj.†
Whitely, Sam. M., col.†
Wheeler, Jos., brig.-gen.
Wood, T. J., brig.-gen.†

ROSTER OF CAVALRY OFFICERS, U. S. ARMY.

Those whose names are followed by an asterisk or dagger are members of the Association

FIRST CAVALRY.

Colonel.
Wells, Almond B.
Lieutenant Colonel.
Sprole, Henry W.†

Majors.
Borus, Peter S.†
Swift, Eben.†
Gaston, Joseph A.†

Captains.
Galbraith, Jacob G.
Brown, William C.†
Brown, Oscar J.†
Landis, J. F., Reynolds.†
Mills, Albert L.†
Scott, William S.†
Goode, Geo. W.†
Cabell, De Rosey C.†
Wright, Edmund S.†
Rivers, Wm. C.†
Hartman, John D. L.†
Davis, Milton F.†
Lindsay, Elmer.†
Arnold, Samuel B.†
Sills, Wm. G.†

First Lieutenants.

Smith, Henry C.
Arnold, Percy W.†
Moseley, George V. H.†
Foy, Robert C.†
Hickman, Edwin A.†
Tilford, James D.†
Hazzard, Russell T.†
Richmond, Henry R.
Ritch, Rogers S.†
Chapman, Leslie A. I.†
McAndrews, Joseph R.†
Gleave, Samuel R.†
Nolan, Robert M.†
Thomas, Charles O., jr.†
MacKinlay, William E. W.

Second Lieutenants.

Jones, C. Rodman.†
Smith, Selwyn D.†
Gregory, Daniel D.
Kent, Guy.
Enos, Copley.†
Graham, Arthur M.†
Lininger, Clarence.†
Munro, Horace N.†
Bell, William H., jr.†
Roscoe, David L.†
Rodney, Walter H.†
Pegram, John C.

Hodges, Harry L.
Krumm, Herbert Z.
Veterinarian
Nockolds, Coleman.†

SECOND CAVALRY.

Colonel.
Edgerly, Winfield S.†
Lieutenant Colonel.
Schuyler, Walter S.†

Majors.
Robinson, Frank C.
Parson, Daniel.
Blocksom, Augustus P.†

Captains.
Hoppin, Curtis B.†
Brett, Lloyd M.†
Lewis, Thomas J.†
Foltz, Frederick S.†
Gardner, John H.†
Stevens, Charles J.†
Sargent, Herbert H.†
Trout, Harry G.†
Winn, John S.†

Harrison, Ralph. †
Clark, William F. †
Heron, Joseph B. †
Wade, John P. †
Kochsperger, Stephen M. †
King, Edward L. †

First Lieutenants.

Pope, Francis H. †
Hanna, Matthew E. †
Johnson, Frederick C. †
Moore, John W. †
Parke, Henry W. †
Honey, Robert J. †
Mumma, Morton C. †
Harvey, Charles G. †
Smith, Gilbert C. †
Coughlan, Timothy M. †
Tyner, Geo. P. †
Martin, Walter F. †
McGehee, Oscar A. †
Hammond, O. P. M. †

Second Lieutenants.

Lynch, Frank E. †
Gasky, Geo. †
Saylor, John T. †
Pike, Emory J. †
Collins, Robert L. †
Pope, William E. †
McKinnill, Frank. †
Smalley, Howard R. †
Love, Moss L. †
Eby, Charles M. H. †
Taulbee, Joseph F. †
Barry, John A. †
Gordon, William W. †
Castleman, James P. †

Veterinarians.

Luak, William V. †

THIRD CAVALRY.

Colonel.

Woodson, Albert E. †

Lieutenant-Colonel.

Steever, Edgar Z. †

Majors.

Hain, Otto L. †
Dodd, George A. †
Andrea, Edwin P. †

Captains.

Ripley, Henry L. †
Morgan, George H. †
Boughton, Daniel H. †
Johnson, Franklin C. †
McDonald, John B. †
Heard, John W. †
Tate, Daniel L. †
Eyes, Rodwick. †
Thayer, Arthur. †
Hedekin, Charles A. †
Barton, Frank A. †
Conard, Julius T. †
Williams, Andrew E. †
Pattison, Harry E. †
Conard, Casper M., Jr. †

First Lieutenants.

Stirmyer, Edgar A. †
Babeock, Conrad S. †
Wallack, Robert E. †
McNally, Bernard E. †
Buchan, Fred E. †
Cowan, William B. †
Callen, Donny. †
Van Voorhis, Daniel. †
Wood, Robert E. †
Grant, Walter S. †

Benjamin, Julian A. †
Jackson, Robert F. †
Comly, George B. †
Taylor, William R. †
Seenan, Cornelio A. †
Hemphill, John E. †

Second Lieutenants.

Sterling, E. Kearley. †
Hawker, Irvin L. †
Coppock, Edward R. †
Lesher, Robert W. †
Malze, Sidney D. †
Bernard, Thomas P. †
Valliant, Rigby D. †
Mitchell, Henry E. †
Goodspeed, Nelson A. †
Johnson, Harold B. †
Jones, Arthur R. †
Talley, David B. †

Veterinarians.

Schwarzkopf, Olaf. †
Gelston, Samuel L. †

FOURTH CAVALRY.

Colonel.

Carr, Camillo C. C. †

Lieutenant-Colonel.

Stedman, Clarence A. †

Majors.

Murray, Cunliffe H. †
Edwards, Frank A. †
Lockett, James. †

Captains.

Erwin, James B. †
Benson, Harry C. †
Bivens, Tyree E. †
Cameron, George H. †
Cram, George H. †
Hughes, James B. †
Brown, Robert A. †
Koehler, Lewis M. †
Stewart, Cecil. †
Harris, Floyd W. †
Scherer, Louis C. †
Winans, Edwin B., Jr. †
O'Shea, John. †
Rutherford, Samuel McP. †
Chitty, William D. †

First Lieutenants.

Arnold, Frederics T. †
Henry, Guy V. †
Perabing, Ward B. †
Haigh, Charles S. †
Boniface, John J. †
Dorsey, Ben. H. †
Furviance, Samuel A. †
Gillen, Alvan C. †
McConkey, Douglas. †
Herbier, Fred W. †
Knox, Thomas M. †
Austin, Wm. A. †
Smyser, Rudolph E. †
Richter, Joseph C., Jr. †
Stedje, Jens. †

Second Lieutenants.

Fortescue, Granville R. †
Degen, John A. †
Storren, Robert. †
Edwards, Frank B. †
Barney, James P. †
Prunty, Leonard W. †
Naylor, Charles J. †
Martin, William S. †
Mohn, Albert J. †

Jurich, Anton, Jr. †
Henry, James B., Jr. †
Cowles, William H. †
Lewis, LeRoy D. †

Veterinarian.

Plummer, Alex. †

FIFTH CAVALRY.

Colonel.

Cooper, Chas. L. †

Lieutenant Colonel.

West, Frank. †

Majors.

Paddock, George H. †
Watts, Charles H. †
Bishop, Noel S. †

Captains.

Foster, Fred W. †
Goldman, Henry J. †
Macomb, Augustus. †
Bryan, Roger B. †
Holbrook, Willard A. †
Traub, Peter E. †
Jenkins, John M. †
McClure, Nathaniel F. †
Fleming, Lawrence J. †
Niemen, August. †
Pitchard, George B., Jr. †
Willard, Harry O. †
Holbrook, Lucius R. †
Dallam, Samuel F. †
Whitehead, Henry. †

First Lieutenants.

Valentine, William S. †
Hall, Chalmers G. †
McClure, Albert S. †
Foley, Hamilton. †
McIntock, John. †
Sturges, Edward A. †
Myers, Hu B. †
Raynor, Marion. †
Lewis, John H. †
Rodney, Geo. B. †
Martin, Charles F. †
Dixon, Varlen D. †
Foerster, Lewis. †
Young, John S. E. †
Hanson, John P. †

Second Lieutenants.

Jacobs, Douglas H. †
Renzelhausen, Wm. B. †
Swift, Eben, Jr. †
Disque, Brice P. †
Oliver, Prince A. †
Cooley, William M. †
Mearns, Fredrick. †
Bernard, Joseph H. †
Hennessey, Peter J. †
Sumerville, George R. †
Whetley, Wm. F. †
Andrews, Edwin D. †
English, Ebert G. †
Rothwell, Thomas A. †
Dockery, Albert B. †

Veterinarian.

Vans Agnew, Robt. S. †

SIXTH CAVALRY.

Colonel.

Smith, Allen. †

Lieutenant-Colonel.

Anderson, George S. †

Majors.

Gresham, John C. †
Pitcher, John. †
Cheever, Benjamin H. †

Captains.

Willcox, Elon F. †
Sands, George H. †
Allen, Henry T. †
Forsyth, William W. †
Steele, Matthew F. †
Cole, James A. †
Hutcheson, Grote. †
Byram, George L. †
Howze, Robert L. †
Ryan, John P. †
Rhodes, Charles D. †
Furlong, John W. †
Anderson, Alvord Van P. †
Heiberg, Elvin R. †
Lott, Abraham G. †

First Lieutenants.

Raymond, John C. †
Craig, Malin. †
Guiney, Patrick W. †
Heintzelman, Stuart. †
Read, Beverly A. †
Karnes, Wm. L. †
Baer, Joseph A. †
Morris, Willis V. †
Biddle, David H. †
Miller, Archie. †
Reed, William O. †
Clover, Francis W. †
Turner, Frederick G. †
Woode, Albert J. †
McNarney, Frank T. †

Second Lieutenants.

West, Emory S. †
Schroeter, Anton H. †
Stryker, Goss L. †
Lahn, Frank P. †
Miller, Ralph. †
Butler, Rodman. †
Joyce, Kenyon A. †
Place, Olney. †
Sidman, Frank E. †
Winter, John G., Jr. †
Keyes, Edward A. †
McAbee, E. R. Warner. †
Foley, Oscar. †
Griffith, Frederick D., Jr. †

Veterinarians.

Hunter, Sidney L. †
Cris, Jules H. †

SEVENTH CAVALRY.

Colonel.

Baldwin, Theodore A. †

Lieutenant-Colonel.

Woodward, Samuel L. †

Majors.

Chase, George F. †
Varnum, Charles A. †
Fuller, Ezra B. †

Captains.

Sickel, Horatio G. †
Brewer, Edwin P. †
Mercer, William A. †
Waterman, John C. †
Tomkins, Welsh R. H. †
Beach, Francis H. †
Vestal, Solomon P. †
Anderson, Edward. †
Butler, Matthew C., Jr. †

Paine, Wm. H. †
Averill, Nathan K. †
Hawkins, Clyde E. †
Bell, Ols W. †
Kennington, Alfred E. †
Orton, Edward P. †

First Lieutenants.

Powers, Robert B. †
Mitchell, Geo. E. †
Murphy, Pierce A. †
Harper, Roy B. †
Booth, Ewing E. †
Humphrey, Evan H. †
Rhea, James C. †
Conell, William M. †
Boice, Charles A. †
Asteele, Delphay T. E. †
Lovell, Geo. E. †
Gentry, Daniel H. †
Kendrick, William J. †
Bach, Christian A. †
Commiskey, Archibald F. †

Second Lieutenants.

Lee, George M. †
Jennings, Thomas H. †
Brown, Lewis, Jr. †
Harvey, Ralph S. †
Tatum, Howard. †
Bamberger, Raymond S. †
Malzine, Chas. M. †
Palmer, Orlando. †
Mann, Herbert E. †
Herr, John K. †
Miller, Troup. †
McLean, Allen F. †
Spring, John V., Jr. †

Veterinarian.

Jefferts, Joseph R. †

EIGHTH CAVALRY.

Colonel.

Rucker, Louis H. †

Lieutenant-Colonel.

Kingsbury, Henry P. †

Majors.

Beck, Wm. H. †
Shuuk, William A. †

Captains.

Hammond, Andrew G. †
Dickman, Joseph T. †
Stocum, Stephen L. H. †
Flynn, William F. †
Duff, Robert J. †
Sayre, Farrand. †
Farber, Charles W. †
Barnum, Malvern H. †
Evans, Eliwood W. †
Donaldson, Thomas Q., Jr. †
Suckie, George E. †
Sawtelle, Chas. G., Jr. †
Saxton, Albert E. †
Bigelow, Mortimer O. †
Parsons, Lanning. †

First Lieutenants.

Wells, Rush S. †
Williams, George. †
Roberts, Hugh A. †
Oliver, Llewellyn W. †
Norvell, Guy S. †
Latrobe, Ceman, Jr. †
King, Albert A. †
Weeson, Charles M. †
Watson, John. †
Elliott, Duncan. †
Kirkman, Hugh. †

Purinton, George A. †
Carson, Lawrence S. †
Coxe, Alexander B. †
Rethorst, Otto W. †

Second Lieutenants.

Terrell, Henry S. †
Phillips, Albert F. †
Bailey, George F. †
Walker, Richard W. †
Osis, Frank I. †
Megill, Sabring. †
Keller, Frank. †
Cunningham, Thos. H. †
Kilbourne, Louis H. †
Smith, Talbot. †
Davis, Frank E. †
McAin, William A. †
Mueller, Albert H. †
Early, Orson L. †

Veterinarians.

Stancliff, Ray J. †
Steele, Harry F. †

NINTH CAVALRY.

Colonel.

Godfrey, Edward S. †

Lieutenant-Colonel.

Goldwin, Edward A. †

Majors.

Garrard, Joseph. †
Galle, George H., Jr. †
Bigelow, John, Jr. †

Captains.

Fuller, Alvarado M. †
Cornish, Lester W. †
Walsh, Robert D. †
Read, George W. †
Nance, John T. †
Young, Charles. †
Armstrong, Frank S. †
Hamilton, George F. †
Inxon, Henry B. †
Slevett, Herman A. †
Christian, John B. †
Moses, George W. †
Mott, Chas. E. †
Miller, Alexander M., Jr. †
Kelly, William, Jr. †

First Lieutenants.

Knobottom, E. Holland. †
Pearson, Samuel B. †
Morrow, Henry M. †
Fair, John. †
Coleman, Sherrard. †
Winterburn, Geo. W. †
Quinlan, Dennis P. †
Calvert, Edward. †
Fechet, James E. †
Pilcher, Winston. †
Jones, Frederick M. †
Gibbins, Henry. †
Cole, Casper W. †
Bowie, Hamilton. †
Herman, Frederick J. †

Second Lieutenants.

Barton, Robert M. †
Haskell, William N. †
Cox, Edwin L. †
Hathaway, Emery. †
Howard, John H. †
Camp, Beauford K. †
Pety, Thomas B. †
Love, Robert R. †
Buchanan, Edmund A. †

Kunkel, Joseph V.
Bragg, Francis A.†
Sheridan, Philip H.
Smith, Andrew W.

Veterinarians.

Glasgow, S. Jr.
Tompany, John.†

TENTH CAVALRY.

Colonel.

Augur, Jacob A.†

Lieutenant Colonel.

Hughes, Martin B.†

Majors.

Scott, George L.†
Beach, William D.†
Reed, Robert D., Jr.†

Captains.

Grierson, Charles H.†
Walton, James W.†
Freeman, Samuel D.†
Johnson, Carter P.†
Macdonald, Godfrey H.†
Hay, William H.
Faxon, Robert G.†
Livermore, Richard L.†
Fleming, Robert J.†
Cannon, Thomas G.†
Cavanaugh, Harry LaT.†
Parker, James S.†
Jervay, Eugene P., Jr.†
Sumner, George T.†
Boyd, Charles T.†

First Lieutenants.

Roberts, Thomas A.
McCoy, Frank E.†
Farmer, Charles C., Jr.†
Whitcliffe, Warren W.†
Hart, Augustus C.†
Fonda, Ferdinand W.†
Godson, Wm. F. H.†
Cornell, Wm. A.†
Olsen, Geo. J.†
Huston, James.
Palmer, Bruce.†
Wagner, John A.
Enslow, Raymond S.
Hemphill, John E.†
Cartmell, Nathaniel M.

Second Lieutenants.

Scott, Walter J.†
Wells, Edward C.
Müller, Carl H.†
Stott, Clarence A.†
O'Connor, Marr.
Bordick, Myron R.†
Davis, Benjamin O.†
Tompkins, Daniel D.
Price, Geo. E.†
Cook, Seth W.
Edwards, William W.†
Devall, James W.
Dilworth, Herman S.

Veterinarians.

McMurdo, C. D.†
Service, S. W.†

ELEVENTH CAVALRY.

Colonel.

Morton, Charles.†

Hickey, James B.
Sibley, Frederick W.
Wheeler, Homer W.†

Captains.

West, Parker W.†
Haines, John T.
Brooks, Edward C.†
Hardenman, Lecher.
Elliot, Stephen H.†
Perry, Alexander W.
Langhorne, George T.†
Howell, Melvin W.†
Jones, Samuel G.†
Harbord, James G.†
Tompkins, Frank.
Clayton, Powell, Jr.†
Leary, Edmund M.
Vidmer, George.†
White, Herbert A.†

First Lieutenants.

McCormack, Willard H.†
Seales, Wallace B.
Kromer, Leon B.†
Luhn, William L.†
Ryan, Thomas F.†
Taylor, Theodore B.
Sanjot, Julien E.
Davis, Edward.†
Amos, Frank P.
Rockwell, Verne LaS.
Odell, Albert S.†
Shelley, James E.
Tompkins, Edmond R.
Rittenhouse, Basil N.

Second Lieutenants.

Caldwell, Ralph C.
Perkins, Alvin S.†
Westmoreland, Wade H.†
Smith, Walter D.†
Cox, Creed F.
Pearson, John A.
Symington, John.†
Baird, George H.
Warren, Rawson.
Cocke, John.†
Grunert, George.†
Parker, Ralph M.
Meade, William G.†
Harris, Emmet R.
Stevenson, William L.

Veterinarians.

McDonald, Alex.
Gould, John H.

TWELFTH CAVALRY.

Colonel.

Forbush, W. C.†

Lieutenant Colonel.

Dorst, Joseph H.†

Majors.

Hare, Luther R.
Guilfoyle, John F.†
Kendall, Henry F.†

Captains.

Nicholson, William J.†
Tripp, Percy E.
Michie, Robert E. L.†
Littabrant, William T.†
Caldwell, Frank M.
Hornbrook, James J.†
Symmonds, Charles J.
Anderson, Edward D.†

Rockenbach, Samuel D.†
Conach, Joseph E.†
Morgan, John M.†
Parker, Francis Le J.†
Craig, John W.†
Berkeley, Hugh D.

First Lieutenants.

Brown, Herbert J.†
Lee, Fitzhugh, Jr.†
Long, John D.†
Ryan, John J.
Sharpley, Arthur G.†
Potter, Ashton H.
Case, Frank L.
Cootes, Harry N.†
Van Way, Charles W.
Burroughs, James M.
Morey, Lewis S.†
Neilson, Frederick B.
Case, Lewis W.
Kimball, Gordon N.†
Biegler, George W.†

Second Lieutenants.

Coffey, Edgar N.
Butler, James S.
Jeffers, Solomon L.†
Pickel, Arthur N.
Abbott, James E.†
Lusk, Oscar S.
Reagan, Taylor M.
Graham, William M., Jr.
Tate, Robert F.
Troxel, Orlando C.
Beck, Robert McC., Jr.
Mayo, Charles R.†
Offey, Edward M.†
Sulmon, Max.

Veterinarians.

Hill, William P.

THIRTEENTH CAVALRY.

Colonel.

Harfield, Charles A. P.†

Lieutenant Colonel.

Thomas, Earl D.†

Majors.

Hunt, Levi P.†
Jones, Thaddeus W.
Taylor, Chas. W.†

Captains.

Lochridge, P. D.†
Dade, Alexander L.†
Preston, Guy H.
Fenton, Charles W.†
Corcoran, Thomas M.†
Glasgow, William J.†
Phillips, Ervin L.†
Williams, Robert C.
Short, Walter C.
Swezey, Claude B.†
Whitman, Walter M.†
Babcock, Walter C.†
Hyer, Benjamin E.†
Casatt, Edward B.
Hawkins, Hamilton S.†

First Lieutenants.

Romeyn, Charles A.
Longstreet, James, Jr.†
Winters, William H.†
Ball, Louis R.†
Sturges, Dexter.†
Heaton, Wilson G.†
Herringshaw, Wm. F.
Goethe, James.
Wilen, John W.

Captains.

Pershing, John J.†
Koester, Francis J.
Overton, Clough.†
Merillat, Alfred C.
Marshall, Francis C.†
Ryan, James A.†
Johnston, William T.†
Barnhardt, George.
Lindsey, Julian R.†
Hickok, Howard R.†
Kirkpatrick, George W.†
Andrews, Lincoln C.†
Walker, Kenzie W.†
Parker, Frank.
Eltzinger, Le Roy.†

First Lieutenants.

Forsyth, Wm. D.
Dean, Warren.
Dudley, Clark D.†
Van Deer, Samuel.
Rosa, James O.
McCallough, Charles E.
Duncan, Geo. O.
Bowman, Geo. T.
Cameron, Francis H., Jr.
Tremaine, W. C.
Briand, Christian.
Going, Richard B.
Leah, Ben. Jr.
Mowry, Philip.†
Johnston, Gordon.†

Second Lieutenants.

Gilver, Clarence C.
Manrum, Wiley P., Jr.
Burnett, Chas.†
Lynch, Arthur J.
Norton, Lifton R.†
Ely, Eugene J.
Gardenshire, Wm. C.
Barriger, Wm. S.
McMullen, Joseph I.
Martin, Isaac S.†
Holliday, Milton G.†
Partridge, Leon R.†
Overton, Wm. W.†
Foster, Victor S.
Robertson, Samuel W.

Veterinarians.

Crutman, W. R.
Wilgaus, J.

Davidson, Alexander H.†
Lowe, William L.†
Steenberg, George.†
Moffet, Wm. P.†
Clifton, Wm. H., Jr.†
Deitrich, Leonard L.†

Second Lieutenants.

Ellis, Roland B.†
Reynolds, Robt. W.†
Trumbo, Geo. A. F.
Smith, Walter H.†
Meyer, Henry A., Jr.
Boen, Fred L.
MacLane, Paul B.†
Donnelly, John T.
Bristol, Matt C.†
Dougherty, Clarence A.†
Neill, Walter H.
Bull, Henry T.†
Cathro, Thomas E.
Jennings, Charles H.
Pritchard, William D.

Veterinarians.

Jewell, Chas. H.
Fraser, Walter.

FOURTEENTH CAVALRY.

Colonel.

Lebo, Thomas C.†

Lieutenant Colonel.

Ward, Frederick K.†

Majors.

Hardie, Francis H.†
O'Connor, Chas. M.†
Scott, Hugh L.†

Captains.

Carter, Jesse Mel.
Gray, Alonzo.†
Suplee, Edwin M.†
McNamee, Michael M.†
Meyer, Oren B.†
Howard, Harold P.†
Reeves, James H.†
Walker, Kirby.†
Adams, Sterling P.†
Smith, Cornelius C.†
Smedberg, William R., Jr.†

Yates, William.†
Crosby, Herbert B.†
Smith, Mathew C.†
Drake, Charles B.†

First Lieutenants.

Munro, James N.†
Day, Clarence R.†
McKinley, James F.†
Heidt, Grayson V.†
Hayne, Paul T., Jr.†
Schultz, Theodore.†
Lippincott, Aubrey.†
Holecomb, Freeborn P.
Whitlock, Frank O.†
Thomas, Richard M.
Corbuser, Philip W.
Wells, William S., Jr.
Poillon, Arthur.†
McKenney, Henry J.†
Winnia, Charles C.

Second Lieutenants.

Rucker, Kyle.
Jordan, Harry B.†
Russell, George M.†
Pillow, Jerome G.
Riggs, Kerr T.†
Keyes, Allen C.†
Jewell, James M.†
Read, John H., Jr.†
Fisher, Ronald E.†
Fisher, Arthur G.
Hume, John K.†
Weyrauch, Paul H.†
Zane, Edmund L.†

Veterinarians.

Peter, Henry W.

FIFTEENTH CAVALRY.

Colonel.

Wallace, Wm. M.

Lieutenant Colonel.

Rodgers, Alexander.†

Majors.

Hunter, George K.
Craig, Louis A.†
Day, Matthias W.

ASSOCIATE MEMBERS.

The following are eligible to associate membership: (a) Persons who are, or who ever have been, commissioned officers of honorable record in the Regular Army (service other than cavalry) or in the Navy. (b) Persons who are, or who have ever been, commissioned officers of honorable record of the National Guard of any State or Territory. (c) Former general officers and former commissioned officers of cavalry of honorable record in the Confederate Army.

ADJUTANT GENERAL'S DEPARTMENT.

Colonels.
Wagner, A. L. †
Barry, T. H. †
Lieutenant-Colonel.
Kerr, J. F. †
Major.
Evan, R. K.

INSPECTOR GENERAL'S DEPARTMENT.

Lieutenant-Colonel.
Mills, Stephen C. †
Major.
Irwin, J. A. †

QUARTERMASTER'S DEPARTMENT.

Majors.
Miller, William H. †
McCarthy, D. E. †
Captains.
Yates, A. W. †

SUBSISTENCE DEPARTMENT.

Colonel.
Woodruff, C. A. †
Sharpe, H. G. †
Captain.
Grove, Wm. R. †

MEDICAL DEPARTMENT.

Lieutenant-Colonel.
Hoff, J. Van R.
Comery, E. T. †
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The attention of our readers is called to the following new and old advertisements:

THE MEHLBACH SADDLE COMPANY.

Almost thirty years have passed since an officer of the U. S. Army, Colonel R. E. Whitman, conceived and made the first Whitman, *i. e.*, the present U. S. Army officers' saddle. The style of the firm name under which the business was inaugurated was "R. E. Whitman, U. S. A. (Retired).". This was shortly afterward changed to "R. E. Whitman & Co.," the name remaining the same until 1880, when the Whitman Saddle Company was incorporated, and succeeded to the business. In 1881 Colonel Whitman retired, and Wm. C. C. Mehlbach, then treasurer of the company, assumed the entire management of the concern, which he continued until 1896. During this period Mr. Mehlbach produced numerous new models of saddles, improved upon the construction and lines of the old ones, and, encouraged by a constantly growing patronage, broadened the scope by the manufacture and importation of everything pertaining to equestrian articles to such a degree as to make the company stand foremost in the world among specialists in riding equipments. Buck & Mehlbach took charge of the business in 1896. In 1901 this partnership was dissolved and the Mehlbach Saddle Company was incorporated and purchased all the assets of Buck & Mehlbach, as well as the good-will and "Whitman" trade-mark of the Whitman Saddle Co., thus succeeding both of these concerns. A handsome illustrated catalogue may be had upon application.

MOËT & CHANDON CHAMPAGNES.

According to custom-house statistics, more than one million bottles of Moët & Chandon Champagne were brought into the port of New York in the year 1902, being the largest quantity ever imported into this port in any year by any one house, which places Moët & Chandon ahead of all their competitors in New York, as it does in the world, marking an advance in this country equal to 564 per cent. greater than the combined increase of all the other champagne houses.

J. WILLIAM POPE.

This large importer of finest high grade coffees, teas and spices, calls attention to its wares on a colored page of advertising appearing for the first time in this number of the CAVALRY JOURNAL. Army kitchens always aim to be supplied with the best of everything; but especially in coffees and teas do army people demand an extra good quality, and will be satisfied with nothing but the best. The only large importer adhering strictly to coffee, tea and spice trade in the West is J. William Pope, of St. Louis, and they know and have the best and the best only. Cardinal, San Juan, Menelek and Lucknow coffees are recommended to army people on account of their excellent values and superior flavor and aroma.

INSURANCE.

Mr. H. W. Littlefield has a new advertisement in this issue of the JOURNAL, which it will be well for those desiring to insure to consult before acquiring protection elsewhere. Several new features are offered.

ANHEUSER-BUSCH BREWING COMPANY.

The appearance of a new advertisement of this old reliable firm and friend of the army will be welcomed by the readers of the old CAVALRY JOURNAL, where a similar "ad." was always to be found. Everyone in the army, of course, knows the firm, and it is useless to commend the firm or its wares. Every troop in the service has a horse named "Budweiser," and many have an "Anheuser" also, thus on a small scale

commemorating the name of Mr. Anheuser in the same manner as the generous Mr. Adolph Busch has always done in keeping alive the memory of his first partner in his now immense business by retaining the latter's name at the head of the company's title.

J. F. SCHMELZER & SONS.

Officers stationed in the West, and those in the East for that matter, who desire anything in the sporting goods line cannot do better than go to Schmelzer & Sons to supply their wants. This firm has had extensive dealings with army people, and know how to treat them. Companies, troops and batteries needing outfits for athletic games, sports, etc., can also be accommodated by this firm, who do an immense business at their large store in Kansas City.

H. J. HEINZ CO.

Every one knows about the fifty-seven varieties of Pure Food Products of this company, and every one should also know that these varieties represent the acme of perfection in manufacture. This company has preliminary salting stations throughout northern New York State, which are models of cleanliness and order. The management which exacts this neatness at the stations exercise the same care throughout the process of manufacture. One of the products the H. J. Heinz Company, especially adapted for army use either in camp or post, is their delicious Baked Beans and Tomato Sauce, which can be had at any post commissary or post exchange.

NATIONAL SOCIETY ARMY OF THE PHILIPPINES.

Of this society which all entitled to the privilege are requested to join, General Irving Hale, president, gives the following history:

"After the return of the volunteer in the fall of 1899, the members of the First Colorado Infantry, U. S. V., conceived the idea of organizing a society composed of men who served in the Philippines, and the Colorado Society Army of the Philippines was organized in December, 1899, and issued invitations to all of the organizations which served in the

Philippines to attend a reunion in Denver, August 13-15, 1900. This reunion was a very successful and enjoyable affair, and resulted in the organization of the National Society Army of the Philippines, and the election of General F. V. Green as president. The next annual reunion was held at Salt Lake City, August 13-15, 1901, and was also a very enjoyable occasion. At this meeting I was elected president. The third annual reunion was held at Council Bluffs, Iowa, August 13-15, 1902, and was perhaps the largest and best of the three. At this meeting the constitution and by-laws were revised, prescribing fully all the details of organization of State societies and local camps. The next reunion is to be held at St. Paul, Minn., probably in the early part of September instead of August, as usual, in order to make it coincident with certain local celebrations. The society has grown steadily, especially during the past year, in which a number of local camp and State societies have been added, and many individual memberships received from both the regular army and volunteers. It is destined to be a great influential society, which is worthy of the membership and earnest support of all who saw service in the Philippines."

KEUFFEL & ESSER COMPANY.

It is hardly necessary to call the attention of the older officers of the army to this company, further than to remind them of the address, and to inform them that the Keuffel & Esser Company has a well equipped store in St. Louis. To the younger officers this firm is heartily recommended in every particular, having supplied the army with instruments for a great number of years, in the most satisfactory manner.

THE DEIMEL LINEN MESH COMPANY.

Attention of all officers is called to the new advertisement of this firm. They present their goods for trial by the military. They have achieved immense success wherever introduced, and seem to supply the correct thing. Especially to army officers should the underwear manufactured by this company be extremely useful, on account of the changes in the climate where service may call them. The underwear is adapted to cold and to hot climates admirably, and combines all other desirable qualities with most important one, extreme lightness.

VAL BLATZ BREWING COMPANY.

The return of this advertisement to the pages of the CAV-ALRY JOURNAL will be welcomed by all our readers, who, with the company, are awaiting the return to the army of the canteen privileges which it formerly enjoyed. The Val Blatz Brewing Company has branches throughout the United States, and all are ready as of yore to cater to the army trade. A prettily illustrated booklet, "What Her Blue Eyes Saw," will be sent to any address free of charge.

WM. A. BARR DRY GOODS COMPANY.

The appearance of the page advertisement of the largest department store in St. Louis will serve as a reminder to all officers who have ever served at St. Louis, and at the same time be an introduction to those who have not had this opportunity. Business, however, may be done with the firm through their large mail order department, and any inquiries as to prices, samples, etc., will have careful and prompt attention.

DODSON BRAUM MFG. CO.

This firm issues a very handsome catalogue containing colored plates of all their wares. They have supplied the post commissaries with many excellent articles, and their name on a package is a guarantee of good quality. Post exchanges are invited to correspond with the firm in regard to purchase of goods in large quantities. Troops and companies are requested to write for the price list. They furnish all kinds of table delicacies and relishes, sauces, jams, jellies, fruit butters, etc., put up in glass and wood, in most attractive packages.

SCUDDERS-GALE GROCER CO.

Many a man's heart has been gladdened when it was announced at the Post that the good things to eat and the "smooth things to smoke" had arrived from the Scudders-Gale Grocer Co., or from one of the concerns they have succeeded, for these houses have for years catered particularly to the post exchanges. This house is agent for Hoffman

House Cigars, Dwinell-Wright Co.'s Coffees, Caffè Frères, Sardines, Mushrooms, etc., and for many other prominent foreign and domestic concerns. All orders that are intrusted to this firm will receive immediate and careful attention.

COBB'S COCOA AND CHOCOLATE.

The attention of our readers is called to the new matter on the page of advertising of the Cobb Chocolate Company of Chicago. Among the many excellent products manufactured by this company are a superior quality of cocoa, and two kinds of delicious chocolate, that you are asked to try at their expense. They adopt this means of introducing their wares where they are not already known, since it would be impracticable for the salesmen to visit every part to demonstrate their value. You are asked simply to request of your post commissary or of the exchange to procure samples. A fair trial in these lines does not involve any outlay on your part, and should you become a customer of this firm, as you undoubtedly will after trial, the superior values of the goods at standard prices will amply repay you for any trouble you may take in procuring these articles of diet for the post exchange or the post commissary.

J. H. TAPPAN & CO.

Interest in polo in the army is on the increase, and several regiments have regularly organized polo teams. In connection with this spirit, so admirably suited for cavalry officers, attention is called to the card of J. H. Tappan & Company, appearing in the JOURNAL. The firm has representatives in San Antonio, Chicago, New York, and at Wenham Depot, Massachusetts, at all of which places inquiries will receive prompt attention.

WM. SCHOTTEN & CO.

These importers and wholesale dealers in teas, coffees and spices have for a long time furnished the army with their standard wares. During the Spanish-American War they shipped as a single order one hundred thousand pounds

of their "Best Rio" Roasted Coffee to the camp at Chickamauga. This means one and one-quarter millions of rations. Soldiers like Rio coffee better than all others, and this brand is a particularly acceptable one. A better quality of roasted coffee is "Schotten's 1904," and as the firm is anxious to introduce this combination blend in army households, they will give a pound carton to any officer or any family free of charge upon application. This firm also sends out a little booklet called "Coffee Hints," which can be had for the asking, and has some good points on selection and making of good coffee.

Cavalry Journal.

Easy c.s.

JOURNAL U. S. CAVALRY ASSOCIATION.



VOLUME XIV.

JULY 1903

TO

APRIL 1904.

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