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EXPERIENCES IN CHINA.*

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IN THE latter part of the month of July, 1900, telegraphic orders from the War Department at Washington directed certain officers to report to General CHAFFEE, commander of the China Relief Expedition, for duty on his staff, and also to observe the foreign armies and make a report on them. This detail found me in the center of Panay, one of our large southern islands of the Visayan group, at the town of Pototan, where the gentle Filipino was trying to make it interesting for us. The telegram from General HUGHES was to "pack my war bag promptly," so as to catch the next steamer for Manila. The Filipinos were at that time organizing for increased activity, in the vain delusion that by resisting the American authorities and shooting at the flag they could influence the elections in the United States in their favor. When they heard of the war in China, there was great satisfaction, for they supposed that two wars at the same time would be too much for the Americans to handle. The *presidentes* and the *principales* of the town accordingly assembled at our headquarters to bid me farewell, expressing their grief at my going, wishing a safe voyage and speedy return.

A change from the constant marching, scouting and continual alertness being welcome, no time was lost in getting aboard the *Isla de Negros*, leaving for Manila. The voyage on the blue waters among

*Read before the Kansas Commandery of the Military Order of the Loyal Legion of the United States.

those tropical islands is a delightful memory. Of those regions it may indeed be said that all nature is beautiful and only man is vile.

The next step was from Manila to Japan on the transport *Thomas*, a voyage of five days, covering a distance of 1,300 miles. We skirted along the coast of Luzon for two days, passed the light-house of Cape Bojador, the Babuyanes and Batanes Islands, and the rocks of Balintag. We were hardly out of sight of the latter before the small islands belonging to Japan began to loom up. Many of these are mere jagged rocks sticking up out of the water. The shores of those bits of land are very steep, frequently precipitous on the eastern side, where the constant beating of the heavy swell of the Pacific during the northeast monsoon is undermining and wearing them away.

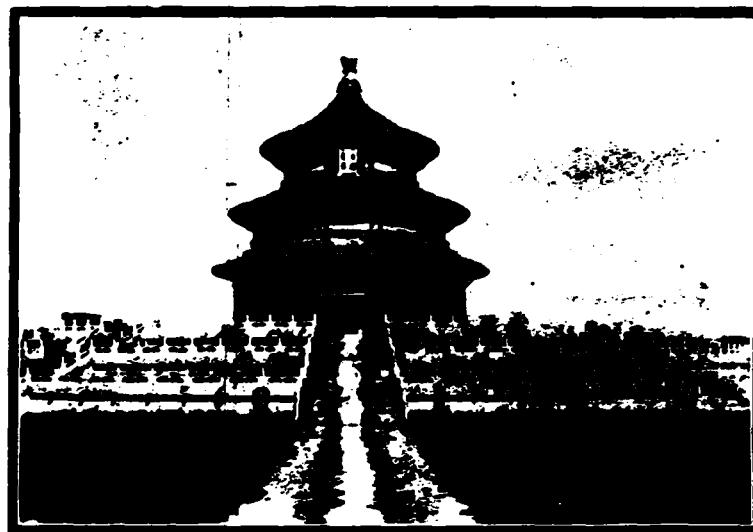
After the pompous little Japanese officers got through with their inspections, we passed up into the narrow harbor of Nagasaki. When entering a Japanese port for the first time, many curious sights attract our attention. The mountain scenery, the hillsides cultivated terrace upon terrace clear to the top, the war vessels, transports, and hospital ships of all the great Powers, and the multitude of *samans* swarming in the harbor and about the ships just arrived—all are very interesting. Unless guards are stationed at the ladder with positive orders, the ship will soon be overrun with hucksters, tailors, shoemakers, etc., ready to manufacture shoddy goods for you while you coal ship. This is another one of the sights of Japan, the coal being raised thirty feet up a human ladder composed principally of women and children, from the lighter to the porthole of the ship, passing from hand to hand in little straw baskets of the size of a washtub. By keeping up a constant stream this human elevator accomplishes the result rather quickly. It looks like a great waste of labor; however, the human machine requires but little fuel in those countries.

After visiting the streets, shops, temples, and other points of interest, and riding about in *jirikishas*, we transferred our belongings to the transport *Indiana*, and were off for the seat of war in China.

The distance from Nagasaki to Taku is about seven hundred miles. After leaving Japan, the first considerable island is Quelpart, which lies south of the peninsula of Korea. Its principal peak rises to 6,500 feet, and is a fine landmark. In the Korean archipelago there are a great number of small islands of peculiar shape: the constant beating of the waves has left them with vertical sides facing the great ocean. The smaller ones appear to be uninhabited by man.

Naturally, when one enters the Yellow Sea, a suggestion of that color is looked for. Unless the name be derived from the faint yellow

haze prevalent at certain seasons, it must be classed with other geographical misnomers. The land on the far projecting promontory of Shantung looks bleak and desolate. Its hills compare very unfavorably with the terraced and verdant slopes of Japan. The Miao-tao group of islands stretches across the Gulf of Pechili one hundred and twenty-six miles from Taku. More than a whole day is taken up in traversing this great gulf. The blue waters change very gradually to green, becoming lighter and lighter, and passing finally into a yellow



TEMPLE OF HEAVEN, PEKING, 1900.

low, and growing dirty as you proceed west and approach the mouth of the Peiho and Hoangho.

Late in the afternoon of August 16th, as we were nearing our destination, mast after mast came into view, until finally we could count more than sixty vessels of the Christian powers riding at anchor. At night, with the search-light and signal systems of the warships in operation, the sight was still more imposing. Next morning we could make out the flags of various nations and observe the forms of the men-of-war and the disposition of their fighting tops.

Many nations were represented in the allied fleet at Taku, though the interest of some of them seemed very remote. The shore was barely visible, and there was no object of interest to break its low monotony. The process by which the Peiho and Hoangho in past

ages built the great plain extending to the east, south and west of Taku is still going on, and will eventually fill up the bay. At present first-class ships cannot go much nearer than ten miles from shore, and even then the propeller stirs up the mud. The large lighter, *Foochow*, received the cargo and passengers and one battalion of the Fifteenth Infantry. By taking advantage of the tide, we passed the bar and were soon in the muddy outflow of the Peiho. The outline of the earthworks known as the forts of Taku now became clear, and the large guns mounted *en barbette* loomed up against the horizon. As we passed the fort we could see that the guns had not been damaged much and that the works were practically intact, which agrees completely with the usual results of bombarding earthworks by a fleet. If the Chinese had had the courage to stand by their guns, they might have inflicted much loss on the fleet. The course of the river is very crooked, so that we soon gave up any attempt to form a mental picture of its windings. The American flag was flying in several prominent places, and never looked more beautiful.

The country is very low and flat, partly covered with water. The surface is dotted with many mounds of various sizes. These are graves, salt-piles or ice-houses. The Chinese houses are built of *adobe* or of reeds plastered with mud. Being of the color of the earth, they make no contrast and are scarcely visible in the landscape. The whole presents an appearance of wretched squalor, monotonous in the extreme. If such is the impression in summer, in winter the place is only to be compared with the Arctic Siberian marshes.

At Tongku the United States had a quartermaster and a dock. Here we had our first view of the Cossacks, the nomads of the Steppe. Their horses were of all colors, scrubby, shaggy and dirty, with stallions, mares and even colts among them. The men had no tents, but made shelters of pieces of canvas, sheets of corrugated iron, matting, or similar articles. They seemed heavy-set, husky fellows, perfectly at home in their surroundings.

The railroad for Peking passes Tongku. It was then in operation as far as Tientsin only. It is double track, standard gauge, well ballasted and solidly constructed throughout. It was managed, or rather mismanaged, by Russian officers and troops. They were railroad troops, and had some notions of running a railroad, but cleanliness was not one of them. The big high-top boot with pointed toe and low heels is worn by all grades of Russian troops. It is really much lighter than it looks, yet on the march there is an appearance of clumsiness. Their marching looks more like loafing along the road than well-regulated progress.

At Tongku we found the American gunboat *Monowacy*. She is a side-wheeler, and a relic of bygone times. She has not left the Eastern waters for many years, the Navy being afraid to trust her on a voyage across the Pacific. She is more of a house-boat than a man-of-war, and will probably leave her bones in the Orient. During the bombardment of the forts she was struck by a stray shot, and then crawled up the river as far as she could go, in order to get out of range.

The country as far as Tientsin is of the same low, flat character, with sandy soil. The crops are scarce and thin. At Tientsin, which is a large city of one million inhabitants, the usual evidences of war were plentiful. There were many ruined buildings, wrecked rolling stock, dead Chinamen floating in the river, etc. The only hotel in the city, known as the Astor House, was occupied by the Russian General Staff, and had no accommodations for guests. We finally found our way out to the Sixth Cavalry camp late in the evening, and were soon comfortable among our friends. The cavalry went out early next morning with two hundred Japanese infantry and twenty-five Bengal lancers on an expedition to the southwest. They found the Boxers about six miles out. The cavalry and the lancers engaged the enemy, drove them several miles and killed about three hundred; in fact, went for them, mounted and dismounted. A large supply of flags was brought in. A Chinese force is surely an army with banners: a regiment carries enough flags for a corps.

Early next morning we started out with three troops for Peking. The destruction outside of the walled city of Tientsin, and also inside, was beyond description. The houses were simply piles of brick and mortar. Most of the dead Chinamen had already been removed for sanitary purposes, not on account of any concern for the Chinese, nor because they were looked after by relatives or friends. We reached Yangtsun, distance seventeen miles, that day. The country is still flat and sandy, but the soil is better, and fair crops are raised. Groves of trees make their appearance, and there are some slight undulations. We crossed the Peiho twice: at Yangtsun it is a yellow, muddy stream, reminding one of our Western rivers. It is about fifty yards wide, and has a good current. The crossings are on bridges of boats or junk, which were quite shaky for our army wagons. At Peitsang, which is half-way to Yangtsun, we found Company "G," Ninth Infantry, on one side, and the Japanese troops on the other, and at Yangtsun there were Japanese and French.

Setting out from Yangtsun the next day, the mountains back of Peking are dimly visible. The character of the country continues the

same. The principal crop is the *kao-ling*, which looks like our sorghum, but is much taller. They also raise millet, maize and vegetables, such as beans, egg-plant, and sweet potatoes. The soil is not yet rich enough for crops requiring substantial ground. Egg-plant and sweet potato seem to be favorites. No fruit in this part of the country. We reached Matao, a distance of thirty-seven miles, that day. At this place there are sand dunes, and consequently much worthless land. There are no roads; only trails for wagons or carts. Most of the time we were marching on top of high dikes which had been constructed to restrain the overflows of the river. These were not formerly used as roads and were not intended for that purpose. At intervals there were piles of earth to repair breaks in the dam; also graves on top; all of which interfered with our teams.

At Matao we found American, English and German troops, with an American captain in command. The next day we marched to Tung-chao, which is a walled city at the head of river navigation for junks on the Peiho. Formerly there was a canal into Peking, but it has been allowed to fall into disuse. The river has dwindled to a small stream, and at low water is not navigable at all. The villages on the road, very much like our *barrios* in the Philippines, except as to materials and method of construction, were all deserted. Dead Chinamen were seen floating in the river. Those on land were fed on by dogs and hogs. Many were undoubtedly buried under the smoldering ruins. At Tung-chao a corpse was lying in the middle of the narrow gate. All sorts of transportation passed over, until it was simply a mass crushed down into the mud. Nobody took the trouble to bother about Chinese cadavers. Police parties of coolies buried them later on. Life is held so cheap in China that but little attention is paid to dead human beings.

The destruction of the railroad was most thorough. Being so solidly constructed, it must have cost them a great deal of labor to destroy it. The rails were removed and thrown into the river. The ties were burnt or buried, and the culverts and bridges so badly damaged as to require extensive repairs. Tung-chao got off easier than the rest, but everything had been well looted. The temple near the river landing had a number of gods of heroic size and most fierce aspect. Soldiers had stuck their bayonets or sabers into them, gouged out the eyes, or otherwise defiled them. In many cases they had been reduced to wrecks and lay strewn about the buildings. Later on, the destruction was made more complete in the search for hidden treasure.

On the 23d we set out for Peking, and soon its crenelated wall loomed up in the distance. We passed the place where the first at-

tack was made and where the Fourteenth Infantry scaled the wall. The distance to the American camp was about seventeen miles, making the total from Tientsin eighty-seven miles.

The city of Peking, as enclosed by its walls, is in the form of a rectangle, oriented from north to south. The northern two-thirds is enclosed by the highest and thickest walls, and is known as the Tartar City. The lower third may be considered as a sort of annex. It is called the Chinese City. Inside the Tartar City, and surrounded by high walls, is the Imperial City. Inside of this is the Forbidden City, or Palace. This is, of course, enclosed by high walls, and is surrounded by a wide and deep moat.

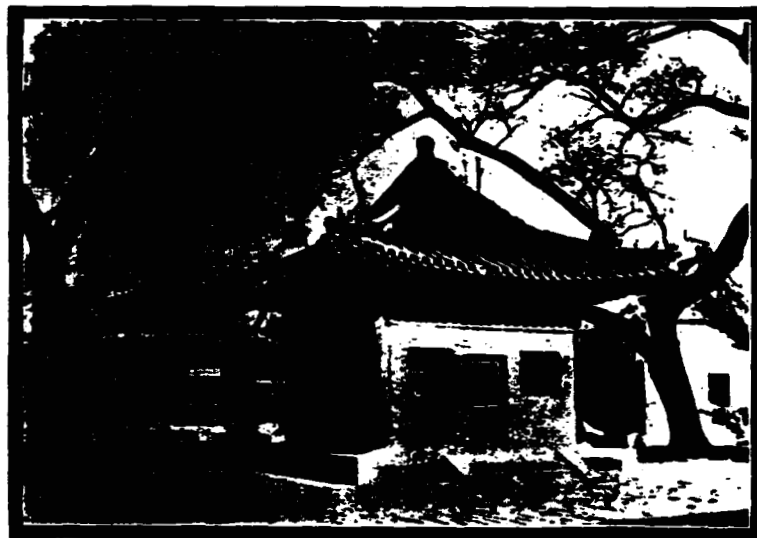
The two cities were divided into sections and assigned to the troops of different nations for the purposes of police, sanitation and preservation of order. The Americans had the western half of the Chinese City and the southwest of the Tartar City. Our troops were encamped in an enclosure known as the Temple of Agriculture. These imperial grounds, surrounded by high walls, were almost unoccupied. There were a few buildings, or so-called temples, and a platform of white marble on which religious ceremonies were held. It was the duty of the Emperor to come to these grounds once a year to break soil and plant seed. In the buildings we found many conventional agricultural implements made of wickerwork or light wood, evidently used in the ceremonies. A large part of these grounds was paved with brick, but the neglect of the place was so great that weeds as high as a man on horseback were found everywhere. Beautiful bronze vases of large size, sculptured marble and other works of art were hidden away in neglect. The American troops cleaned up these places, and they then undoubtedly presented a better appearance than they had for years.

The eastern half of the Chinese City was occupied by the British forces. Their camp was in a large compound known as the Temple of Heaven. The grounds were occupied by the Bengal Lancers, the Twelfth Royal Battery, the Coolie Corps and the enormous pack trains of the British force. In the eastern part of the compound there are two beautiful circular pagodas. One is decorated in blue, yellow and gold; the other one in less brilliant colors. Both are artistic in design and in good condition, and may be considered the most attractive pieces of architecture to be found in Peking. There is also a large circular raised platform in white marble, where the Emperor worships alone; this is known to the Chinese as the center of the universe.

The Japanese occupied the whole northern portion of the Tartar City. The Russians had the southeastern corner; the Italians, French and Germans had smaller portions assigned to them.

All the nations insisted upon being represented. The buildings in the grounds occupied by troops from the continent of Europe were carefully looted, and in many cases completely gutted.

The Americans entered on the eastern side and made their way through successive gates, with the assistance of Riley's battery, to



U. S. SIGNAL OFFICE AND PAYMASTER'S OFFICE. TEMPLE OF AGRICULTURE, PEKING, 1900.

the walls of the Imperial Palace. In ten minutes more the last gate would have been blown down and the American soldier would have occupied the sacred precincts of the Forbidden City. At this stage the foreign generals called a conference, and the operations were suspended. Our troops withdrew under fire with the greatest disgust, and have ever since felt that they were deprived of their lawful prize by foreign chicanery.

The predominating feature attracting one's attention in Peking is the great number of walls.

On the 13th of September we took a ride on the top of the wall surrounding the city, starting at the south gate of the Chinese City, and making the complete circuit. The walls are easily ascended on

the ramps which are found on the inside at the main gates. The Tartar wall is from fifteen to twenty feet higher than the Chinese wall, and there is no way of passing from one to the other.

The wall is from thirty to forty feet high and from forty to fifty feet in width between the crenelated edges, which rise about five feet above the roadway. It is everywhere practicable for carriages; with a little work, principally cleaning up, it could be made one of the finest drives in the world.

The facings of the walls are made of large sun-dried brick. The space between is filled up with earth, and the top is paved with a layer of brick. At suitable intervals there are gates, generally double, with high square towers erected over them. The whole of Peking is surrounded by a moat, which was formed by taking away the earth to build the wall. The immense amount of labor to construct these walls, with an aggregate length of over fifty miles, is almost beyond imagination, especially when we consider that no machinery of any kind was employed, and the whole thing was done by hand.

The crenelated edges are formed by blocks of stone, with the usual notches for the use of firearms. This idea of having everything surrounded by a wall appears to be universal. There are no fences around grounds or property. Everything is closed up by solid walls, and the space thus surrounded is called a compound. The interior of these compounds is frequently a labyrinth of walls, so that without a guide it would be difficult to reach the residence portion. The roofs of the large public buildings and temples are made of porcelain tiles of peculiar construction. All houses belonging to the royal family are covered with yellow tiles; the use of this color for decoration is reserved to royalty.

Of the Chinese City only about one-third is occupied by buildings, and in the Tartar City more than one-half is vacant ground.

Although the population of Peking is about a million, so many live in one house that probably three times the present population could be comfortably quartered within the main walls. It seems to be a universal custom in North China to have a piece of wall in front of the door of the house, and parallel with its front. The object of these detached walls was a mystery to us for some time. Finally a resident told us that evil spirits can only travel in straight lines, and that this bulwark forced them to pass by the house thus protected. On all the doors were pasted pictures of two gods, one very fierce, looking like a war god, the other mild and gentle. The full meaning of this we never ascertained, though it was understood that they were simply household gods. There are temples and shrines in-

numerable. At intervals along the road there are small buildings with *papier-maché* gods and facilities for worship. Many of the mandarin class have their own gods on the premises, just the same as the well-to-do Filipinos have their altars and images. Indeed, it is a poor Chinaman that has not some kind of a god at hand to worship.

There is no water-supply system in Peking. Though all the houses are roofed with tile, we saw no arrangements for catching rainwater. Reliance is placed on wells, and the water is carried in buckets. The Chinaman uses very little water for personal purposes. A curious fact in this connection is that in a city of a million Chinamen there is no laundry. One could have washing done by women who had been at the French Mission; but partly because the water was dirty, or economically used, or the clothes were covered with dust while out to dry on the ground, one's raiment usually came back looking worse than when sent out.

The headquarters of the American commander were in the office building of the American Legation, which is situated on Legation Street. A large part of the Chinese City was in ruins, the destruction being greatest in the vicinity of Chien-men, in the German section. Many of the streets were merely a succession of piles of brick and mortar, the woodwork still smoldering in places. This destruction was wrought by the Boxers, who burnt up every building in which Chinese merchants sold any kind of foreign goods. The fire, of course, soon got beyond control, and the rich commercial portion of the Chinese City was almost entirely ruined. The stench from human and other carcasses, compost-heaps and green stagnant pools, and the clouds of dust consisting of dried filth, made traveling through the streets exceedingly disagreeable. Add to this the grotesque appearance of the Chinese shops still standing, with their strange lettering and gilded dragons; the massive gates and walls of the Tartar City; the numerous statues of dogs and dragons in stone or bronze, sometimes of colossal size; the many different kinds of soldiers, from the Mohammedan of India with bare legs and brilliant turban, to the heavy-booted Cossack from Siberia; and the filthy Chinaman with his pigtail and garlic breath pervading the whole, and you have a conglomerate impression never to be forgotten.

Legation Street extends from the Hai-te-men to the Chien-men, and is so called because most of the foreign legations have their compounds on this street. Only very recently it was macadamized so as to make it passable in wet weather. It is very narrow and entirely inadequate in the busy season. The lamp-posts were split and shivered by bullets; the walls are scarred in many places. The Hôtel

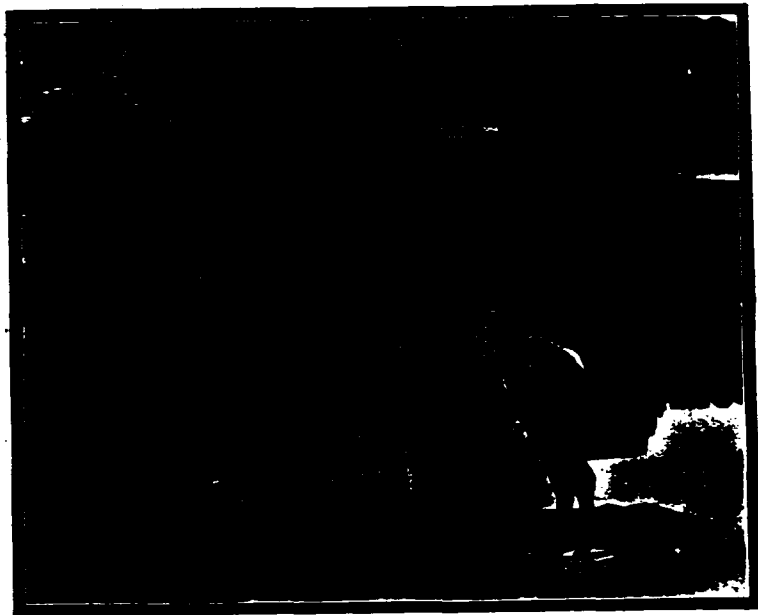
de Pekin was barricaded, and all the rooms of the second floor had been repeatedly perforated by projectiles. West of the American Legation all the houses were destroyed in the effort of the Boxers to burn out the Europeans. Signs of very heavy rifle and artillery fire were plentifully in evidence.

On the 24th of August we visited the Pei-tang (North Cathedral), or French Mission. In this enclosure, the walls of which are over one mile in length, two hundred and fifty persons perished during the siege. The place was defended by thirty French and ten Italian soldiers; of these twenty-three were for duty when relief came. Rations were being issued at the rate of two ounces per day, and there were only 800 pounds of food left for 3,000 people. Twenty-four hundred shells were fired at the garrison. The south end of the church is marked by thousands of bullets; the east side is badly damaged by artillery fire. A sheet of zinc as large as an "A" target, found in the defenses, had two hundred bullet-holes in it. Four large mines were exploded by the Chinese. The crater of one was seventy feet in diameter and thirty feet deep. Nothing can give a clearer idea of the cowardly nature of the Chinese than the fact that a handful of men was able to hold this large place against a numerous enemy armed with artillery in position on commanding walls.

The American Legation suffered very little damage. The Spanish Legation also escaped. The French Legation was destroyed and the minister collapsed with fear. The British Legation, which is the largest and strongest in Peking, was shot up a good deal, but was ready at all times to render a stout resistance. The Chinese were mining and the British were counter-mining. All sorts of material of war was improvised, and a good state of defense arranged. In the dining-room of the legation a corner of the frame of the large oil portrait of Queen VICTORIA was carried away by a shell, but the painting itself not damaged in the least. By a strange coincidence, the same portrait of the Queen was damaged in an identical way at the siege of Kimberley in South Africa. At the French Mission a marble statue of the Virgin about four feet high placed on one of the interior walls escaped without the slightest injury, although the wall around it was pitted with bullet-holes. The devout looked upon this as a miracle. Bishop FAVIER proved himself a good deal of a soldier, and deserves much credit for the way the defense was managed. Several thousand Chinese Christians were huddled together in the Cathedral and adjoining buildings. Judging from their appearance, they seemed not worth saving, either spiritually or physically. We were informed that there are no converts among the rich or mandarin class.

and that the Christian influence is confined to the blind and deformed picked up out of the streets.

The architecture of the Chinese is very simple; the same form is repeated everywhere. After awhile, when the novelty has worn off, it all becomes very monotonous and tiresome. The ground plan of the buildings is in nearly every case a square or rectangle. The pagodas are circular, hexagonal or octagonal. They are experts in the use of mud, cement and stucco. The tile roofs are supported by heavy framework of timbers. Like the Filipinos, they have no lumber-



BRITISH INDIA LANCER. (ORDERLY.)

yards; only accumulations of logs, which are sawed up by hand as needed; naturally there are no saw-mills. In the Tartar City there were many millions of feet of logs on hand.

The roofs are generally in the form of two or four curved surfaces. At the end of the ridge there are always two large porcelain deer heads; at each of the four corners there is a procession of conventional figures consisting of a deer head, three to five dogs, and terminating with a woman mounted on a rooster. These pottery figures are of the same color as the roof, green, purple or yellow. The

street doors are barred from the inside and are without lock or latch. The only way to get in is to knock and wait for somebody on the inside to open.

The streets of this capital of a people numbering 400,000,000 are curiosities. The broad avenue passing from the south gate between the Temples of Heaven and Agriculture to the Chien-men and up to the Forbidden City is paved in large blocks of granite, with a gravel or dirt road on each side. There are also paved roads about the Imperial Palace. All the rest are simply natural ground. In many cases a ditch four or five feet deep is dug on each side, leaving in the center a causeway about sixteen feet wide, tolerably well drained, but too narrow. The ditches are filled with green or black water, offensive in every way. Cases of animals and even persons being drowned in the streets of the city are not uncommon. At night, driving on these causeways without street lamps is dangerous, and it is almost impossible to turn around. In dry weather clouds of foul dust pervade everything, even in winter. This is the reason why in old temples and other buildings not in use layers of several inches of dust are found. The dustiness of North China exceeds anything I have seen elsewhere. The freshly painted rigging of the *Egbert* became coated with dust in Taku Bay, ten miles from the shore.

There is a stone road, comparatively new, leading from the city to the Summer Palace. The old stone roads are very bad traveling. The large blocks are worn smooth; many of them have sunk away on account of lack of proper foundation and deficient drainage. In dry weather such roads rack wagons or carts to pieces; in wet weather animals find no secure footing. Such is the road to Lin-ko-chao, of which Marco Polo speaks in his travels of the thirteenth century. At that time, over six hundred years ago, it probably was a pretty good road. As there are no fences anywhere, there is a general tendency to form new roads across country. The Chinese peasant counteracts this in an ingenious way. Every two or three rods he digs a short trench perpendicular to the road. Rather than to be jolted or stalled, the driver will confine himself to the narrow traveled trail.

The bridges of the country are massive affairs in granite or marble. The bridge over the Hun-ho at Lin-ko-chao is a broad and beautiful structure in white marble. It aroused the admiration of Marco Polo, and is still in good condition. Many of the trails and narrow roads have, through centuries of use, been worn deep into the soil, so that one is likely to be traveling in a small cañon with no way of getting out except at the ends. This was especially noticeable in the country north and west of Peking. Good running water is scarce, for

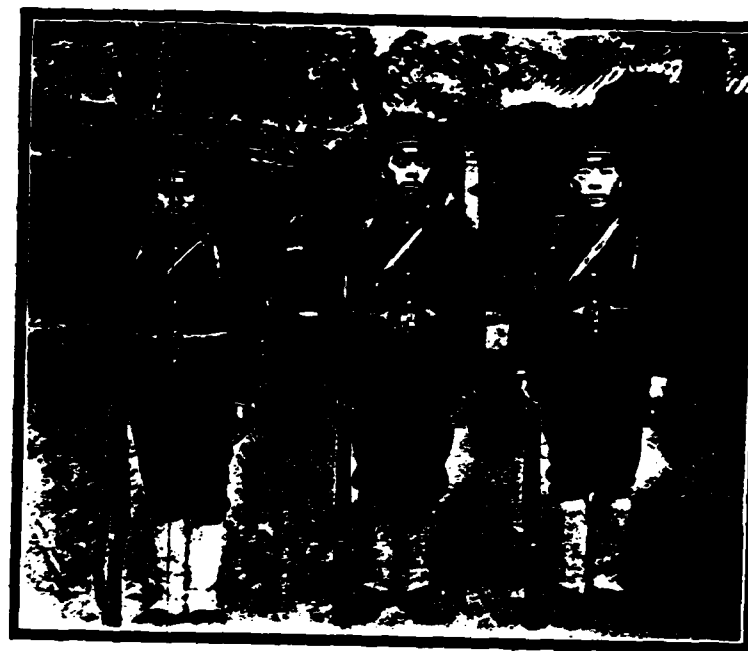
the dense population pollutes all the water with its filthy habits. Water from wells is raised by buckets, suction or force pumps being unknown.

The people are very saving in the use of fuel. There are no stoves and no fire-places. Firewood is very scarce. Reeds and the roots of plants are used for fuel. In the cold winter weather the Chinaman puts on additional layers of clothes wadded with cotton or lined with skins of animals. Generally he has no bed, but sleeps on the *kong*. This is a platform raised about two feet above the floor and covered with flat tiles. A light fire is built under it. Every particle of heat is thus utilized. A few mats spread on the *kong*, a pillow and a cotton cover complete the sleeping arrangements.

The cooking of the Chinese is peculiar. They are great eaters, and may be seen devouring food at all hours of the day. They are especially fond of fritters and all things cooked in grease. Peanuts, chestnuts, sweet potatoes and egg-plant are favorite articles of diet. The marketing is done in the usual Oriental way. No food supplies are kept on hand in the household. At meal-times the servant buys for a few cash just the amount necessary for that meal and cooks it over a diminutive fire. The poor classes feed largely on rice and millet, or the seeds of the *kau-ling*. The fuel used in cooking is coal. About ten miles west of Peking there are rich mines of anthracite coal of excellent quality. The coal-fields of China are by far the greatest in the world. Owing to primitive methods of mining and transportation, coal is quite expensive. It is all brought to the city on the backs of camels. Immense trains of these large, ugly, shaggy, double-humped beasts bring in their four hundred pounds each. As they subsist on the coarsest food and labor is very cheap, this method is probably as good as any from a financial point of view. Several offers to build railroads to the coal mines have been made by foreign capitalists. The Chinese Government always rejects them, because it would throw so many camels out of employment.

The Chinese ponies are a very hardy class of animals, and comfortable for saddle purposes. Their antipathy to white men, and especially to soldiers, was curious to behold. Our marines seized a lot of them. There seems to be a sort of infatuation which makes a sailor or a marine crazy to ride a horse as soon as he reaches the shore. Our men had horses to give away, and nearly all the officers rode. When we stop to think that *carruajes*, *coches*, *calesas*, *quilezes* and *carromatas* are unknown in this part of China, we are apt to forgive this acquisitiveness on their part. The Peking cart, which is the only Chinese vehicle on wheels that I saw, is an instrument of tor-

ture. It is stoutly constructed of hard wood. The tire has cogs to prevent slipping. There are no springs of any kind; the top, in shape of a box, being attached to the axle and shafts. There are no seats; simply a few cushions thrown in the bottom. Imagine traveling a hundred miles with your feet doubled under you tailor fashion and riding on the axle. People who made the journey from Tientsin in such a cart tell me they were dead to the world for a week. A much pleasanter mode of conveyance is in a chair carried by coolies. A



JAPANESE INFANTRY.

large wheelbarrow with the wheel in the middle is also a very common means of transport. One man steadies it at the handles and others pull on it with ropes. But by far the most frequently used transport is by means of coolies and the *pinga*. The human machine is so cheap, and it takes so little fuel to run it, that this method will not be replaced for a long time, if ever.

Coming back to the question of fuel and heating, the anthracite coal is so hard that it is difficult to keep the fire going. With a small fire such as would be used by the Chinese, it is almost impossible.

This is overcome by pulverizing the coal and then making it up into balls the size of a walnut. For heating purposes they also use a small stove, which is simply an unglazed earthenware four-gallon jar with a small hole near the bottom for draft. All the gases, of course, escape into the room, and sometimes the occupants fail to wake up. This, however, is a matter of small moment, and the stove is not blamed for it.

A great many different kinds of money were in circulation. The silver dollars of Japan, Hongkong, the Straits Settlements, Mexico, the United States and the Chinese Provinces were all valued differently. The bank paid what it pleased for gold; Chinese merchants would not take it at all. At Tong-ku I tried to pay a boy for carrying my valises with a piece of silver. He refused it, but was satisfied with two *cash*, of which it takes eight hundred to make a dollar. He had evidently never seen anything but brass money in his life.

The *cash* are strung on cords forty-nine to a bunch, the fiftieth one being taken out as *cumshaw* to pay the teller. Our quartermaster had this stuff stacked up and went around with a cart to pay off. Most of the coolies had to be paid daily. In the evening we could see them trudging home with a load of *cash* on their shoulders. They thus had plenty of money on a salary of twenty to thirty cents per day, which was double the usual amount. While the poor Chinese were daily digging and raking over the ruins for stray *cash*, our soldiers left them lying about in strings as not worth picking up.

The principal markets are on Chien-men Street in the Chinese, and on Hai-te-men Street, or, as the Germans call it, Ketteler Strasse, in the Tartar City. On bright days these streets are a sight to behold. For three miles north of Legation Street there are immense throngs. Besides the goods for sale in the stores, thousands of peddlers and hucksters display their wares in the open air on mats. It is, of course, impossible to enumerate all the kinds of garments, silks, embroideries, furs, loot and junk offered for sale. At this particular time a large part of it was stolen goods, damaged articles recovered from the ruins, or the proceeds of looting expeditions sent out by the foreign armies.

The universal drink of the country, as you know, is tea. It is served hot, without sugar or milk, and is offered by everybody, even by the peasants along the roadside. Our soldiers did not esteem the beverage very highly.

The fruits of Peking are few in variety. Crab-apples are sold on strings like beads. The larger apples are mealy and not fit to eat. The pears are of two kinds: the hard watery variety, without flavor;

and the round Peking pear, which is famous, probably by contrast, for it does not compare with our California or Delaware pears. The grapes are excellent. The characteristic fruit of the country, however, is the large flat yellow persimmon, of which the Chinese seem to be very fond.

Farming is primitive and laborious. They do pretty fair plowing, are skillful in the use of manures and in irrigation, and keep their fields scrupulously clean. No agricultural machinery was seen: also no wind-mills. Their principal deficiency in farming is the lack of variety. The peasant is content to produce the same thing for centuries without ever thinking of change or improvement. The *kao-ling*, already referred to, grows to a height of fifteen feet. A command placed in a field of it is as completely out of sight as it would be in a dense forest. The seed is planted close together, thus producing long slender stems. This would seem to be undesirable as far as the quantity and the quality of the grain are concerned. But the latter is not the only product to be considered. The long slender stems are used for building material, to construct the sides and roofs of houses; and split into strips it makes the coarse mats so commonly seen in China.

There are many places of interest to visit in and near Peking. Nobody was more eager to have a look at the interior of formerly forbidden buildings than the Europeans and Americans of Peking, some of whom have been resident there for many years. Sir ROBERT HART, an Englishman who has charge of the Chinese imperial customs, came in 1860, and has been back to London only once.

Beside the great walls and the beautiful pagodas of the Temple of Heaven, we visited all the legations. The Temple of Ancestors is full of *cloisonné* and rich pottery. It was used by the French as headquarters until they moved to the Altar of the Silkworm. At the White Ming Pagoda, on the border of the lake and north of the Forbidden City, there is a large bronze statue of the tutelary deity of the city. It is a most forbidding-looking object, with the head of a dragon and eight pairs of arms and legs, and trampling human victims under foot. The marble bridge across a narrow part of the lake and the building at its eastern extremity are worth looking at.

Due north of the center of the Palace there is an elevation of several hundred feet, known as Coal Hill. According to tradition, one of the powerful emperors collected here a vast pile of coal to serve as a reserve supply in case of a siege. There may be some foundation for this in fact, as it would be a perfectly natural proceeding; but it must be largely a myth. There certainly is not a trace of coal

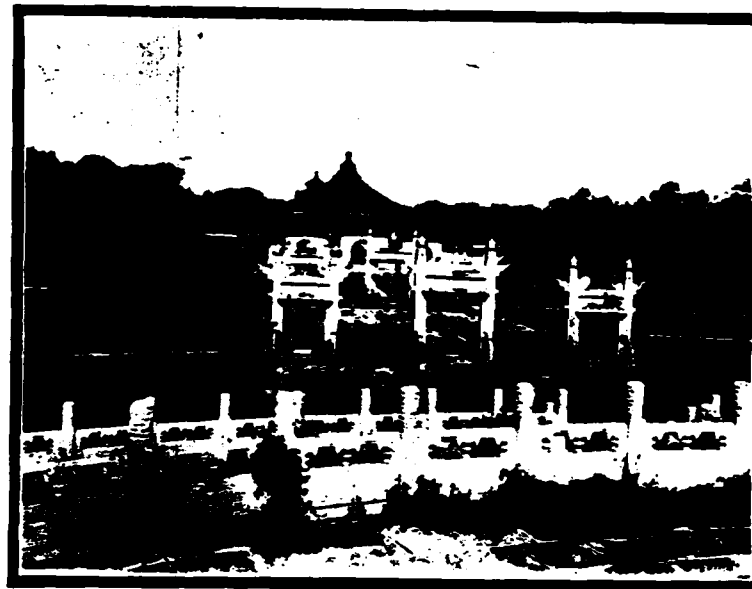
there now. From the pagoda on the summit there is a fine view not only of the Forbidden City, but also of all the surrounding country. As you look down on the yellow roofs of the sacred precincts, where no Christian had ever entered, you appreciate the desire of the traveler, reporter and photographer to penetrate into the interior.

The southern gate was held by the Americans, the other three by the Japanese. Nobody was allowed to enter without a pass from the American or Japanese general. It was my good fortune to pass through twice and to inspect nearly all the buildings and works of art. Foreign officers of high rank and other influential people went through in detachments, under escort of an officer, American or Japanese. Most of them had large pockets, and it was difficult to prevent objects of small size from being "pinched"; in fact, on my second trip none were to be seen; even the porcelain tags from the ashes of the imperial ancestors had been removed. Those who had borne for years the stigma of not being good enough to enter these sacred halls now had little compunction in carrying off the most sacred articles, to be preserved as souvenirs. The Forbidden City is very disappointing. We expected better things at the seat of empire. There are some fine large vases in bronze, and colossal statues of dogs, cranes, turtles and dragons. The buildings are dilapidated, the courts overgrown with weeds, the tapestries decayed, the carpets worm-eaten and ragged. All these things are relics of the glory of the ancients; the moderns have not even kept clean the works of art left to them, nor prevented the palaces and temples from becoming foul pigeon-roosts.

The Empress Dowager's Palace on the lake shore, in the southwest corner of the Imperial City, was crammed with valuable articles. Unequaled ebony carvings in large pieces, ivory and marble work, smaller *objets de vertu* in agate, jade and malachite, rich tapestries, gowns and furs, all in profusion. Yet, with all these really handsome furnishings, they went wild over cheap bronze or gilt clocks from France and Germany; gaudy chandeliers with red and green pendants disfigured the rooms. European playthings were found everywhere. They seemed to be very fond of mechanical toys and the phonograph. Everybody who could afford it had a music-box. The Emperor's Palace near by presented the same picture to a smaller extent. At one time boating on the lake was an amusement for the royal inmates. In these latter times the lake has shallowed a good deal and is overgrown with a jungle of lotus, so that boating is impossible. A few bathing and washing places are kept clear of weeds. Another royal plaything to drive away *ennui* was a railroad track and cars. The road was several miles in length and ran along the lake.

There were no engines. When the Peking Lake Shore Limited came along, decorated in yellow furnishings, it was drawn by coolies manning imperial yellow ropes.

Near the north wall of the Tartar City there is a large compound, half a mile square, with a mass of buildings known as the Lama Temple. It formerly was inhabited by 2,000 monks, who, in addition to the usual lazy and worthless character of such beings, were extremely rapacious and insolent to foreigners, who paid good money to get into



VIEW IN TEMPLE OF HEAVEN GROUNDS, PEKING, 1900. LOOKING NORTH.

their rotten presence, and usually more to get out. The brutes are meek enough now; everybody cuffs them to get even. The main temple has a figure of BUDDHA eighty feet high, and the place was full of gilt and bronze gods. I am informed that it has been looted and all the gods except the eighty-footer carried off.

The Chinese barracks, north of the Anting plain, which was a drill-ground for the regular Chinese troops, and about one mile from the city, were occupied by the Japanese. As the buildings are new, the Japs were as comfortable as they would have been in their own barracks.

By far the best kept and most beautiful place is the Emperor's Summer Palace, seven miles northwest of Peking. This group of buildings is situated on the banks of a considerable lake, partly artificial, on which there are five steam launches. The figure of a side-wheel steamboat in white marble rests at the edge of the lake and makes an ideal band-stand and a place of entertainment. The secretary of the American Legation, Mr. SQUIRES, gave a picnic and a luncheon to a large party there. Music and the most approved beverages and viands were not lacking. All these palaces were in the possession of the Russians, who beat the Japanese in a race for this loot. They had placed seals over various apartments, but I fear that in spite of this, His Imperial Chinese Majesty will have to make a new collection of *bric-à-brac* when he gets back.

The Ming tombs, about a day's journey to the northwest, are said to be well worth seeing. A projected trip to that place and to the great wall of China was cut off because at that time the Americans were discouraging expeditions.

At a conference of ministers and commanding generals, on August 25th, the question of a formal entry into the Forbidden City was brought up. After some discussion, in which the contention was made that the military success of the expedition was not complete, that the Chinese would say that we could go so far but no farther, and that we were unable to penetrate the Holy of Holies through direct interposition of the gods, it was decided by a vote of six to two, all the Europeans voting in the affirmative, to make a formal entry into and passage through the Forbidden City. It is true that the pretext seemed a small one; still it must be remembered that the Chinese are a credulous and superstitious people, and as long as there was no ocular demonstration of the complete fall of the Imperial City, they would consider themselves as having "saved their faces." The question of the relative strength of the detachments, and especially as to who should head the procession, almost raised a row in the conference. Precedence was claimed for the Japanese because they had by far the largest force and had done most of the work. The Russians asked for first place because they were first in the city. Neither General LINIEVITCH nor General FUKUSHIMA would give way, and neither was willing to submit it to a vote. General CHAFFEE took pains to inform the wily Muscovite that the reason he was first at the gate was because he had violated an explicit agreement not to start till 8 A. M., by advancing secretly at 10 o'clock the night before. As it was, the Russians were stalled at the gate and unable to go farther until the Americans

pushed past them. General LINIEVITCH finally proposed that the Russian and Japanese troops go in side by side, which of course was not practicable. General FUKUSHIMA then said he would leave the final decision to his chief, Baron Lieutenant-General YAMAGUCHI. The latter sent word next day that the Russians might lead. It was agreed to make the formal entry at 8 A. M. of Tuesday, August 28th. No mounted troops to take part; the generals and their staffs to ride horses, but no others. Troops to enter at the south gate, march through to the north gate, and be dismissed. The following order of entry and the number of soldiers corresponding to each was fixed as follows: Russians, 800; Japanese, 800; English, 400; Americans, 400; French, 400; Germans, 250; Austrians, 60; Italians, 60. The French and German contingents were entirely out of proportion to the degree of their participation in the campaign, the French being feebly and the Germans not at all represented. General FREY claimed he now had 8,000 troops in China. The Austrians and the Italians sent all they had. The chiefs of the staff met next morning and completed the arrangements.

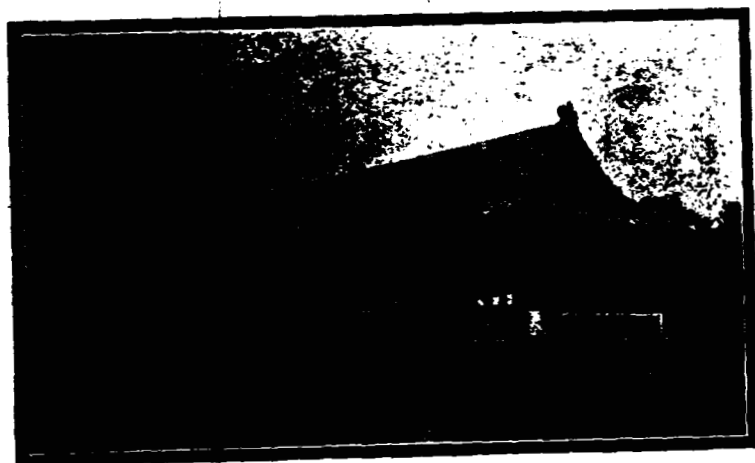
On the day fixed, the procession started at the appointed hour. The Russians took charge of the whole thing. General LINIEVITCH and staff rode around and looked at the various bodies of troops, except the British, and received their salutes. The Russians had two bands of music; the conduct, appearance and marching of their men were good. The Japanese moved off promptly in their turn. They presented a remarkably uniform, neat and compact appearance, and marched with precision, using a sort of modified goose-step, similar to the German parade-step, which shook their fat cheeks. Full swing of the arm was permitted. The bagpipe corps of the Gourkas, dressed in turban and plaids, then struck up with their weird music, and the procession of British troops started; all of their regiments were represented. Next followed the Americans, headed by General CHAFFEE and his staff.

The picture printed in *Collier's Weekly* was taken at this time, while waiting our turn. As our bands could not be induced to march up from Tientsin, we were without music. In one of the court-yards near the center of the Palace, the Russians formed line and cheered the other troops as they passed by, the bands playing appropriate airs. The Germans marched in their parade-step, which is like our double-step, but, gaining ground to the front. They were a sturdy-looking outfit, and impressed one at once as good troops. The French presented a sorry appearance; the Austrians and the Italians were creditable. The spectators were limited to a few photographers and

reporters, so that the honor of heading the procession was rather an empty one, after all.

After the parade, the staff officers visited the buildings and looked at the gods and other curiosities. The eunuchs did not seem a bit pleased when they had to open up. When we came to the harem, the head eunuch positively refused to open the door, and made signs across the back of his neck, indicating that he would lose his head. It occurred to me that turned over to some of our inducers, he might have quickly changed his mind.

The domestic animals of North China are about the same as ours. The sheep is much more common than with us, the skin being highly esteemed for clothing in winter and the flesh for food at all seasons.



GENERAL CHAPPEE'S HEADQUARTERS. TEMPLE OF AGRICULTURE.
PEKING, 1900.

The large flat-tailed variety seems to be the favorite. The camels of Mongolia come down in the fall of the year with furs and other produce of the country, and take back with them tea, cotton goods and silks in the spring. The dog is very plentiful and is the scavenger of the country. There is a peculiar breed of small dogs with high foreheads and large eyes. They are only seen in parlors as pets.

All the bronze and stone dogs, sometimes weighing tons, seemed to be fashioned after this breed. The rest of the canine population are curs of the worst kind. We saw no buzzards or other birds of that species in North China. The reason of this probably lies in the fact that there is nothing for them to eat. No domestic animals are al-

lowed to die a natural death; if one should do so accidentally, he would be utilized by the Chinamen anyway. All wild animals have been crowded out of this densely populated section. but deer, tigers, bears and wolves are found in the mountains of Manchuria and Mongolia. For many years the only tax paid by Korea as a dependency of China was a certain number of tiger skins annually.

Along the road from Tientsin to Peking there was a good deal of indiscriminate shooting, especially in the vicinity of the Russians, and from junks in the river. It was probably indulged in to some extent by soldiers of all nations, shooting at dogs, chickens, and so forth. and was a source of annoyance for several weeks; one of our lieutenants was hit in the hand by a stray bullet.

The country around Peking, as viewed from prominent points in the city, is a plain. The foot-hills to the west are about ten miles distant, and beyond them successive ridges of high mountains are seen to the north and west. To the east, south and southwest the great plain extends indefinitely. The Imperial Hunting Park, southwest of the city, is about five miles square and enclosed in stone walls. Outside the walls of the city, especially to the west and north, there are large suburbs with many thousand inhabitants. At various points pagodas and temples are to be seen, and occasional groves of trees in parks and cemeteries. A large part is laid out in gardens to supply the vegetables and other food-stuffs for the city. Not enough is produced, however, to feed the dense population, and reliance is placed on the annual tribute of two million bags of rice floated up on the canals from provinces farther south.

On the 25th of August a private of the Fourteenth Infantry brought in an immense double-humped camel loaded with vegetables: it created a sensation in camp. This was a new kind of transportation to the American soldier, and he did not know exactly how to handle him. Later on, our quartermaster had large trains of camels bringing in vegetables from the country and coal from the hills.

On the 26th of August two native Indian soldiers were killed by an American patrol, for looting in the American section. They would not stop when ordered to halt, and, after crossing their own lines, opened fire. Two shots were fired at them in return and two Sikhs died. A court-martial fully exonerated our men. The affair increased the reputation of our Army as being composed of good shots.

Many expeditions were organized for the purpose of scouting the country and locating the Boxers. The Sixth Cavalry made two expeditions to the Hunting Park and killed about forty. Another expedition of the Sixth Cavalry went to the northeast, with the object of

liberating some Chinese Christians. They were guided by an American missionary, who had to be restrained. His sole object seemed to be to impress the natives with the power of the Christian God. The Christians were found to be in no danger and declined to be rescued.

The British sent out many expeditions with carts and pack trains for the purpose of bringing in loot. When no more places were available in the city, they extended their operations to the country, and soon had a warehouse as big as a ship filled ten feet deep with furs, garments and silks. The French were inveterate looters, and sent out expeditions daily. The Russians had possession of many of the choice places in the city. Their operations were not much in evidence, but they were effective nevertheless. The Japanese captured 50,000,000 *taels* of silver. A horse sold by Lieutenant RHODES, Sixth Cavalry, to the Japanese chief of staff, was paid for in original packages of silver from the treasury. The Americans, especially the marines, also acquired a few articles before they were stopped. All the American loot was ordered to be turned in, and then General CHAFFEE did not know what to do with it. He finally ordered it to be sold for the benefit of the poor of the city. Later in the season considerable bodies of troops were sent out, ostensibly to drive away Boxers, but the real object was to get in touch with more loot. A large expedition consisting of two columns, one from Tientsin and the other from Peking, was sent to Pao Ting-fu. All the silver had been removed to the mountains, which caused as much disappointment to Catholics and Protestants from France and Germany as it did to Mohammedans and Buddhists from India.

The Chinese silver is cast in small ingots, varying in value from five to fifty dollars. They are generally in the shape of a small short boat, and are called "shoes." These fit into each other, and are placed in bamboo poles, and are thus transported.

The head clerk of Peking's only hotel has become a millionaire, verifying the old saying that it is an ill wind that blows nobody good. He and his wife, who is a California woman and a good rifle-shot, commenced their looting during the siege. Houses in rifle range abandoned by rich Chinese were visited and pillaged. When the troops entered, this M. CHAMONT took advantage of the confusion to bring in all the silver he could. The safes at his office were overflowing, and the precious little "shoes" were lying about like so much old iron. Later on, he commanded regular robbing expeditions. One of our patrols recognized him at his work in one of the American sections. He escaped, and being a French subject, got off free. He made most of his money, however, by going among the soldiers and buying the

silver. As the "shoes" did not circulate as money, he got them for one-fifth to one-half of their value from soldiers, who were tired of lugging the stuff around in their haversacks. By deposit in that philanthropic institution, the Hongkong and Shanghai Bank, the operation was completed.

Upon reliable information that a number of Boxers were assembled in the hills west of Peking, an expedition, under command of General WILSON, consisting of British and American troops, started on the 16th of September. The British had a conglomerate force. They seem to have the habit of working by detachments instead of tactical units. There may be some reason for deviating from sound principles in this respect, but I could not discover it. The first day's march was to Liu-ko-chao. A night march brought us at daylight to the position. A flanking column consisting of QUINTON's battalion, Fourteenth Infantry, and some Hindoos climbed Mt. Bruce, and thus turned the enemy's position at the Pa-ta-chao temples. It was a stiff climb, in which the Americans beat the hill-climbers of India. Upon arrival at the summit, firing commenced. One company finally charged the town and took it, while a small detachment went two miles farther to close the line of retreat. About twenty Chinamen were killed. Apparently there were no wounded. When the other troops came in, we had to give them quarters.

The place was immediately looted by the Sikhs, and the property was turned over to an officer, who entered it on a list. The British handled such matters better than anybody else—evidently the result of long experience in India. After a warehouse full of stuff had been collected, an estimate was made of its value. This sum was then divided up *pro rata* on a fixed scale among the officers and men, and the amount placed to their credit in a book. The goods were then auctioned off to the highest bidder, care being taken by bidding in to secure approximately the estimated value. The outside "suckers," among them the Americans, paid cash, whereas the Britishers bought against their credit. Many articles brought more than they were worth, and all together it was the most scientific system of looting observed in China. The richness of the displays at these sales I leave to your imagination. Some articles, such as jade, were valued highly by the Chinese for religious reasons, and because they were the fashion. The manufacture of some others, such as genuine red lacquer and the *sang de boeuf* vases, has become a lost art. The soldiers often knew nothing of the value of the articles they were bringing in. On one hand, a rock crystal statuette would be taken for glass, and on the other, gaudy jewelry was prized highly. The Chinese attach great

value to age. They all seem to be connoisseurs in pottery, and can tell you the age of a piece of china instantly. Some of it, manufactured during the reign of Dao-Ching, is over one thousand years old.

There was ample evidence that the temples had been used as headquarters for Boxers. Two machine guns were placed so as to sweep the entrance to the valley. We also captured a quantity of powder, 10,000 cartridges and a lot of *jingals*. The strength of the enemy had been greatly exaggerated. The English and American legation people used to rent these temples during the summer and spend their vacations in the hills. The building leased by the British had been destroyed by the Boxers. This is a fine location, with a view of the Summer Palace and Peking. Resting here in the fresh air from the mountains, the reclining mandarin, surrounded by a goodly company of gods, and "hitting" his pipe, was lulled to sleep by the gentle tink-



IN FRONT OF THE TEMPLE OF AGRICULTURE, PEKING, 1900:
CAMEL TRAIN BRINGING IN COAL.

ling of the bells on the great white pagoda, swayed by the breezes of summer. A spring of fresh water gushed out from under a rock at the foot of the mountain, and there were fish-ponds and baths. With suitable company, supplies and cooks, I can imagine a very pleasant two months at such a place. General WILSON protected the beautiful pagoda, but when the American troops left, the gods and this landmark were laid low. The arsenal at San-kia-tien was also burnt down.

Several words in the English language have been adopted by all the Europeans. Everybody refers to property taken from the Chinese as "loot"; the German calls the rebels "*Die Bozer*," and the Frenchman refers to them as "*Les Bozeurs*." When the officers of the different armies are lined up at the bar of the Tientsin International Club, they all say, "How!"

I shall not go into the details of the differences in the customs of the Chinese civilization from ours. Genial old General VON HOEPF-

NER's favorite remark used to be that in this cursed country everything is upside down. In Germany the apples were round and the pears long, but here the pears are round and the apples long; the Chinaman pulls a saw instead of pushing it, etc. It seems certain that the Chinese civilization has been developed from remote ages on entirely separate lines, with practically no influence from outside sources. They claim to have tried all our systems while Europe was still peopled by savages, and to have given them up, finally arriving at their present perfect plan of human life. This is the reason that we have made no impression on their civilization, in spite of missionaries and of Chinese students sent to our schools. A few novelties, such as the phonograph or the electric light, may attract their attention, but do not disturb the general apathy of the people. Probably only a small portion of the peasantry know that the "foreign devils" have been in Peking. When the troops leave, an imperial decree will be issued, stating that with the aid of the gods the "foreign devils" who tried to enter Peking have been driven back to their ships, after losing many lives and paying heavy indemnities for their temerity. So little is truth regarded, that those who have lost fathers, brothers or husbands will not dare to make an inquiry questioning the imperial decree. I am told that among the people there is not even a tradition left of the presence of the Allies in 1860, only forty years ago.

The flags of the nations were used to protect the property of persons living in their district. Flags could be seen on buildings, carts, camels, and even coolies, who had a miniature flag pinned to their gowns. The Americans came without flags; however, the Chinese made pretty good imitations, although they were generally short of stars. The French robbed our camels several times in spite of the flag. The robbing of Chinese grew to such an extent that, at the instance of Sir ROBERT HART, a conference of generals was called to devise means of stopping it. Prince CHING sent word that there still were about one million Chinese in Peking. He asked for permission for his people to bring in food, and for the guards to protect merchants and vendors. General GASELEE stated that he saw Chinese doing business in every quarter of the city except the Russian, where there were only dogs. This remark, when translated to him, did not disturb General LINIEVITCH in the least. He thanked General GASELEE for the information, and said that the matter would be remedied. The English and the Russians do not love each other, and the former do not always succeed well in hiding their animosity. The French and Germans are more polite to each other, though when I heard General VON HOEPFNER speaking to the French chief of staff and the latter

reply in German, I did not think they would need any signs of "lest we forget" for some time. Suitable orders were issued for the protection of the Chinese dealers.

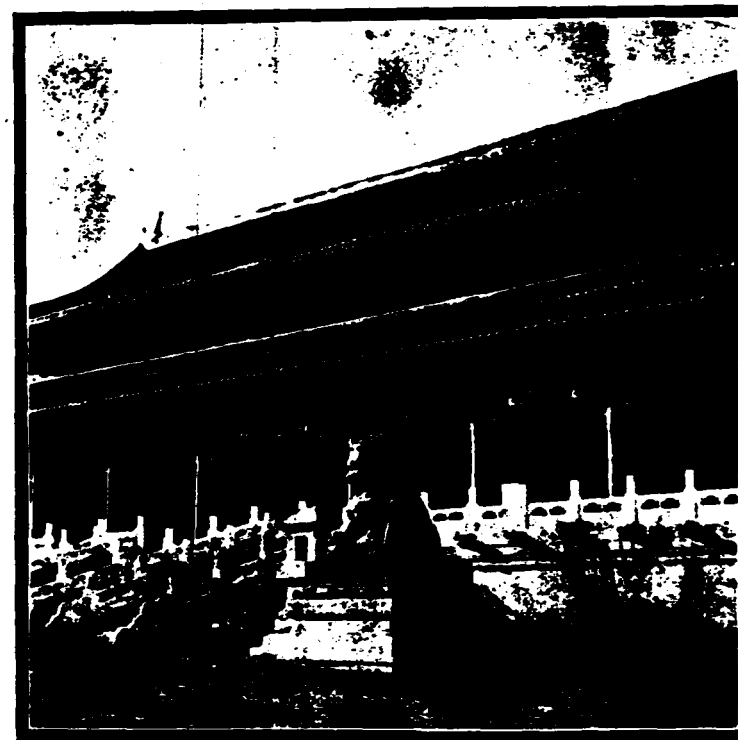
On September 11th there were over 30,000 troops in Peking. A still greater number was on the line of communications, at Tientsin, and *en route*. It was the opinion of the conference, upon inquiry by General CHAFFEE, that a garrison of 10,000 would be sufficient for Peking. At these conferences the French seemed to be a sort of an annex to the Russians, though the latter went through the form of consulting them.

The impression I received of the foreigners, after associating with them officially and socially, is that they are not to be trusted, except the English.

American generosity and straightforwardness, coupled with lack of experience in international matters, cannot hold their own against European cupidity and duplicity. Beside the two cases of deceiving the American commander already mentioned, there was a third by the Russian commander. At a conference on the 25th of September, General WILSON asked what effect the withdrawal of the Russian troops would have on the repair of the railroad from Yangtsun to Peking. General LINTEVITCH replied that work would continue; that there were difficulties which rendered accurate prediction of the date of completion impossible, but that material was coming from Shanghai and Vladivostok, and that progress would be rapid. He also said that the telegraph line would remain in operation, and at the disposal of the generals. In less than a week it was announced that work on the road was abandoned. The telegraph line got out of order, and was never repaired. A fourth case of deception was by the French. Though they had only a squad with a flag present in the attack on Peking, they claimed allotment of part of the city to them. General CHAFFEE gave up a large section to them. Then, in order to straighten out the line, as they claimed, they begged for one hundred yards more. They got that, too, our general and minister never questioning their motive. It turned out that the only reason they wanted that extra piece was because it contained the mint, out of which our Gallic friends extracted 400,000 *taels* of silver in a few hours.

The burial customs of the armies differed greatly. The British and Japanese burnt their corpses; the Germans selected a cemetery near the Hai-te-men; the French preferred their consecrated ground at the Pei-tang; and the Americans eventually ship their bodies half-way around the world.

As the time for the arrival of Field Marshal Count von WALDERSEE approached, the Germans became much agitated. General von HOEPFNER brought the matter up in conference several times; the other generals placed their troops at his disposal. A cavalry squadron was to meet the Count outside of Peking. Both sides of the way from the Hai-te-men to the Emperor's Winter Palace were to be lined with



SOUTHERN ENTRANCE TO THE HALL OF HARMONY.
FORBIDDEN CITY, PEKING, 1900.

troops in skirmish order. The General desired to make a trial deployment the day before, but I guaranteed that our troops would be in position at the appointed hour, and we were spared the extra work. On the 17th of October, at 11:30 A. M., the boom of cannon announced the arrival of His Highness; the procession passed off very well. This was a great opportunity to make notes on all the different kinds of uniforms. At the Winter Palace the selected companies constituting

the guard of honor executed a march past in columns of fours. The march of the Americans at "port arm" without any ostentation was finely done, and made a good impression. The English and Japanese also did well. The French were a little better than usual; the Italians were disgraceful. The Germans were all picked men, accurately sized, and executed an unusually high parade-step, their knees going up as high as their elbows and the flat of their hobnailed boots coming down on the pavement with a whack. The Field Marshal looked well in his uniform of the Prussian Uhlans. Outside of Peking he left his carriage, which, by the way, was drawn by fine mules branded "U. S."

The German supply departments have not been as efficient as was expected. The fact that they are not accustomed to trans-marine expeditions, and the great distance, partly accounted for the deficiency. German officers desired to purchase commissary stores, cigars, clothing, horses—in fact, anything. French officers were also after cigars and cigarettes *de Manille*. Colonel ALEXANDER and other British officers, having heard that the American troops were about to be withdrawn, made inquiry whether some horses would not be sold instead of shipping them back to America. Whereat I told them that the American Government did not sell horses except after condemnation, and that the troops from China would go to the Philippines, and take their horses along. The impression seemed to be abroad that the Americans would sell anything—a purely commercial people, you know; this is the reward for the kindness of our Government in permitting the more destitute to purchase clothing, cigars, etc. They supposed that Uncle SAM was making a profit on these things, and could not understand why they were so remarkably cheap. Such little incidents throw a side-light on the character of the Europeans, who very often seem incapable of conceiving of truthfulness and unselfishness in others.

On the 3d of October we had a review of the American horse, foot, artillery and marines. The troops made a very fine appearance, particularly the battery. What the Europeans respect most in us is our shooting qualitics. Our rifles and ammunition are as good as any, and most of our men are better shots. But our proficiency has sadly fallen off—a fact that nobody but ourselves is fully aware of. This defect will rapidly be remedied in our newly reorganized forces, for nearly all our officers realize the situation.

The American administration of civil affairs in the Chinese Quarter was a source of great satisfaction all around. The place became

a refuge for the Chinese, and was crowded to overflowing. The German Quarter just across the street was deserted.

When the Fourteenth Infantry left on October 21st for Manila, the artillery and cavalry accompanied them beyond the city limits to the place where the first attack was made. The cavalry presented arms and the battery fired a salute. General CHAFFEE called up the officers and made an address. Then there were cheers for General CHAFFEE and Colonel DAGGETT, and the cavalry and the battery. Some German staff officers witnessed the affair, and when they heard the cheers and found that there was nothing said about "*Hoch der Kaiser*," they went off in a huff. I suppose they reported to their Field Marshal that the *Americans are very impolite*.

Long residence in China often has a curious effect on white men. They become great admirers of the ancient philosophy. When they get far enough along to know the pottery—perhaps to have made a small collection—and can read the signs on the shops and the tablets in the temples, they will probably remain in China the rest of their lives. They become satisfied that the Chinese plan gets more out of life than any other; that the feverish activity and struggle for gold of the Europeans do not increase the happiness of the individual or contribute to the welfare of the people. We thus find white men who are decidedly pro-Chinese. Some of them adopt the Chinese dress and wear pig-tails.

The meetings of the Chinese Government councils always take place after midnight. The hour for the Tsung-li Yamen was 2 o'clock in the morning. Of course, when in China, our legation people had to do business at the time appointed by the Chinese; no amount of profanity would remedy the matter. The talk of the Chinese officials, as you know, is endless. With them procrastination is a fine art. As you go lower down in the scale it is the same; everybody talks. In the laboring class all aspire to be No. 1. When there is special work to be done, they all get together to talk it over; it is their way of killing time. Chinese labor is as expensive as American, for five men will not do one man's work.

The Russian has the Oriental method. He will talk for hours about trifles, and then bring up the important subject. Perhaps some of you will think that the lecturer is tarred with the same stick, for we come last to a few remarks on the armament, equipment, instruction and *morale* of officers and men of the foreign armies. All the troops had excellent small arms of practically equal caliber, power and efficiency. The Germans and the French had long bayonets, the Americans, English and Japanese short ones. Our battery of light

artillery was the best. The foreign batteries were not of the latest model. The English Twelfth Royal Battery was a very heavily equipped affair, but solid and efficient. Most of the other guns were of small caliber. When the large German reinforcements arrived, their batteries brought the largest model field guns, caliber 77 mm. It is a beautifully constructed gun, with fine sights.

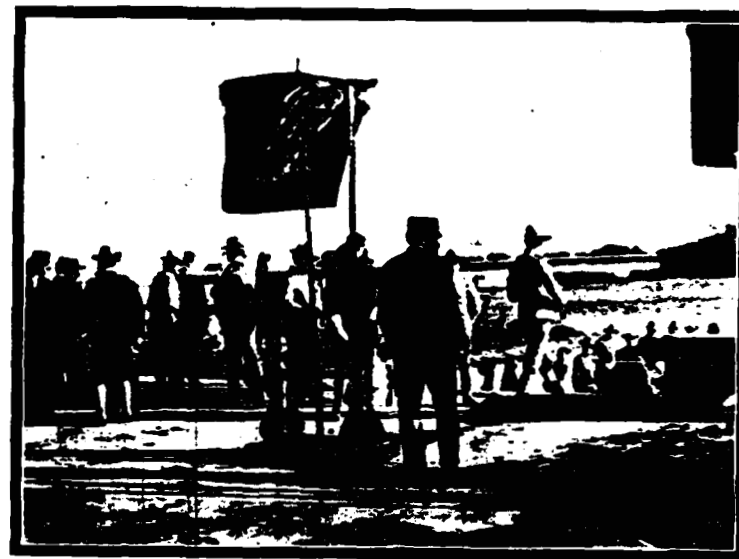
Among the many dead animals along the road from Tientsin to Peking we saw no American horses or mules. This speaks well for the superior quality of our stock, and still better for the care we take of them.

The Russian horses were an undersized, shaggy lot; they are said, however, to have great endurance in severe climates on poor food, covering long distances and carrying good weights. The American horses were by far the largest there. Our saddle is the best; an opinion held by the British officers, as well as our own. The new German saddle and horse equipments are also very good. I do not go into the details of these things, for lack of time. The Indian Lancers had much lighter, but very active horses; in fact, they were beautifully mounted. When a native enlists in one of these regiments, he has to contribute three hundred rupees to the *chundee*, or horse fund; when his time expires, he gets his horse or the money value thereof back. The Japanese horses are still smaller; I do not believe their cavalry amounts to much. It is to be regretted that there was no opportunity to compare the American and British cavalry in a long raiding expedition. In horses, equipment and pack transportation we distance them all, and have the only cavalry suited to long and rapid expeditions in all kinds of weather, especially winter. The American transportation was by far the best there, only, as usual, we did not have enough at first. Although there were no roads, we had no trouble with our wagons. Our train of twenty-eight teams carried as much as all the pack transportation of the British forces. For a long time the only draft animals the Germans had at Tientsin were their own soldiers. Everything on four feet was of course seized to supply the deficiency.

For transportation of the sick, the Indian troops had *dhoolies*, or hammocks swung on large bamboo poles. The patient, protected by green curtains from heat and dust, travels very comfortably. The *dhanjibhogs*, or ambulance carts, also seem to be clumsy affairs, although said to be quite convenient. The British also employed a coolie corps of a thousand men, and upon arrival in Peking promptly organized a camel corps which rendered good service, the troops being accustomed to that kind of transportation. The baggage allowance

of officers and men on both the summer and winter scales are accurately fixed by regulations.

A peculiar feature of the Russian transportation was a kitchen on wheels. An elliptical iron box, axes of about four feet by three feet, served as a huge kettle for the soup of the men. The ration of the Russians is very simple, and soup forms a large part of it. The fire under the kettle is kept burning on the march, at the end of which a cup of hot soup is served to each man at once.



PRESENTATION OF UMBRELLA TO GENERAL CHAFFEE BY CHINESE OF AMERICAN SECTION, CHINESE CITY, PEKING.

The French transportation was such as could be picked up in the country.

Our subsistence department did excellent work, and our ration both in quality and in quantity was far ahead of all the others. Our large and varied supply of sales stores was the envy of all the foreign officers, who particularly admired our fruits and cigars. Our clothing was much sought after by the foreign officers, especially gauntlets, fur caps, gloves and blanket-lined overcoats. All our clothing was declared to be excellent. A few days before I left, the Italians, having heard that we were sending back to Manila our excess of supplies, begged us to sell them 100 pairs of shoes, saying that their men

were ordered on an expedition, but that many of them were practically barefooted.

The strength of the various contingents toward the close of November was about as follows: Americans, 1,300; British, 10,000; Russians, 15,000; Germans, 20,000; French, 16,000; and Japanese, 22,000.

The Manchu differs considerably from the Chinaman of the southern provinces. He has more hair on his face; his cheek-bones are higher, his complexion darker, and he is more warlike than the true Chinaman. They are wrapped up in their own ignorance and superstition, satisfied with their present condition, and look upon all Europeans as ignorant barbarians. They are not without some excuse for despising our religion and civilization, for, judging from the conduct of the Christian troops in 1860, and again in 1900, we are not far behind them in brutality. Many outrageous crimes were committed for which there was no excuse whatever. After Peking had been captured, all the regular Chinese troops were withdrawn out of reach, and made no threats, or molested the line of communications in the slightest way.

The French, Germans and Russians, however, continued to receive information that the small posts along the line, and Peking itself, were in danger, and kept on sending out detachments to drive off alleged masses of Boxers. On the 19th of November, with no other escort than a guard of two men for some prisoners, I drove from Peking to Yangtsun. The guide having lost his way, we proceeded across country, passed close by the gates of a walled city, camped one night, and arrived at our destination without having been molested in the least. We were surprised to learn that we had passed through the heart of Boxerdom, and that the Germans had a battle there the day before. The American troops refused to take part in these massacres. A Chinaman is a good deal of a stoic, but even he appreciated our conduct, and contrasted it favorably with that of the other troops.

We found the British officer fully up to his reputation—a clean, courageous gentleman. He is, of course, the backbone of England's native troops. The administration and higher grades are in his control, the native officers seldom rising above the rank of captain. The Indian troops are very well disciplined. They have the highest regard for their British officer, and rush to his defense in moments of danger, surrounding him and shielding him from impending harm. The officers, for their part, are exceedingly scrupulous in their regard for the customs of caste and religion of their native troops and camp-followers. Of the latter there were thousands; including those on

the line of communication, there were about 9,000 camp-followers for 10,000 troops. All the officers have their grooms and *syces*. In the cavalry regiments there is a grass-cutter with a pony for every two cavalry horses, and all the regiments have native servants allotted to them according to a fixed schedule. The discipline of the camp-followers also was excellent. There was, of course, no drunkenness, this being prohibited by the Mohammedan religion. Very few cases of brutality came to my notice. Their looting was to a great extent authorized, or at least tolerated and regulated. Our few camp-followers, such as packers, teamsters and employees, made a great deal more trouble than all the Hindoos. These native troops possess



BRITISH INDIAN TROOPS. 24TH PUNJABS: 3 PRIVATES, 1 PIPER.

good marching powers, easily take care of themselves in the field, and are handled with little difficulty. I have some misgivings about their fighting qualities, and think that their officers would not be specially anxious to engage modern European troops with them.

In forming an opinion of the qualities of different European troops, it must be remembered that a great deal of attention is paid to outward appearance, corresponding to what the Chinaman calls "face," and that they always put their best foot foremost. On occa-

sions like this, when they are likely to come in contact with foreign troops, they send picked bodies of men into campaign, unless urgency prevents. Thus the officers with whom we are likely to come in contact are far above the average in appearance and intelligence, and we are likely to see only the good side, and not the defects.

The discipline in the Russian forces is rigid, and consists principally in absolute obedience to the officers; consequently any excesses committed by Russian troops must be blamed entirely on the officers. The military instruction of the men is quite good, considering the low order of intelligence prevailing in the ranks. The Russian soldier carries his long bayonet always fixed, and would be a tough customer at close quarters. I do not believe that their shooting is good, and that in cases requiring individual action they would be hard to contend against. In my opinion, they are too brutal and cruel to possess courage of the first order.

The Germans took no part in the principal campaign. Their instruction is excellent and their discipline of a high order. Their non-commissioned officers and men appear to be educated. Their soldiers strike you at once as being very young, and that a hard campaign would tax them severely. The death-rate of the German troops in China is greater than that of any others. Obedience to their officers being a religion with them, these troops certainly would fight well. The first French troops to arrive were from Tonkin and Cochin China. They belong to the criminal class, and were enervated by the climate. Their discipline and instruction are poor, and they possess no great value as field troops. The regiments that arrived from France later on were of much superior quality.

The Austrians and Italians were too few in number for a basis of opinion.

Much has been said and written in praise of the Japanese troops. They are stout little soldiers, good marchers, well instructed, and have an excellent organization and administration. The Japanese had great advantages in this campaign in the proximity to their own country, previous operations against the same enemy, and thorough knowledge of the present theater of war through an organized spy system. Their fighting qualities against Europeans have yet to be tested. I believe they have been somewhat overrated.

There was great friendship between the American and Japanese soldiers, and the relations between our officers and theirs were of the pleasantest kind. The character of the Japanese officer seemed to be frank and generous, considering their very limited pay; but it must be remembered that they are Orientals and that all Asiatics are tricky.

In conclusion, I would say that the American soldier came back from China with a distinct feeling of personal superiority, and that when our Uncle SAMUEL calls him, he will not be afraid to meet any of them.

CAVALRY EXPERIENCES FROM 1898 TO 1901.

By CAPTAIN KIRBY WALKER, FOURTEENTH U. S. CAVALRY.

THE employment of our cavalry during the past three years has been so active and varied that a few remarks and comments concerning its service should be both interesting and profitable. The widely scattered lands of Cuba, Porto Rico, China, Luzon and several other islands of the Philippine group have witnessed the strength and courage of the American cavalryman and have been astonished at the size of his horse. This work has been carried on under a tropical sun and in tropical rains; on mountain trails and mud roads and across torrential streams; in rice-field and in thicket and forest; with rations and transportation and without them; mounted and dismounted; on gunboats and on small boats; against civilized people and against savages; and always to the credit of the cavalryman. It is doubted if our service has ever been so diversified. It is, I believe, the only period when our cavalry has served outside of the United States except during the Mexican War. These three years have been a practical training school for our officers and men, and we can now go forward with renewed and strengthened cavalry spirit. From a period when it was stated that cavalry charges were no longer feasible and that cavalry could not stand the terrific fire of the magazine small arms, and that cavalry was declining in importance, we come to a period of cavalry triumph, when, by reason of its recognized worth and the valuable work accomplished in Cuba and the Philippines, our own cavalry was increased by one-half in number of regiments and more than that in number of men. It is pertinent to remark here that in the last two years England, Germany, Russia, and, I believe, some other European nations, have increased their cavalry arm of the service. Obviously this cannot be called the period of decline of cavalry. The cavalry of the future, with tireless, energetic and ambitious leaders at its head, will give as glorious traditions as has the cavalry of the past.

In particularizing upon the work done by the American cavalry, the writer of this paper will comment upon that only which came under his own observation or which he learned from other officers.

When most of the regular cavalry regiments were mobilized in Southern camps just before the campaign in Cuba, the strength of the troops was doubled by the accession of recruits. For years before various plans for increasing the fighting strength on the outbreak of the war had been elaborated and discussed. It is the opinion of many who had much to do with these recruits, that the plan adopted was not a good one. It is believed that had the campaign against Havana been consummated, as was expected and planned, the work of the regular cavalry would have been retarded rather than advanced by this supposed accession of strength. It is proper to say that there are those who hold that the plan adopted was the best that could be devised. However that may be, the recruits were not sent to Cuba, and the efficiency of the dismounted cavalry at Santiago, according to unprejudiced observers, was equal to that of the infantry.

Three troops of the Fourth Cavalry in the Philippines were for several months mounted on the small native pony. Several other troops served dismounted for a time. Three troops were in *cascos* towed by a tin gunboat on the Laguna de Bay, and did efficient work in the lake towns. These were jocularly known as the "horse marines." At times troops were put on small gunboats to make landings at coast towns that could not be reached by inland trails. At first it was said that cavalry could not be used mounted in the Philippines, on account of the lack of proper forage and the physical difficulties to be overcome. This was disproved. The cavalry with General LAWTON on his northern campaign did the most effective kind of work, and this in face of rains, deep mud, rapid torrents, destroyed bridges and other physical difficulties almost inconceivable. The resolution of the man and the power of the horse overcame them all. In General SCHWAN's southern campaign the cavalry made rapid flank marches, surprising, scattering and destroying. In this campaign, illustrative of rapid work under difficulties, was the pursuit of a body of Filipinos by a squadron of the Eleventh Volunteer Cavalry along a road which crossed a series of deep ravines, the Filipinos making a delaying fight on the further side of each ravine. The leading troop would dismount, dislodge the enemy, and the next troop would then rush through and resume the pursuit without losing any precious moments. This rapid work was so discouraging to the Filipinos that they were finally forced to scatter in the brush and abandon the road entirely. In nearly all parts of Luzon and in several other islands the cavalry has done persistent and valuable work. The work of mounted troops was recognized as so valuable that most of the infantry regiments were issued forty or fifty horses each, for the use of scouts.

On account of the character of the enemy and more especially the character of the country, most of the fighting was done dismounted. However, there are a number of cases of successful charges by detachments. Curiously enough, in a charge by a detachment of Troop "H," Fourth Cavalry, the only man who dismounted, a sergeant, was killed. In China a squadron of the Sixth Cavalry, after engaging the enemy dismounted in front, made a mounted charge in conjunction with a flank attack, killing about 150 of the Chinese.

The experience gained in the sea transportation of horses and mules will be of great value in the future. A few animals were lost at Daiquiri, Cuba, from being thrown into the sea to swim ashore, there being no lighters available. With the exception of two trips to Manila by the sailing vessel *Tacoma*, all the animals were carried on steam transports, fitted up for the purpose. Comparatively few died of disease on the way. The greatest loss was occasioned by the *Aster* running into a typhoon. Of 400 animals on this vessel, one mule was landed in Manila, which mule died afterward.

Lighters were available at Manila for the landing of horses, and most of the animals were put ashore there. The First Cavalry lost some animals in making a landing at Batangas. A squadron of the Fourth Cavalry landed 400 animals in northern Luzon from a transport a mile from shore, with the loss of one animal, small boats being used to lead them ashore. In addition to the ordinary military duties, a number of our officers were constantly engaged in civil administrative work, requiring the collection and disbursement of funds, and also in building roads, bridging streams and other engineering work.

The Boer War affords a broader field than our operations in Cuba, China and the Philippines, for comment and criticism regarding the use and importance of mounted troops. Here again we find the cavalry star in the ascendant. The British cry from South Africa has been for cavalry, more cavalry, and then cavalry. Something over 200,000 animals have been transported to Cape Town, and British agents in various parts of the world are still buying and shipping them. Their mounted infantry has done some good work, but it has proved more expensive than cavalry, owing to the enormous destruction of horses. The Boer is a natural horseman, and it is owing to his mobility that he has been able to strike in unexpected places, to make his fights in one defensive position after another, and to turn a British flank attack into a frontal attack. Had the British been as mobile as the Boers, the war would probably have been ended months ago.

The British failures in the earlier part of the Boer War were brightened only by the successes of General FRENCH's cavalry. Perhaps the most brilliant events of this war have been the relief of Kimberley by FRENCH's cavalry, after repeated failures by infantry, and General DE WET's breaking through the British lines when it was thought he was entirely surrounded. Both of these movements were in the nature of cavalry charges. I quote the comment of one of our infantry officers, a spectator in this war: "The British cavalry was neither sufficient in number nor trained in full appreciation of its modern rôle, and mounted infantry had to be resorted to as a stop-gap. But mounted infantry is at best a makeshift. . . . Nor will the British mounted troops be a match for the Boers until they can ride, not like mounted infantry, but like cavalry; and until they can fight, not like cavalry, but like infantry. The only cavalry lesson we draw for ourselves from this war is, that we cannot have enough of our kind of cavalry."

Mobility is an essential characteristic of cavalry, and by means of it large bodies of well-trained horsemen are enabled to hover around the flanks and rear of an enemy, cutting communications, destroying its commissariat, trains and munitions, producing panic and confusion, and generally delaying its movements. These duties, together with scouting, reconnaissance and actual contact on the field of battle, make cavalry a most valuable and important arm.

The Boer War has emphasized the value of our system of armament and training of cavalry. In future wars cavalry, well led, skillful in the use of its weapons, and trained to fight mounted or dismounted, will render such an account of itself as will be most gratifying to all lovers of that branch of the service.

TRANSPORTATION OF PUBLIC ANIMALS BY SEA.

BY CAPTAIN L. M. KOEHLER, FOURTH U. S. CAVALRY.

MY observations on this subject are based upon actual experience in carrying horses and mules from San Francisco to Manila. In '95 I had selected the subject of "Army Transportation" for discussion, as I had been an acting quartermaster at a frontier post ninety odd miles from a railroad, and had become interested, owing to the many difficulties experienced in keeping a large train in serviceable condition for the mountain roads; and in that article I touched upon my present subject in so far as I could find data furnished by the English Army, which was the only one up to that time familiar with the subject. Upon reporting at San Francisco for transportation to Manila, I was informed I would be detailed in charge of a horse transport; and as there were two in the harbor to sail, I was given the choice, taking the one that was to sail first. After receiving my order, I visited the transport, and found everything in apparent readiness for the animals to be placed aboard. I was ordered to report to the quartermaster in charge of the transport service, who, I discovered, was a most important personage; and to comply with my orders to report in person I had almost to resort to personal encounters to run the gauntlet of clerks, messengers, doortenders and acting quartermasters in the outer offices, all believing it their one duty to protect the all-important functionary in his secluded and private office from being annoyed by any one so unfortunate as to be detailed for duty on a horse transport.

The quartermaster told me where the animals could be found for cargo on my steamer and handed me the reports of a number of officers sent back from Manila, all speaking highly of the horse sling; but the most enthusiastic in its praise, having placed a sling under each animal upon leaving, admitted that he lost all his animals, and pictured most vividly the horrors of the storms encountered and the great danger to life for a man to go among the animals during rough weather, although resting so safely and securely in their slings on smooth seas. I concluded a sling was something to be avoided; at least, if they did not protect in a storm, I could not any more than lose mine without slings, and so save a great amount to the Government and my men the work of slinging the animals; and I trusted the horses and mules upon taking

their departure from this life might forgive me for not having provided them with a rare treat, a sling ride, before their demise.

I was made an acting quartermaster and commissary and had a volunteer medical officer, a veterinarian, thirty odd volunteer soldiers of different organizations, about seventy so-called teamsters, and three hundred and ninety horses and mules report to me, to add to the comfort of a sea voyage destined to last thirty-one days. I requested a civilian quartermaster and commissary clerk, but failed to procure such service, as the Government had all it could reasonably be expected to do in providing such luxuries for the volunteer quartermasters engaged in this seafaring business; and such poor regulars as myself could find amusement and kill *ennui* by performing clerical work while the animals has the good taste to be riding the seas comfortably.

The animals were selected from a herd of a thousand, and were tested for glanders, and, upon my suggestion, were placed upon a bran and hay diet three days before loading. I did not wish them to be filled with grain upon embarking, and the bowels being loose, I believed them in the best condition to withstand the new experiences and the effects of sea sickness. Before receiving the animals, I had the ship thoroughly washed and disinfected with a weak solution of carbolic acid in the lime-water used in spraying the stalls.

The steamer was lying alongside the dock and low in the water, so the ramps, fitted with good side-rails, were almost on the level, and it looked as if loading would be simply a question of leading the animals aboard the ship. At 1 P. M., the date of sailing, the animals were brought from the Presidio by the soldiers and quartermaster employees, and loading began. I had provided several packblinds, foreseeing some would prove obstreperous, and I wished no delay. I found that with the precaution it was not possible to load and get into the stream in three hours, in time to avail ourselves of the tide; and seeing I was somewhat anxious, one of the ruffians contracted as a teamster proceeded to help me out of my trouble by procuring a "2x4" scantling and knocking down a mule. All labor had to be suspended a few moments to remonstrate properly with this brute, and to impress gently upon all to sail with me what code of morals would be in force on the trip in dealing with my four-footed friends and passengers.

Someone here appeared with about twenty feet of one-inch rope, and throwing it over the haunch of an animal with half a dozen men on each end, the horse or mule made a hurried acquaintance with the ship. This worked so well that ropes were employed on both ramps and on the gangways leading from deck to deck. The stalls on this vessel were constructed so close to the sides of the ship and with such

narrow passages between the rows as to make it necessary to remove all side-rails. The loading of the horses was proceeded with, beginning fore and aft, leading down the tiers of stalls, and when the horse was at his stall he was straightened out and held in place until the side-rail was secure; and so on until the few in midship could be backed in place by removing the breast-boards. I kept the horses and mules on deck to themselves as much as possible; the horses on the upper decks and the mules in the hold of the ship. As soon as I found out how to induce the animals to go aboard the loading proceeded rapidly, and by four o'clock we were ready to go into the stream. I saw that the ship was well supplied with forage for the animals, and that the ship's stores were ample to sail for many days more than necessary to make the trip.

Before sailing I discovered that a board of survey had acted on my vessel and found her not entirely seaworthy and not fitted to carry stock; but the authorities thought the necessity of the vessel going as far as Honolulu was great enough to take the risk, and of course I would not protest after the officials had provided me with the interesting fellow-passengers I have enumerated.

A pilot was taken aboard and we were off on our long journey across the Pacific. Everyone seemed delighted that we had made our start, and one could not help but conclude, hearing the men laughing, shouting and singing on the upper deck as they viewed the city for the last time for months, and looked towards the Golden Gate, that all labor and trials were of the past, now we had gotten under way; but this dream of idleness and bliss was of short duration, for as we crossed the bar the pilot permitted us to touch the bottom a few times, as a reminder that we had not yet said good-bye to Mother Earth, and with the rough seas encountered the old steamer pitched frantically and rolled so unpleasantly that about one-third of the animals lost their footing and after a short struggle lay in all kinds of positions in their stalls. The men were at once called upon to assist, but unfortunately, most of them were wanting aid along with the mules, and it was the blind leading the blind. Confusion reigned until the seas were smoother and with a little effort the stock was placed on its feet.

The employees and soldiers were divided into six guards for the care of the six half-decks fore and aft carrying stock. The soldiers were squadded by themselves and given the horses on the upper deck, and the civilian employees, with the appointed trainmasters, were assigned the mules between decks and in the hold. Later in the evening the animals were given what water they wanted and the feed-boxes were put in place and supplied with hay during the night. No grain

was fed, and most of the animals refused water and hay and acted as if they were suffering with sea-sickness along with many of the men. Next morning a bran mash was fed, and about 7:30 the stock was watered. Then came the greatest problem of all, the cleaning and disinfecting of the vessel. It was found that most of the stalls were built so close to the sides of the vessel that it was almost impossible for a man to get in rear and make an attempt to clean the stalls; and the passageways were so narrow as to preclude removing the breast-boards and leading them into the passageways. Upon investigation, it was found that by sawing the handles of the hoes to about three feet, and most of the brooms and forks to the same length, two men working together, one holding the animal while the other from a cramped position in rear used his shortened implements, could thoroughly clean the stall. It was such an effort that had there been no fear of endangering the lives of men and animals, the temptation not to clean the stalls until we reached Honolulu would have availed; but a visit to the hold quickly dissipated the idea that any such thing could be. Many experiments were resorted to during that day to facilitate the work, and about 3 P. M., an inspection showed the work could be done. The sailors rigged up hoisting apparatus fore and aft, by which the manure and refuse from between decks and the hold was brought above and thrown over the sides of the vessel.

The scuppers, which are the sewers of a ship, are constantly watched, kept open, and in working order; those with no direct outlet were connected with the bilge tanks and were emptied by the ship's pumps twice a day. After the first day's effort, the crews had to be changed, as it was found the labor in the hold was greater than anywhere else; so the forces were proportioned according to the labor. The men quickly grew accustomed to their work, and each day found the ship ready for inspection some earlier than the day previous. It was a revelation to us that a ship so poorly adapted to the transportation of animals could be kept in such a thoroughly clean and sanitary condition. The effort required was out of all proportion to what ought to be demanded of men under such conditions. Daily the fire hose was used in cleaning the most inaccessible stalls and flushing the scuppers and drains on all the decks. It was but a day or two before the sides of the vessel were covered with hay and manure, and stained from the urine from the scuppers; so we carried the insignia of a horse transport, that all with whom we might come in contact could not be mistaken as to our cargo.

I will discuss the different questions as they presented themselves to me from day to day, and not in their order of importance.

WATER.

The water question arose at once, and I found upon investigation that the animals between decks and in the hold could be watered by the use of a hose and bucket, one man carrying the hose supplied with a stopcock nozzle and two with buckets, filling and watering alternately. This worked very well, and was satisfactory and expeditious. When it came to watering the stock on the upper deck, it was found the supply tank was placed so low as to give no flow on this deck, necessitating the carrying of water from the deck below, a most laborious undertaking, and in rough weather so difficult that it required constant supervision to see the stock did not suffer. Investigation showed that to raise the tank would require a very heavy framework connected directly with the ship's beams, as the weight of the water and tank is great, and when not completely filled, in a rough sea, the strains to which the support would be subjected would be enormous.

Both vessels I commanded had the same fault, and although attention had been called each trip by the officer in charge, no change was made, on account of the expense and the vessels not being adapted in construction for the necessary framework. Vessels carrying stock ought to carry fresh-water ballast in independent tanks, arranged to be cleansed and examined from time to time. If the vessel is dependent on its condensers, it will often happen that the water is too hot to be given the animals; but if the condensers are properly connected with the fresh-water tanks, and all the water turned into them from day to day, and the tanks not connected with the condensers for the time being supply the tank on the upper deck, which is the one in constant use, then the water is always of good temperature and palatable. There should be more than one ballast tank, as on the second vessel one burst and the water escaped into the bilge tanks and limbers and had to be pumped overboard; then there is danger of the condenser not working properly and one or more tanks becoming salt before the trouble is located. Safety demands that the vessel have independent fresh-water ballast tanks, that they can easily be connected with the condenser for renewal and with the pumps for supply purposes. The ballast should be more than sufficient for all uses of the ship for one voyage; but if only partly filled, would cause the ship to roll, one thing to be avoided on an animal transport. One thousand tons of fresh water will carry five hundred animals and crew for upward of fifty days.

VENTILATION, FRESH AIR.

Fresh air is constantly needed for the animals, and can only be supplied to those in the hold and lower deck by artificial means. Cold air

can be forced in by means of electric fans, and the hot, foul air can be taken out by exhaust fans properly placed. Either system, if in good working order and intelligently placed, will answer the purpose; but the use of both is recommended, and if but one can be obtained, then the exhaust system. The hatches in our animal transports should not be less than 10 feet square, and the larger the better. The sailing master should be interested in the welfare of the stock from the moment they are placed aboard, and should be required to see that the wind sails fore and aft at the hatches and other ventilators are fully trimmed all hours of the day or night. My relations with both skippers were most cordial, and the ship's day and night watch never neglected the wind sails. The guard in the hold tested the cold-air ventilators every fifteen minutes, and if not satisfactory, report was made to the ship's watch on the upper deck. The exhaust ventilators were frequently tested to see that hot and not cool air was being forced out.

No matter what system is used, whether the blower or exhaust, the fresh air must be conducted in rear of each animal through the supply pipes, and by opening or partly closing the shutters in rear of each animal, regulate the supply. The foul, hot air lies under the decks and in the ends of the vessel, and in exhausting the opening of the exhaust pipes must be at these places. Nearly every horse transport used had its ventilating system placed so as not to derive full benefit. A few had the openings of the exhaust pipes on the floor of the deck, thinking the foul air filled with carbonic gas was heavier than the cool, fresh air and would be found there. Most of these errors were eventually remedied.

The power for running the fans should be in duplicate, fore and aft, so if any one breaks down, the other can be started. Electric fans are to be preferred to those run by steam for the Philippine trade, as the former are so much more portable, and then the steam pipes heat up the hold too much for a tropical climate.

Besides the fans, many auxiliaries must be employed to keep up the fresh-air supply. Every porthole on the decks carrying animals should be provided with an iron air-scoop, and whenever practicable, night or day, should be employed. Often I had the ports open when the sea was not high, but shipped many tons of water in the cause of refreshing air. The water did no harm, as it was soon swept into the scuppers and led to the urine tanks or the limbers and then pumped overboard. Should the storm be great enough to require the hatches to be battened down, the animals are not in danger, provided the ventilators are capped with the conical screw cap.

The animals should carry best in the hold and lower decks, as they are not exposed to the sudden changes of temperature or to the draughts as those on the upper decks. Both vessels had only canvas curtains for protection on the two upper decks, which were not adequate, necessitating the shifting of animals from deck to deck on account of contracted colds and fear of pneumonia. On the *Athenian*, the superstructure of the upper deck was of rough boards, and before leaving Honolulu I had it covered with paulins; but they proved an insufficient protection from the heavy rains encountered.

DISINFECTANTS.

Among the medical supplies carried for the horses was an item of 250 gallons of chloro-naphtholeum at \$2 per gallon, 10 gallons of creolin at \$4.50 per gallon, 90 gallons of antiseptum at \$2.50 per gallon, and 300 pounds of chloride of lime, \$15; total, \$910 for disinfectants for carrying 400 animals from San Francisco to Manila, a cost of more than \$2 per head. When I requested a supply of horse medicines as found on the supply table in force, for 400 animals for 30 days, I was laughed at, and informed that a more liberal policy was being carried out, and that besides I would carry a six-months supply for all animals taken. I had no opportunity before sailing to check the various horse medicines, and you can imagine my surprise to see such articles as 100 doses of mackin, \$32, when all the animals had been tested for glanders; 5 gallons of witch hazel distilled, \$1.30 per gallon—enough of a lotion to have had the animals shaved; \$19.20 worth of surgeon's silk in addition to two coils of catgut—sufficient in amount to care for the wounds should the animals be subjected to a bold engagement daily for months; dental halter, \$10, and hobbles, \$24, reminding one that to have a dental operation performed there is no place like a rolling, pitching horse transport. I was so astonished in checking the invoice to find that an expenditure of \$1,540.57 had been made for horse medicines, and this, with the \$910 for disinfectants, made a grand total of \$2,450.57—a cost of more than \$6 per head. I only used five gallons of the chloro-naphtholeum and about half of the antiseptum, and I thought at the time it was wasting it, and I am more firmly convinced of the fact to-day.

Manual labor, with a free and frequent application of the broom and broom, are the only reliable disinfectants for a horse transport. Vinegar applied with a scrubbing-brush to the feed-troughs every few days is a good precaution, and I found a little chloride of lime, which is only five cents per pound, thrown into the scuppers and drains and then washed out with the fire hose, helped take away the horsey and

ammonia smell of the hold. Creolin, antiseptum and chloro-naphtholeum are too expensive and eat up the iron and wood of the vessel to such an extent that their use should be forbidden. It is simply impossible to clean a ship with disinfectants; and if the decks were washed with fancy preparations, it would still demand labor to remove the dung and urine; and if the two latter are thoroughly policed, you can travel without the former.

If it is deemed advisable to send a six-months supply of medicines, they should be kept intact and invoiced to the receiving quartermaster at Manila, just the same as other stores, and a reasonable amount taken by the transport quartermaster for use on the voyage. These should be carried in the prepared form as much as possible, such as lotions, colic mixtures, stimulants, salves, etc., so as to require no compounding when needed.

EXERCISE.

Many officers carrying animals have considered the question of exercise a most important one; and while exercise, fresh air and sunshine are important factors in the health of man and beast, yet the exercise can well be dispensed with in a journey requiring no longer than thirty days.

In the first experiments animals were taken north and disembarked at the Aleutian Islands, or later at Honolulu, on the theory that the animals needed rest and that their legs and health would be impaired unless some such expedient were resorted to. For a horse to stand in his stall on board a moving vessel for thirty days I know is no hardship, as he is constantly exercising, balancing himself with the rolling of the vessel, which is never entirely without motion.

I experimented with fifty animals regarding their legs, not permitting the men to touch them with hand or brush, to see if for want of walking exercise they would stock up and swell; but I found not a single case.

A sailing vessel had a track built in the hold, and the horses were walked and ridden daily (weather permitting). This was good for both men and the horses; the diversion was a good pastime, but nothing more. The point I wish to make is, that it is not at all essential to the health of the animal.

One officer made quite a report and spoke of this important subject, and how he finally solved the problem by having the upper deck enclosed with a strong railing, and daily the animals were led up the runways and walked and ridden about the deck. While on deck they were groomed, and this time was also used in cleaning the stalls of the

absent promenaders. This pictures to us calm seas and beautiful days, ideal conditions such as one might expect in carrying animals on a Mississippi steamer. Fortunately, hundreds of our animals have made the passage with scarcely encountering a ripple on the sea, and would have been landed in good condition had they been shipped loose on the decks without stalls; in fact, some few were transported in this way.

The report advocating exercise as necessary goes on to state, under the heading of "Feeding," that he fed nearly full forage, as he found that an animal exercising all day and night in balancing himself worked quite as hard as an ordinary mule would in the service anywhere; so required the feed, and from his argument I conclude required no provision on deck for additional work and exercise.

The thousands of dollars expended in fitting up transports with exercising facilities and the time and labor necessary in unloading and loading at intermediate ports has all been thrown away.

The lessons taught by the sailing vessels, I trust, are sufficient to last as long as our Government may ever have occasion to transport a single animal by sea. The length of time required for these crude carriers is so great that it wears out the patience of both crew and animals, and the expense is out of all proportion to results accomplished.

DISPOSITION OF THE ATTENDANTS.

I kept the soldiers and civilian employees squadded separately, and assigned a number to each half-deck proportioned to the work. At night two were constantly employed as a running guard in two-hour shifts, and went from animal to animal and replaced the thrown-out hay. The days and nights of storms and rough seas all were required to be about the animals, to encourage, quiet and to assist them when in trouble.

For three nights the men slept right at the heads of the animals in the passageways, and to this I attribute our successful voyage.

FEEDING.

The first few days the animals are striving for their sea legs and are quite as unhappy as the men, and "stables" interests them but little. During this probationary period they were watered at 8 A. M., 11 and 4 P. M., and occasionally one was given a drink during the night if he showed restlessness. The feed-boxes were kept supplied with hay all night. The men on watch kept picking up the hay from the passageways and placing it in the small feed-boxes, and when eaten up it was renewed, as the boxes held but half a feed, about 6 pounds.

Bran mash was fed freely, and about the third day half a ration of

oats. From this on I fed about as I would in the post, excepting that water was given more frequently. I had no serious cases of sickness; a few mild cases of colic and some contracted colds on the upper deck from exposure.

Weather permitting, I removed the breast-boards and placed hay for the mules on the floor in front of them, as they seemed to feed to better advantage in this way. The animals developed a sea appetite and showed their impatience at "stables" by calling, biting and kicking to a greater degree than I notice daily in the post. Green forage, such as beets, carrots, etc., always carried by the English and by some of our vessels, are only an additional source of colic and are to be avoided. Alfalfa hay should be fed if obtainable, as it keeps the bowels in good condition.

SLINGS.

Strange that the advocates of this method of torture are the officers who employed them and encountered great losses, from half to all their cargo. One who slung every animal from Seattle says he encountered rough weather at once, speaking of it as a gale; and, although not entirely satisfied regarding the absolute necessity of the sling, concluded it saved the lives of many of his animals in the seven-days gale before making Honolulu.

This same transport expert tells of how the animals, when tired out from the rolling of the ship, would give up and lie and rest in the sling, only to turn a somersault front or back, not mentioning the terrible internal bruises received by pounding the side-rails with their weight of 1,000 pounds or more.

The only reason he did not lose every animal enjoying the sling was that his reported gale was not quite gale enough. Had it been a good typhoon, the animals would have all been lost, and he would have reported the storm the cause and overlooked the real one—his slings.

This report stated that upon leaving Honolulu he experienced severe storms, but did not use his slings, and the animals did not suffer; and the reason given was that they had acquired their sea legs, forgetting that, without slings, somersaults and other playful gymnastics were denied them.

I only experimented with ten, and found that they were unsanitary, always reeking with the urine.

Just as soon as the weather was rough and they found that by squatting six inches they had support and relief to their tired legs, they fell into the sling, and the next good roll turned them over head or tail foremost, just as far as they could go, or they pounded the sides of the stall with thuds that resounded throughout the ship.

It is easy for a horse in a sling to break his neck or become injured internally, and no matter how often he may escape and by help of the men be put on his feet again, he will be in the same predicament every time the ship acts badly, and sooner or later he is a disabled animal.

It is not a sling the horse needs in a gale, but a suitable stall, and one that will never give way.

The transports for a long time were supplied with one sling for each animal at a cost from six to ten dollars, and many vessels turned them in at Honolulu as dangerous, and the others were receipted for and stored at Manila, where I believe thousands are to-day. The transport returned to San Francisco without them, and was again supplied.

The aggregate cost of these stores, with the value of the animals they murdered, would go far towards building an ideal horse transport. I feel so strongly on this subject that I can leave it only with the statement that a sling for an animal at sea is an invention of the devil.

STALLS.

I will close my discussion with remarks upon what a properly fitted stall for a sea voyage should be.

The animals will make the journey without exercise, without absolutely perfect sanitary conditions, without slings and with moderate care, providing the one important feature, the stall, is suitable and so strong of construction that neither in calm nor storm can he possibly break it down, leaving him at large on the deck, a menace to his own life and to that of the men fearless enough to try to confine him. All the great losses of animal life were occasioned by the stalls giving way in the typhoons and the animals falling and lunging about on the decks until put out of their miseries by death.

The men could not go among the loose animals, but had to seek places of safety for themselves. The slings played an important part in breaking down the stable and freeing the animals. Anyone who has traveled with animals can easily picture the terrible sight of a score of them loose on the decks, falling with every pitch of the vessel and struggling in their frenzy until disabled with broken limbs or internal injuries.

Those fortunate enough to have taken one of these transports from San Francisco to Manila without a severe storm cannot fully realize the importance of a good stall. Many trips were made with such perfect sea conditions that no stalls would have been necessary, and the

animals could have been tied anywhere and enjoyed life just as much as on land.

The Arabs for hundreds of years have carried their stallions in open sailing vessels to India without stalls, but in their case they build strong pens and fill them so completely that the stallions can move in no direction. This is not comfortable for the horse, but is an ideal weather precaution. Packed like so many sardines in a can, turn the ship over and they are still in place.

The stanchions, head and tail, should be connected with the ship's beams, and of iron or steel; if of wood, then 4 inches by 6 inches and of oak; the side-rails must be of hard wood, 2 inches by 12 inches; and the breast- and haunch-rail 2 inches by 8 inches. All must be adjustable so the breast-rail will be at the height of the breast, the side-rails that of the flanks, and the haunch-rail 6 inches above the hock.

The stalls from 2 feet to 2 feet 4 inches in width, and from 6 feet 6 inches to 7 feet 6 inches in length. No fixed dimensions can be given, as a cavalry horse of 900 or 1,000 pounds will not carry with the same dimensions as a mule weighing 1,600 pounds. The stalls must either be adjustable or built for different-sized animals, and the animals shifted until placed in proper stalls.

Stanchions, end- and side-rails must have all corners rounded, and should be as smooth as the carpenter's art can make them. No padding, no canvas, no leather can be allowed, as in time it will chafe the occupant and in a short time a large abscess on breast, side or haunch will develop. The breast-boards on the *Centennial* were well padded and covered with good canvas, and it was found necessary to grease them daily, and with this precaution many had to be removed, as the tender breasts of the horses would not stand the contact. Smooth tin plates were used on the *Athenian* for haunch and breast, but the tin is soon bent and corrodes from the perspiration and sea air, and is then sure to chafe. Nothing is satisfactory but a hard wood of fine grain, perfectly smooth and kept so. This can be done by a daily application of soft soap or grease or other expedient. Best of all would be a cover of 1/8-inch metal with a very heavy coating of non-corrosive nickel plate.

Some vessels landed at Honolulu and Manila as high as thirty animals with such abscesses that after a week's treatment it was disagreeable to visit the open sheds where they were kept, owing to the stench from the wounds. Some vessels landed every animal with hair and skin rubbed off of some part of their anatomy, and few could boast of a clean bill of health on this score.

The animal should stand on a hard-wood mattress made of 2-inch hard wood with openings 2 inches square, and bolted to this should be two 2-inch square hard-wood cleats in front and two in rear for the feet to hold to. Six inches in front of the row of stalls should be a "2x4" spiked to the deck, so when the animal loses his cleats he must be stopped by this larger one before falling. The same precaution must control in rear of the stall. When a storm is expected, it is well to provide the decks with fine cinders and throw them in each of the stalls. This, I believe, kept many an animal on his feet at a critical moment.

The feed-boxes should be 10 inches by 20 inches on the bottom, straight up and down where attached to the breast-board, and beveled on the sides and rear, the top being 18 inches by 26 inches. Each is provided with two hooks, to slip into the staples of the breast-boards or stanchions as the case may be. They are made of galvanized iron, so as to be easily cleaned, and beveled, so as to slip one into the other for storage and to make them portable. They are all alike, so as to be interchangeable. On the *Athenian* they were made of 2-inch pine, were not interchangeable, and weighed about sixty pounds, requiring two men to handle them whenever they were removed for cleaning, and were so bulky that only a few could be removed at a time.

With each stall should be a strong halter with a good wide crown-piece and an extra band above the nose-band, on each side of which is sewed a 2-inch iron ring and to which is fastened a strong adjustable chain connected with the stanchions. The two chains are of such length as to make it impossible to strike either stanchion or the beams under the deck. In calm weather the chains can be unsnapped from the rings, but when at all rough they should be in place.

Were I permitted to fit up a vessel, I would have a collar and hames in each stall, with tugs attached to the upper part of the side-rails, and a strong breeching attached in like manner. Only in a severe gale or typhoon would it be necessary to take up the tugs so as to give the animal 6 inches play to the front and 6 inches to the rear, and with the strong cleats for his feet, I do not believe he could fall down as long as the ship rode the seas. This would also keep him away from the breast-board and haunch-rail and avoid chafing. If the haunch-rail is not to chafe, it must be placed at an angle of 8°, so when the animal goes back and sits on it he touches it with the broad muscles of the haunch over the entire surface of the rail.

The cleats are not quite as wide as the stall, nor should the mattresses quite meet, thus permitting the urine to find its way out and

to make cleaning the stalls less of a task. In a well-arranged vessel the stalls would be at least 2 feet from the sides of the vessel, and the passageway at least 6 feet between rows of stalls, thus enabling the crew to clean and shift the animals from place to place as might be required. These figures for four rows of stalls would require 28 feet for the stalls, 18 feet for the three passageways, and the 4 feet for the scuppers at the sides of the ship, making a beam of 50 feet, which ought to be the minimum width.

The vessels I saw had the sides of the ship for the rear of stalls, and the two center tiers were placed tail to tail, and horses rode facing toward the sides, while they should ride facing the center of the ship.

In each tier of stalls there ought to be an extra one, and in cleaning the stalls the animal next to the vacant one should be placed therein while his vacant stall is cleaned, and so on throughout the tier. With the ample 6-foot passageways, the animals could be led into them on calm days and groomed and rubbed, which, while not necessary, would undoubtedly add to the comfort of the horse.

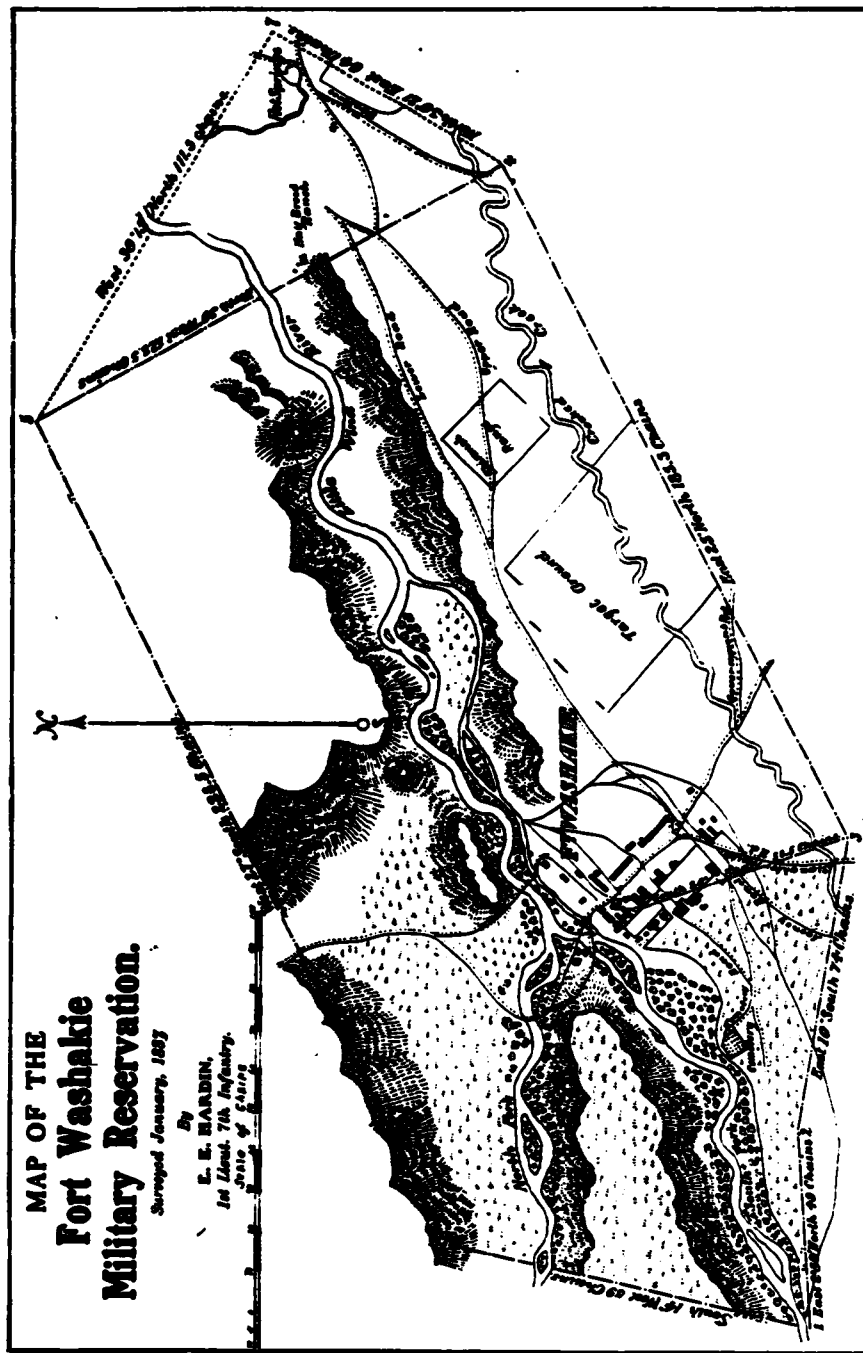
On each half-deck should be a sick-stall, 8 feet by 8 feet, with quantities of bedding and well-padded sides. If the animal can lie down and has plenty of bedding, the motion of the vessel will disturb him but little. If he cannot lie down, then the sick-stall is fitted with side-rails, and he is tied in his sling. Each hatch is provided with an animal-box connected with the steam capstan, so an animal, if very nervous or suffering from exhaustion in the hold, can be transferred to the main deck or *vice versa*. Change from one deck to another seems to be beneficial in nearly all cases of nervous tension.

A transport for carrying animals should be from eight to ten thousand tons, between 50 feet and 60 feet beam, fitted with rolling chocks, and every appliance for making her steady on the seas. The one object in construction should be to carry the animals with the greatest possible comfort. Every transport I saw was fitted up with the one idea to carry as many animals as possible, or, rather, to place in the ship as many stalls as possible, and to report that such and such a vessel has accommodations for so many animals; the greater the number of stalls the greater the triumph. I saw stalls built over the shrouds, capstan heads and the ship's cleats, where an animal could not live a day in even moderate weather. Many were built in impossible places, where the animal could not be led.

Upon arrival at Manila, an inspector-general of the regular corps came aboard, and I explained in detail all the defects of the vessel,

and took nearly two hours in pointing them out: besides having submitted a complete report with recommendations as above stated. In his report he summed up the entire matter by saying: "The facilities for cleaning the stalls were not good, and they were too short and too wide." I had pointed out where 108 stalls had been rebuilt at sea, and with some few changes could be made good, but such a little detail was not even worthy of mention.

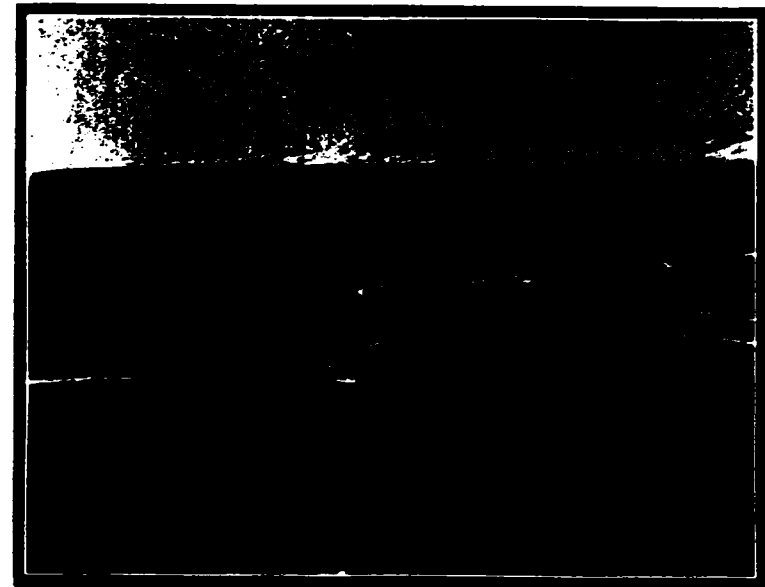
No one should be permitted to superintend the fitting up of a transport who has not had experience in carrying such a cargo as the vessel is to carry, and the more experience he has had the better: and no one should be permitted to inspect such a vessel, with a view to making recommendations in equipment, unless he has had like experience.



FORT WASHAKIE, WYOMING.

FORT WASHAKIE, Wyo., was established in 1871 by Capt. ROBERT A. TORREY, Thirteenth Infantry, with a view to protecting the Shoshone Indian Agency, which is about a mile distant.

It is the most remote station in the United States, being one hundred and forty-seven miles from Rawlins on the Union Pacific Railway, which makes the supply of the post somewhat difficult, and



FORT WASHAKIE, WYO. SHOSHONE INDIAN AGENCY IN THE DISTANCE.

freight consignments in winter have been known to be as long as eight weeks in reaching the post from the railroad. Daily stage thirty-three hours from railroad.

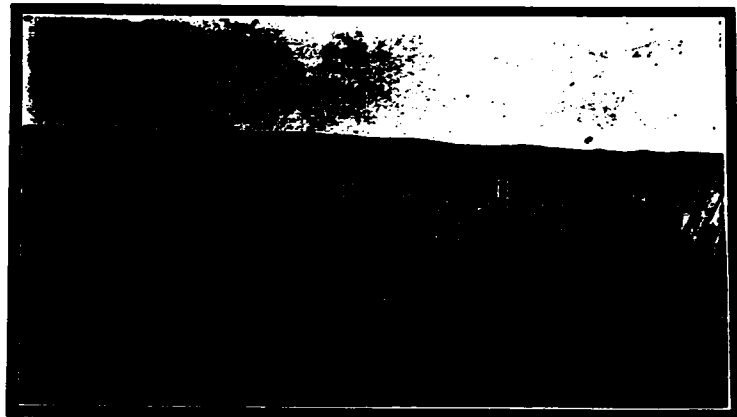
There are barracks here for three small organizations (two companies of infantry and one troop), but only one organization (a troop) having been stationed here for some years, unused buildings have not



BARRACKS AT FORT WASHAKIE, WYO.

been kept thoroughly in repair; so that it may properly now be called a one-troop post.

All the buildings are one story, built of *adobe*, stone and logs. Stables for one hundred horses and thirty mules. We have an excellent riding-hall in the open, good target range and facilities for troop field practice; good pasture enclosed by three miles of fence, good garden.



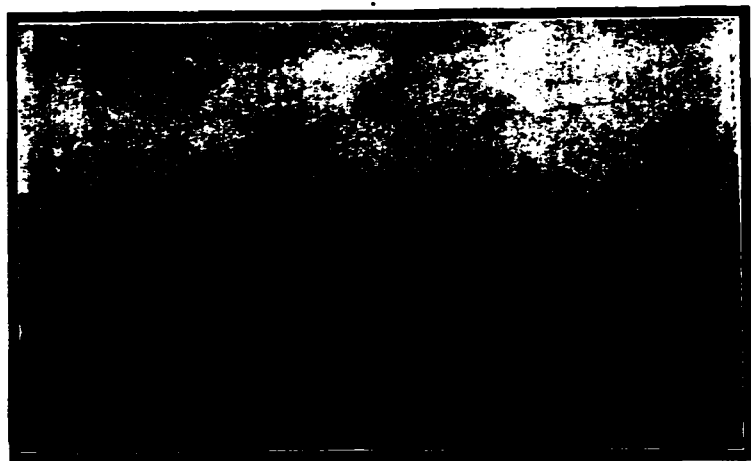
RIDING SCHOOL AT FORT WASHAKIE, WYO.



THROWING HORSES - TROOP "E," FIRST CAVALRY, FORT WASHAKIE, WYO.



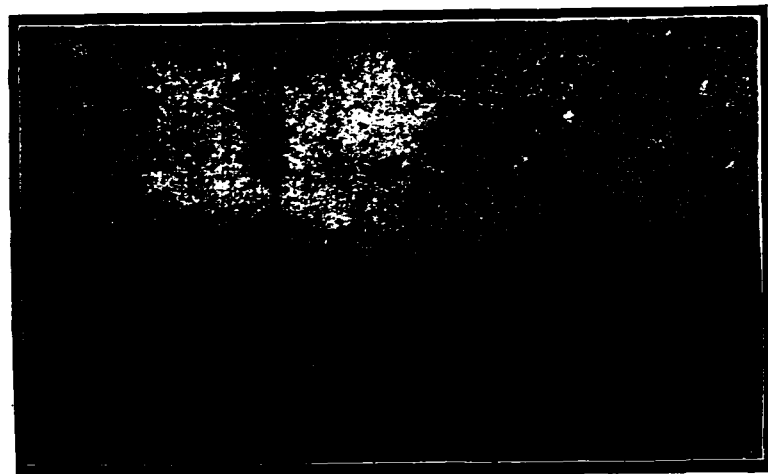
VIEW, FORT WASHAKIE, WYO



POST EXCHANGE, FORT WASHAKIE, WYO.

About two and one-third miles east of the post is a large hot spring, with bathing-pool about sixty yards in diameter. Bath-houses have been constructed here for both officers and men.

A tar spring on the reservation supplies a mixture of asphaltum and petroleum, which has been used to a limited extent for walks and for roofing paint.



ADJUTANT'S OFFICE, QUARTERMASTER'S STABLES, AND POST EXCHANGE, FORT WASHAKIE, WYO.

The reservation is about a mile wide and two miles long. The nearest town is Lander, Wyo.; sixteen miles distant, population 1,000.

Water supply excellent, the water being pumped from Little Wind River.

The post is supplied with a steam saw-mill, planer, etc. The fuel used is mainly soft coal, with a limited supply of wood.

There is no sewer system at the post, cesspools being dug for the purpose of carrying off waste.

The post is at present (March, 1902) garrisoned by Troop "E," First Cavalry.

THE AUTOMATIC SMALL ARM.

By FIRST LIEUTENANT AUBREY LIPPINCOTT, FOURTEENTH U. S. CAVALRY.

TO students of the art of war the introduction of gunpowder as a propelling force in engines of war stands out the most prominent event in the evolution of that science. It was, indeed, a red-letter day on History's calendar. "The art of war, which until now had found its advantage only in superior numbers, or in the great personal strength and fiery courage of the warrior, became a science; and the most skillful usually carried away the victory from the merely brave."

It would be interesting to trace in detail the development in firearms, beginning with the bombard—made in France as early as 1338—and ending with the most recent productions; but such is quite beyond the scope of this paper. Confining ourselves, therefore, to the last fifty years, it will be remembered that within that period the muzzle-loader has been replaced by the single-shot breech-loader, which in turn has given way to the magazine rifle; and to-day many of the European powers are considering the advisability of adopting an automatic magazine rifle.

Before taking up the argument—*pro* and *con*—of the automatic small arm, an effort will be made to describe briefly two weapons illustrative of the mechanical systems commonly employed by inventors of this type of rifle. They are:

- 1st. Those in which the powder gases from the barrel (which in this type is immovable) actuate the bolt mechanism.
- 2d. Those in which the recoil furnishes the energy necessary to operate the bolt; the barrel in this class being movable.

Manufacturers of the last-named type contend that there is a disadvantage in using a portion of the powder gases to obtain automatic action, due to the want of ballistic efficiency, which in turn is due partly to the danger of losing powerful powder charges, and partly to the escape of gases. The recent tests, however, of the Mannlicher automatic rifle seem to quite refute these statements.

In the barrel of this gun (*i. e.*, the Mannlicher) is bored a small vent, through which a portion of the powder gases enter a gas cylinder fastened beneath the barrel by means of a screw. In this cylinder

moves a piston which engages the bolt. When, upon firing, the bullet passes the vent, "the piston is forced back, the lug of its arm engages in the cam of the recess in the bolt and forces the latter to turn to the left, or to unlock. Through the shock of the lug against the end of the recess in the bolt the latter also receives the impulse necessary for its further rearward movement. . . . while the piston, having completed its travel, is driven forward again by its coil spring." From the momentum it has already received, the bolt completes its rearward journey, cocking the piece and throwing out the empty shell as it does so. A recuperating spring now sends the bolt home, and by its own spring it is turned to the left and locked. By this forward movement a new shell is carried into the chamber. It will thus be seen that the gas piston has only to unlock and start the bolt to the rear, after which it is returned forward by its coil spring. For the greater part of its rearward movement the bolt is therefore independent of the gas mechanism, and can, if the vent become choked, be operated by hand, as with the non-automatic rifle. Or, if so desired, the vent can be closed and the weapon used as an ordinary magazine rifle.

As a typical example of guns of the second type (*i. e.*, those in which the energy necessary to operate the bolt mechanism is furnished by the recoil), the Mauser may be taken.

When this gun is fired, the pressure of the base of the cartridge on the breech-block starts the latter backward, carrying, as it does so, the barrel along with it. This movement cocks the piece and tightens the barrel recuperating spring. The connection of the breech-block and barrel now ceases, the block continuing its travel alone. This extracts the empty shell and tightens its recuperating spring. Having completed this rearward movement, the block is sent forward by the expansion of its spring, a new shell being pushed into the chamber by the operation. The barrel recuperating spring then expands, bringing it into the firing position.

Having thus briefly described two rifles characteristic of the mechanical systems employed to obtain automatic action, the advantages and disadvantages of this type of small arm as compared with the non-automatic repeating rifle may be considered, and this comparison must involve the following points:

- Rapidity of fire.
- Accuracy of fire.
- Durability.
- Supply of ammunition.

RAPIDITY OF FIRE.

As to rapidity of fire, the advantage is, of course, entirely with the automatic arm. With these rifles an average of from 35 to 45 aimed shots per minute can easily be maintained. Three hundred men armed with rifles of the type recently introduced by the Danish Automatic Rifle Company could, it is claimed, fire in a given time as many rounds as 2,500 men armed with ordinary magazine weapons.

ACCURACY OF FIRE.

With the non-automatic magazine rifle the firer must needs entirely destroy his aim in working the bolt; indeed, he will usually take the piece from his shoulder for this operation. This disadvantageous factor is quite eliminated when using the automatic arm; for, assuming that the soldier has taken the prone position, to continue firing he need only pull the trigger, keeping the piece constantly trained on the objective. The fact that much of the recoil is taken up by the recuperating springs renders this maintenance of aim still easier.

The difficulty met with in the Philippines in firing rapidly yet accurately with our present arm has recently prompted the promulgation of an order on the subject, a paragraph of which follows:

"In service in these islands you are called upon to encounter an enemy unusual in civilized warfare, and whether he rushes your position in daylight or under cover of night, with bolos and daggers, or fires upon you from places more or less distant, if you are able to fire your pieces accurately and rapidly, your casualties will be very few, and the fact that you are able to do this is certain in your ranks to make a nervous man collected, and a brave man more courageous. In other words, the act of taking a correct aim and pulling the trigger without deranging the piece should be made as nearly as possible mechanical. . . . The effect of rapid fire on the morale of troops has often been noted by military writers, and has given rise to the English expression, 'Shooting up one's pluck.'"

DURABILITY.

In comparing durability, the automatic arm does not suffer. The methods of obtaining automatic action are comparatively simple, and the workmanship of the foreign-made guns thus far produced is of the highest order. The following extract from the proceedings of a board of officers convened at Springfield Armory, Mass., on December 23, 1897, to test the Borchardt automatic pistol-carbine, will in part substantiate this statement:

"Endurance.—997 rounds were fired in 2 hours and 27 minutes, 1,000 rounds more were fired in 2 hours and 9 minutes, without inter-

ruption." The firing of these 1,997 rounds was done without cleaning or oiling. The pistol was then subjected to the usual dust and rust tests, and demonstrated its ability to withstand each.

SUPPLY OF AMMUNITION.

But though the automatic arm is intrinsically equal and in many respects superior to the non-automatic magazine rifle, it is a question whether it would be the ideal weapon for the firing line. With an extended order formation it will be an extremely difficult matter to prevent the skirmishers from getting out of hand and wasting ammunition in a wild and ineffective fire—even when using the present magazine arm. With an automatic rifle this waste would be even greater, unless perfect fire discipline could be maintained. The problem of supplying ammunition on the battlefield has not, as yet, been satisfactorily solved to meet the demands of our ordinary magazine guns, not to mention automatic arms. But though yet unsolved, it by no means follows that it is incapable of solution, and the day must come—and is probably not far distant—when this great obstacle will be, to a large extent, overcome. Then that nation which has the most rapid fire arm will have an incomparable advantage over its less progressive enemies. Even under existing conditions, it is easy to conceive the superiority an army equipped with an automatic arm would enjoy when holding a position, meeting a charge—either cavalry or infantry—paving the way for a cavalry attack, or advancing on an intrenched position by rushes. If supplied with a weapon of the Mannlicher type and automatic action were not desired, only a second's time would be required to convert the arms into non-automatic weapons.

As to the automatic pistol, the tests now being made will determine its suitability for military purposes. It has already demonstrated itself to be the weapon *par excellence* for all officers.

Therefore, inasmuch as these weapons have already reached an advanced stage in their development, and because other Governments are losing no time and sparing no efforts to determine their fitness for war purposes, we likewise should be giving the matter some attention.

Among the foreign Governments at present experimenting with this most recent innovation in firearms may be mentioned Austria, with the Mannlicher; Germany, with the Mauser; Denmark, with a new rifle fed from a magazine holding from one to twenty-five rounds; Italy, with the mitrailleuse of the Italian Cei-Rigotti; and Sweden, with a new arm invented by Lieutenant FRIBERG.

From the degree of perfection already attained in this type of small arm, as well as from the fact that many European powers are experimenting with and considering the advisability of their adoption, it is apparent that the automatic weapon is no longer to be regarded as in the embryo. For this reason we should be giving the matter some attention.

Since Waterloo—indeed, we might say since the introduction of gunpowder—military development has depended mainly upon the improvements of firearms. To this NAPOLEON contributed by employing the best mechanics he could find, among them PAULY and DREYSE, who constructed a breech-loader as early as 1812. That great military genius saw the immense advantage an army supplied with a superior arm would have over an enemy superior in numbers but inferior in armament, and spared no efforts to obtain a transcendancy over his enemies in this as in all things else. Unless we do likewise, will we not err?

THE REVOLVER OR PISTOL BEST SUITED TO CAVALRY.

By CAPTAIN THOMAS Q. DONALDSON, JR., EIGHTH U. S. CAVALRY.

EVER since the invention of firearms made the armor of the mounted man useless as a protection and his battle-axe ineffective as an offensive weapon, there has been a constant effort to produce a firearm which could be readily manipulated and fired with one hand, and which would have enough power to place the mounted man at least on an equality with his dismounted opponent. The name "pistol" was given to this weapon.

There seems to be some doubt as to the exact time when it was invented, but Lieut.-Col. G. V. FOSBERY, V. C., late Bengal Staff Corps, in an article in the *Journal of the Royal United Service Institution*, "On Pistols," has this to say on the subject: "The pistol was produced in its earliest form somewhere between the years 1446, when the hand gun is known to have been made in two sizes, and 1509, when the match lock was first adapted to portable firearms. Some say that it was invented by an Italian named CAMIELLI VITELLI, made at Pistoia, and called after that city; others, again, assert that, on the contrary, it was made at Perugia, and so named from *pistello* (a pom-mel); while a third authority says it was so called from the pistol, which coin just fitted its caliber. Anyhow, it is certain that the hand guns, large and small, were succeeded by the hackbut and demihague, and these, again, by the harquebus and pistol, and it seems more probable that it was made to meet the necessity of having something lighter and more manageable than the match-lock proper, which was cumbersome and unwieldy, required a rest to support it when in use and oftentimes two men—a firearm, moreover, which could be used by the mounted man against the foot soldier (who now began to carry the hand gun)."

Shooting from horseback with the primitive form of this weapon must have furnished plenty of excitement for both man and beast, and must have required a degree of skill on the part of the trooper that would throw into the shade anything now required of the mounted pistol shot. One authority says: "Until the introduction of the wheel-lock, a coil of burning match must have been an intolerable por-

tion of a horseman's equipage: and even when this was abolished, imagine the processes he had to go through. CRESSOL, in 1632, as quoted by Lord DILLON, says they were sixteen in number, and when, lastly, he pulled the trigger, the chances must have been even whether he got a snap shot at his enemy or had a miss fire."

The above author mentions quite a number of curious inventions in which the pistol was combined with other weapons—such as a battle-axe with a hinged edge, inclosing a short set of barrels which could be fired with one blow of the axe; double- and four-barreled pistols, combined with swords, etc.—all designed to meet the necessity of quick action, as it was out of the question to fire more than one shot at the charge and it was imperative to make the one effort effective.

The development of the single-barreled pistol was comparatively rapid, and it reached its highest type, under the old flint-lock system, in the dueling pistol, with which some very creditable feats, up to fifty yards, were performed.

The forerunner of the present revolver, which was at first made with a set of barrels revolving around a spindle, and finally with a single barrel with a cylinder containing a set of chambers, which was revolved on a spindle until the chambers successively came into line with the barrel, was quite an early invention; but very little use could be made of the system until the percussion cap was devised and made it possible to fire one barrel at a time, instead of having *all* the chambers discharged every time the trigger was pulled.

It seems that the pistol was first prescribed as a part of the equipment of the British soldier in 1544, and (with the exception of the reign of Henry VIII.) has been carried by him ever since.

The revolver, as an effective weapon, dates from 1830, when Col. SAM COLT produced his model. In 1835 he greatly improved it and gave it practically the same form that his weapon now has and with which we are all familiar. Even now, however, there was little sale for the revolver, and COLT, having spent all his money in inventions and the attempt to find a market, was forced to suspend its manufacture, and it was not until General TAYLOR, during the Mexican War, requested the War Department to send him one thousand of these weapons, that he was again able to take up the subject. From this time on, however, the revolver came into general use, not only in the United States, but in Europe as well, and the name of COLT is now associated with "revolver" wherever firearms are used.

What a terrible weapon the revolver becomes in skilled hands is shown by the feats performed with it by our Western plainsmen and by its record during the Civil War.

Colonel HALL, of the Adjutant-General's Department, has this to say of one occurrence during that war:

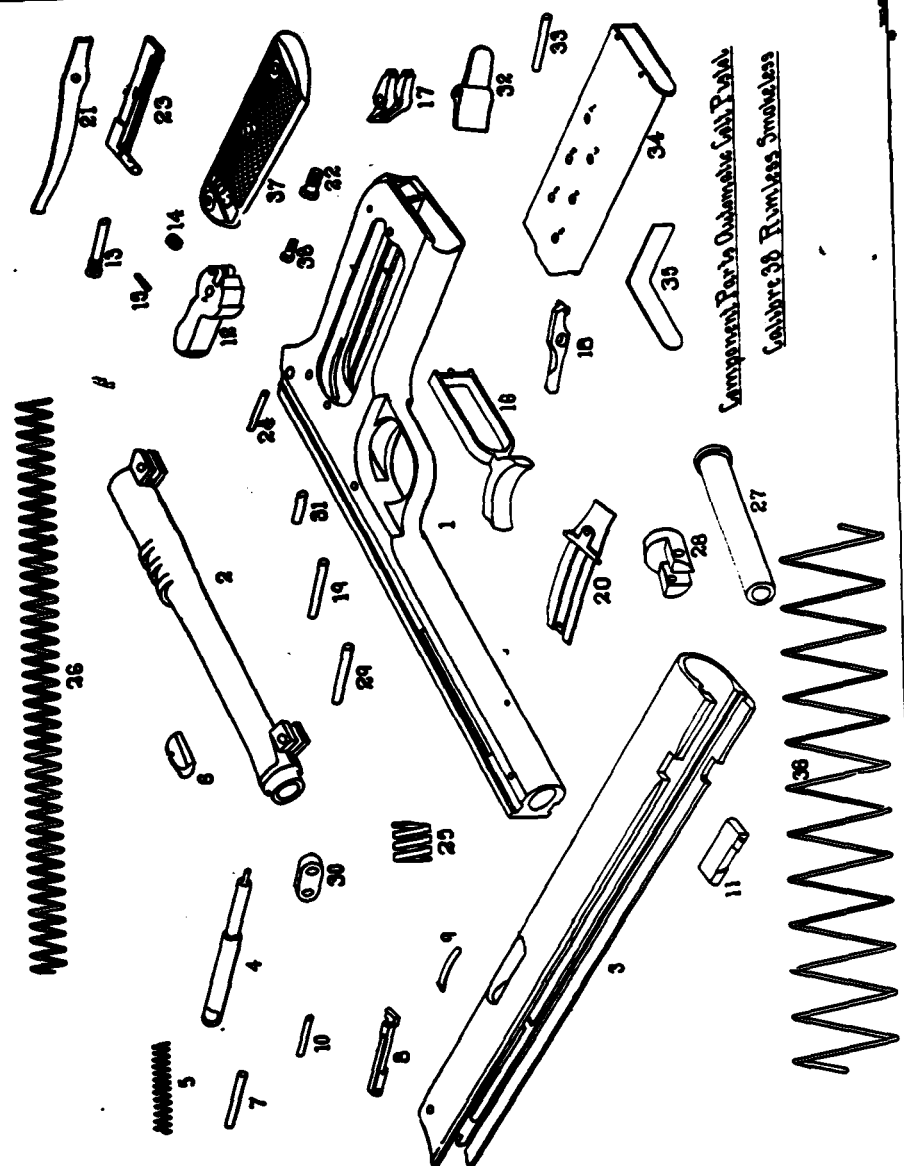
"I know of but one instance where its [the revolver's] use by a mounted organization has ever been perfected, but the results in this are more than sufficient to establish its supremacy as a cavalry weapon were we entirely devoid of individual cases in which a high degree of skill had been attained. The organization to which I refer was a regiment of QUANTRELL'S command under a leader named BILL ANDERSON (claiming to belong to the Confederate Army), who infested the northern part of Missouri during the last year of the War of the Rebellion. These men were armed with three or four revolvers each, and, at the time to which I refer, numbered about fifty. They attacked, upon an open prairie, a command of our mounted troopers, whose numbers I have heard variously estimated at from 200 to 250. ANDERSON'S command lost but five or six men, and only eight or ten of the Federal troopers escaped with their lives. The others were laid out over the prairie for a distance of four miles, and were killed with revolvers. I have been informed, and I believe credibly, by men who belonged to ANDERSON'S command, that mounted pistol practice was their principal occupation."

It is evident, however, in this case, that the Federal troopers were not properly handled. Had they charged their opponents instead of dismounting and waiting to be attacked, the result of the encounter would probably have been different. Sufficient evidence, however, is on hand, not counting this instance, to show that some form of pistol is certain to remain a part of the cavalryman's equipment, whatever may be the fate of the saber.

The important question, then, to answer is: What is the pistol best adapted to the Cavalry service? This is the problem that has occupied the attention of cavalry officers for a long time, as a glance at the files of the *CAVALRY JOURNAL* and the *Journal of the Military Service Institution* will show. It is of vital importance to the Cavalry, for all indications seem to point to the early abandonment of the saber as far as field service is concerned; and hence the necessity for the most effective pistol that can be devised.

Whatever the weapon adopted, it must possess the following qualifications:

1. It must fire every time the trigger is pulled with the intention of having it do so.
2. Its mechanism must be serviceable under all the conditions in which it may be used.



REVOLVER OR PISTOL BEST SUITED TO CAVALRY. 75

3. It must fire a bullet that will produce a maximum effect at short range—say twenty or twenty-five yards—and stop man or animal instantly wherever struck.

4. It must be accurate and have a moderate trigger-pull.

5. It should admit of very rapid fire and carry at least six cartridges.

6. It must be capable of being reloaded easily and rapidly on horseback.

7. It must be sufficiently light to be handled quickly.

In the first part of this paper two systems of hand firearms have been touched upon—the single-barrelled pistol and the revolver; but there remains to be considered a third system, which has been developed within the past ten or fifteen years—that of the automatic or self-loading pistol.

The single-barrelled pistol as a cavalry weapon is obsolete and, from present indications, the revolver is soon to become so.

Our present service weapon, the Colt .38 caliber double-action revolver, is a fair sample of the best weapons of this system, and we are all familiar with its defects. One season's mounted target practice with it is enough to make a man wish for a better weapon—one that does *not* occasionally miss fire and that does not require *all* of his strength to fire it. One of our service revolvers, which I selected at random from a lot numbering over a hundred, had a trigger-pull when used with single action of 13½ pounds, and with double action of 18½ pounds. Both of these pulls are too heavy to permit of rapid and accurate shooting. Leaving aside the questions of caliber and heavy trigger-pull, which could be adjusted, the revolver has two defects which, so far, have not been (and probably never will be) eliminated. These defects are the escape of the powder gases between the cylinder and the barrel, and the liability of the cartridge shell, after firing, to jam against the breech and prevent the cylinder from revolving.

It is believed that the mechanism of the revolver has now become as perfect as it is possible to make it for this class of weapons.

In August of 1899, a board of ordnance officers was convened at the Springfield Armory for the consideration of the following points:

"1. The caliber of the revolvers.

"2. Whether or not a suitable revolver for the United States Cavalry service should have side action.

"3. Whether or not it is desirable that the revolver should have double action.

76 REVOLVER OR PISTOL BEST SUITED TO CAVALRY.

"4. It is desired that the board should also consider the subject of repeating pistols; and report whether they are as desirable for the United States Cavalry service as the revolver; and if adopted, whether they should displace the carbine, and the latter be discarded."

The board, after an exhaustive test of two revolvers, one Colt and one Smith & Wesson, came to the following conclusions:

- "1. The caliber .38 should be retained.
- "2. The side action is desirable.
- "3. The double action feature should be retained.
- "4. The automatic pistols are not as yet sufficiently developed to

warrant their adoption in place of the revolver. It should not displace the carbine."

The board found both revolvers submitted serviceable weapons, and recommended that they be adopted, adding: "Actual trial in the field is, however, the final test of the suitability of a revolver for army use, and the board are therefore of the opinion that steps should be taken to have such a test made."

In April of 1900 another board met at the same arsenal, for the purpose of considering the subject of automatic pistols, and after testing the Mauser, Mannlicher and Colt automatic pistols, summarized as follows:

"*Mauser Pistol.*—This pistol in general works well, and the parts are well made and durable. It can be easily and quickly loaded, and it is capable of a rapid rate of fire. It has a high initial velocity, and is more accurate than the revolver.

"It has the following disadvantages:

"It is large and cumbersome.

"The construction is complicated and the pistol is expensive to make.

"It would be more difficult to care for than a revolver.

"Its caliber is small (7.63 mm.=.30 inch), and the bullet is extremely light (85 grains).

"It is of foreign manufacture.

"In regard to the value of this arm as a pistol-carbine, this board agrees with the opinion of the board of officers convened by Special Orders 260, Headquarters of the Army, A. G. O., November 3, 1898, which was as follows:

"The board believes it would be inexpedient to allow it to displace the carbine, the latter being a long-range weapon of precision for dismounted action, while the former (referring to the automatic pistol), with its shorter barrel and attachable stock, is, in the opinion of the

REVOLVER OR PISTOL BEST SUITED TO CAVALRY. 77

board, better adapted for use as a short-range weapon for rapid use while mounted."

"The board does not recommend the adoption of this pistol for service.

"*Mannlicher Pistol.*—While this pistol is very simple in construction, the operation of loading is very tedious and slow, and it would be almost impossible for a man to load it while on horseback. The muscular exertion required to fire it is practically the same as for an ordinary double-action revolver, while the rate of fire is much slower.

Model 1902 Seven Shot



"The board are of the opinion that this pistol is not a suitable arm for the United States service.

"*Colt Automatic Pistol.*—The test to which this pistol was subjected was in every way more severe than that to which revolvers have been heretofore subjected, and the endurance of this pistol appears to be greater than that of the service revolver.

"It possesses further advantages, as follows:

"Very simple construction.

"It is easy to operate.

"It is not liable to get out of order.

"It is capable of a very high rate of fire.

"It can be conveniently loaded with either hand.

"It gives a high initial velocity and flat trajectory.

"It is more accurate than a revolver. The plant for its manufacture has been completed, and in case of necessity the pistols could be obtained promptly and in quantities.

"It has, in common with the other automatic pistols tested, the disadvantage of a light bullet, and therefore lacks the 'stopping power' of the revolver.

"By reducing the velocity, however, the weight of the bullet can be increased accordingly; or, if desired, the caliber can also be increased; and the manufacturers state they are prepared to manufacture an automatic pistol of caliber 0.41 inch, which is in all other respects identical with the one tested.

"In the opinion of the board, this pistol is a suitable arm for use in the United States service, and it possesses numerous advantages over the revolver.

"Before adoption, however, the board recommends that a number of these pistols be purchased for actual trial in the field."

It is seen from this report that a board of *ordnance officers* believed that an automatic pistol had been produced which was superior to the service revolver. A number of the Colt automatic pistols were issued to the cavalry in the Philippines for trial, and while I have not had an opportunity of learning what the results of the trial were, I have obtained the opinion of one officer who tested this weapon in the Philippines, and from what he says, he also thinks the Colt is superior to the revolver. Captain W. C. Brown, First Cavalry, is the officer referred to, and I take the liberty of quoting him as follows:

"I regard it [Colt automatic] as far superior to the regulation revolver; in fact, I think almost any automatic pistol is preferable to our revolver for most uses to which such an arm will be put. In jungle fighting, particularly, one must shoot quick, and if you can for a short space of time put in a perfect stream of bullets, so much the better. The Colt automatic is a safer weapon to use than our regulation arm, and it can be loaded easily on a horse prancing about under fire. So much for its advantages.

"I have not found it as accurate as the regulation revolver, and am under the impression that the recoil throws the barrel off at the instant of discharge."

Another officer, Captain F. S. Folz, Second Cavalry, after an exhaustive test, in Cuba, of the Colt automatic pistol in comparison with the Mauser and service revolver, reported as follows:

"Experiments were directed to manipulation, as the accuracy and power of the arm is above question.

"My experience with the Colt extends to some 400 shots that I have fired or seen fired from four pistols, and with the Mauser, to 500, from three pistols.

"The Colt is more compact and three inches shorter than the Mauser (for the same length of useful barrel). * * * The Colt is also lighter than a Mauser having the same length of useful barrel.

"The caliber of the Colt .38 is better than that of the Mauser .30; it is presumed, however, that whatever pistol is adopted will be made of the caliber selected.

" * * * The side ejection of the Colt is not liked as well as the top ejection of the Mauser, as the flying shell may strike neighboring horses or men.

"The Colt seems to present more openings for sand and rust than the Mauser, which at rest is as tight as a box. * * * The parts of both pistols are apparently sufficiently large and strong and very much more substantial than those of the revolver.

"The Mauser can be dismounted without tools, while the Colt requires the use of drifts beyond the first operation of removing the slides or barrel casing.

"The Mauser barrel can be cleaned and inspected after firing without dismounting; while with the Colt the slide casing must be removed with a pin, and the small lock (?) must be carefully disposed of.

"When the last shot has been fired from the Colt, there is no indication of the fact: the shooter is too much occupied to keep an accurate count of his shots, and almost invariably snaps the hammer on an empty chamber. The chamber of the Mauser remains open when the pistol is emptied.

" * * * The rapidity of fire of either pistol is limited only by the quickness of the trigger finger.

" * * * Taking all things into consideration, the Colt automatic is a great improvement over the revolver; but while it has the advantage of the Mauser in compactness, it is very inferior to it in the other more important points mentioned: notably the following:

"1st. It is slow in recharging, and cannot claim to be always loaded."

"2d. The user must remember to work the action by hand after loading; the arm does not show whether this has been done or not, and the result at practice was many snaps on an empty chamber.

"3d. The user must remember to count the shots he fires; the pistol does not show when it is empty. At practice, the snap on the empty chamber after exhausting the magazine was the rule, and not the exception.

"In view of the above considerations, I have the honor to respectfully recommend that no more Colt automatic pistols be supplied, but that the Mauser be temporarily adopted, while some officer is afforded facilities for working out such a combination of Mauser and Colt as



I have indicated. This weapon should have only a shot-gun range, and should throw a ball of at least .45, better .50."

Within the past three months a new automatic pistol has been sent to the Cavalry for trial—the Borchardt-Luger pistol. This weapon has been adopted by the Swiss military authorities after thorough tests in competition with the revolver and other automatic pistols—the results of these tests being as follows, in their order of merit: 1, Borchardt-Luger; 2, Roth; 3, Mannlicher; 4, Bergmann; 5, Mauser.

This pistol has not been in the hands of our troops long enough to be thoroughly tested; but from my own tests with it, and from conversations with other officers who have tried it to a limited extent, it seems to possess the following disadvantages:

1. The extractor is too delicate, being easily broken.
2. The breech-block does not always close tightly after firing, requiring the use of the hand to make it do so.

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

4. The magazine slips in easily and quickly, but is too valuable to throw away, and time would be lost in attempting to save it after its cartridges were exhausted.

It is a beautifully made weapon, and very powerful and accurate; but it has, in common with the other automatic pistols, a smaller caliber and a light bullet.

A few days ago I saw in one of the service journals a notice of a new automatic pistol, called the "Mars," invented by a British officer, which is made in three calibers, the largest being .45, and giving its bullet a velocity of about 1500 feet. If this pistol is correctly described, its caliber and bullet seem to fill the bill.

STOPPING EFFECT.

This is what any weapon adopted must instantly produce, either by shooting a large heavy ball or by shooting a ball that will "mush-room" on impact, or by combining these two methods.

A short time ago, while testing the Luger pistol on beef cattle to observe the effect of its bullet on live bone and tissue, I also had the opportunity of seeing the effect of the old .45 Colt fired at short range, and was surprised to learn that the stopping power of the latter, at least when used on large animals, was over-estimated. I fired at five steers with the Luger, shooting directly at their foreheads at a distance of not over ten feet, and, although all were struck within two inches of the brain, not one fell or showed evidence of any shock until the brain was actually touched. An old Indian standing near me, thinking my weapon was "no good," opened up with his .45 cannon and fired two shots at a large steer before he could be prevented from doing so. The two shots struck the steer squarely in the forehead near the brain, but did not cause him to fall or to appear seriously inconvenienced. After this steer was killed, we examined his head, and found six bullet-holes close together through the skull—four Luger and two .45 Colt; one Luger bullet through the brain having killed him. If this animal had been charging, none of the bullets except the one through the brain would have stopped him.

CALIBER.

Cavalry officers seem to be agreed on this subject, and almost without exception advocate a large caliber—not less than .45. If we can get the large caliber and still have the other necessary conditions, so much the better—even if the pistol has to be made a good deal heavy—

ier to secure it. Whatever other advantages the pistol may have, it *must* possess the two necessary qualities of "sure fire" and the power to stop any living animal fired at.

From the tests of the automatic pistols in comparison with the revolver which I have referred to, it is evident that the former system has very nearly solved our problem, and it is only a short time until it will completely do so.

After the weapon is adopted, every trooper in the Cavalry service should be drilled in its use mounted until he has attained the greatest skill with it that he is capable of. No perfunctory practice will satisfy the requirements, and no weapon, no matter how perfect, will be of any service unless the men know how to use it to the best advantage.

MOLASSES AS A FOOD FOR ARMY HORSES.

By GERALD E. GRIFFIN, VETERINARIAN, U. S. ARTILLERY CORPS.

WHILE serving with the Fifth Cavalry in Porto Rico, 1898 to 1902, it was observed that the natives used a considerable quantity of molasses in feeding their ponies. On inquiring into the reason for this, we were informed that the corn of the country is small, hard, scarce and expensive; oats have to be imported; hay is unknown, it being practically impossible to cure grass in a country where the rainfall is so great and frequent as in Porto Rico. Besides, vegetation flourishes throughout the year, and grass in large quantities is always obtainable, although most of it is of a coarse variety and contains 85 per cent of water, and little else.

The grass for feed is cut early in the morning, made into bundles weighing ten to fifteen pounds, transported on ox-carts to the neighboring towns, and there bought at a small cost by the horse-owner. The horse is allowed an unlimited supply of this grass, which is cut or chopped into short lengths. In addition to this, where molasses is obtainable (and it is very plentiful in this sugar-raising country) and cheap enough, it is added to the drinking-water and the animal allowed to partake of the mixture in large quantities. All the ponies do good work on this forage ration, and endure the harsh usage and brutal abuse to which they are subject by the native Porto Ricans and the resident Spaniards, who are seemingly devoid of mercy where horse-flesh is concerned.

The question suggested itself, "Why not feed army animals in like manner?"

Through the courtesy of Colonel J. CLEM, Chief Quartermaster of the then Department of Porto Rico, a money allowance of \$50 was placed at our disposal for the purchase of molasses for purposes of experimenting with it as a food for horses.

Six troop horses and two private horses were selected for the experiment, which was inaugurated on the 1st day of January, and continued until May 31, 1902.

In carrying out the experiment, I was ably assisted by a detail of enlisted men in charge of a farrier.

On the appointed day the eight horses were weighed, pulse, temperature, respiration, secretions, etc., noted and recorded; also the condition of the teeth and general health, all of which were normal.

^a Commencing with the morning feed on January the first, the oats ration was gradually diminished, and grass substituted at the rate of 3 pounds of grass for 1 of oats. Commencing on the 4th, the hay ration was gradually decreased, and its place supplied by grass at the rate of 2 pounds of grass for 1 of hay.

On the 6th, in addition to the grass, now amounting to 21 pounds a day (chopped), there was added, mixed therewith, 3 pounds of molasses. The hay and oats were eaten eagerly, also the fresh grass, but that mixed with the molasses was absolutely refused, except by horse No. 2, who was fond of candy and sugar. He appeared to have trouble in mastication, and it was concluded that the molasses was not sufficiently diluted. At the next feed 25 per cent of water was added to the molasses, when four of the other horses commenced to eat sparingly. By the 10th of the month all of the horses were eating 35 pounds of grass and 14 pounds of molasses daily, and received no other food whatsoever.

From the 7th to the 18th each horse lost in weight from 25 pounds in the case of No. 2 to 36 pounds in the case of No. 5. Contrary to expectations, no relaxation of the bowels was noticed. In fact, at a later period bran had to be fed to overcome a partially constipated condition in all of the subjects. The urine was clear and secreted in greater quantity than usual, and on test for sugar, no reaction could be observed.

During this time each animal was doing the usual routine work of the garrison—drills, parades, scouts, horse exercise and patrols, amounting in all to about five or six miles per day.

On the morning of the 17th it was decided to give the animals a regular amount of work, of twelve miles daily, saddle packed with soldiers' field kit, or its equivalent, which with the man made an average of 203 pounds.

Animals were watered at 6 A. M., fed 15 pounds of grass and 7 pounds of molasses; at 7:30 A. M. they were all saddled, and the detachment under my direction (riding No. 2) proceeded as follows: one mile walk, one mile regulation trot, one mile walk, one mile slow gallop, two miles walk, one mile fast gallop, one mile trot, two miles walk, and sometimes an additional two miles walk. Returning to stables not earlier than 9:30 A. M., we unsaddled and placed the horses on the picket line. Water was offered at all of the numerous streams

crossing the line of march while *en route*, but was refused except on rare occasions, and then partaken of only by the oldest animal in the detachment, No. 6, fifteen years old. Water was offered at noon, but little partaken of. At 4:30 P. M., 20 pounds of grass and 7 pounds of molasses were fed, water having been given immediately before this. Salt was offered on Tuesdays and Saturdays, and about 3 ounces was used each week by each animal. The molasses was diluted with 25 per cent of water and mixed with the chopped grass as far as possible; where all could not be thus mixed, it was dissolved in water and offered as a drink.

Commencing with January 20th, all of the horses commenced to pick up, and by the 5th of February all of them had arrived at their original weight, and in some cases, notably No. 2, surpassed it. No. 6, the old horse, regained his weight more slowly. By the end of February all of the horses had increased in weight over the original from 35 pounds in the case of No. 6 to 68 pounds in the case of No. 2. This increase was maintained or varied very little throughout the experiment, except in the case of No. 6, the old horse, which slowly put on 52 pounds over the original weight. The work was continued daily, rain or shine, Sundays excepted, and in addition to this, we were glad to let the horses out to garrison riding parties and for drills and parades, provided this did not interfere with the regular work, and with the understanding that no food should be offered the horses while so absent from stables. All the horses were given a swim in the sea every Sunday afternoon for about half an hour, for the purpose of washing off any molasses adhering to the coat. Horses were groomed once a day: at evening "stables."

On April 18th, No. 3 stumbled on a round stone and strained one of the "back tendons" of the off fore, which necessitated his remaining in the stable for seven days: during which time he gained 12 pounds in weight.

In the evening of April 29th a barrel of fermenting molasses was delivered: on the morning of the 30th this molasses was fed at the regular time. As the customary monthly muster was to be held at seven o'clock, the usual work was postponed until later and all the horses turned out for this function. They behaved in a most scandalous manner, breaking up the alignment, mixing things at the reviewing point, and one of them very nearly "policed" the saddler sergeant, an expert horseman. Query: Had the fermenting molasses anything to do with this manifestation of mettle.

February the 5th it was noticed that the manure was becoming quite dry, and that the animals had difficulty in passing it. To correct

this, we fed a little bran mash on the 11th, which was eaten greedily; it had the desired effect, and had to be repeated on an average once every two weeks.

It was observed in Porto Rico that the young horses were the ones that were on sick-report much of the time, while horses of seven and over were seldom reported. The trouble was usually of a digestive nature, with its consequent "out of condition" scratches, grease, skin eruptions, swelled legs, "hoof rot," "hidebound," weakness and lameness, saddle abrasions and cincha sores, accompanied by the usual crop of boils, etc. Four of these cases were chronic sick-report horses, and could not be braced up by the application of the usual drugs except for a few days at a time. On February the 3d all of the four were suddenly deprived of their grain and hay and put on a daily ration of 6 pounds of molasses and 20 pounds of green grass. They refused the molasses for two days, but hunger is a good tonic, and on the morning of the 6th we were gratified to see that everything was cleaned up. The horses' teeth were in good condition. Strange to relate, these animals commenced to pick up immediately, and within ten days they improved so wonderfully that their riders failed to recognize them. These horses did their usual troop work, which was light. After living a month on this ration, they were as suddenly returned to the hay and oats ration.

They suffered with indigestion for several days upon returning to dry food, but otherwise the sudden change was not injurious. We were under the impression that we would certainly have some acute digestive disorder on the sudden change from dry to green food and molasses, but none appeared that could be observed. We were not surprised at the manifestation of indigestion upon changing back to dry food.

All of the horses using the molasses ration, including the four sick ones, improved in spirit, coat, condition, wind and flesh, and looked better than the other horses in the garrison. Remembering that they (the eight) accomplished considerable more work and under unfavorable conditions, and that they probably received less grooming, the results as observed are certainly astonishing.

On ending the experiment, the horses were gradually restored to their usual daily ration of 12 pounds of oats and 14 pounds of hay, which they ate greedily. This ration is too heavy in a tropical climate; the oats could with advantage be reduced 2 pounds and the hay 4.

We do not claim originality for the molasses ration, it having been in constant use on the island of Porto Rico from time immemorial.

Conclusion.—Army horses in the West Indies, when the regular ration is not obtainable, can be subsisted with advantage on grass and molasses (and salt), which are cheap and easily obtainable. The average price for the daily grass and molasses ration was about sixteen cents; that of the regular ration, not including transportation, about twenty-seven cents. The price of molasses depends upon the season, it being cheapest when the cane is being ground.

Thirty pounds of grass and from 13 to 15 pounds of molasses as a daily allowance is sufficient to maintain a cavalry or field artillery horse in good working condition in a climate similar to that of Porto Rico.

On this ration animals appear to do more work; condition and coat improve; there is less tendency to perspiration; the wind is decidedly improved, due probably to a less heavily loaded intestinal tract; urine is increased but slightly; bowels have a tendency to constipation, which is easily corrected by feeding a few pounds of bran mash at stated intervals.

Sudden changes from dry to the molasses ration is not at all injurious and does not derange the digestive apparatus. The change to the dry ration should be accomplished gradually, or serious consequences may arise.

Molasses attracts insects, notably flies and ants; it sticks to the animal's coat, besmears his face and breast, halter and halter strap, soils the clothing of the men and their equipment, and causes some trouble and delay in mixing with the fine-cut grass.

It is believed that molasses in small quantities could be used to advantage in the treatment of debilitated horses or those suffering with chronic indigestion and dyspepsia, when the coat is rough and the skin is harsh and tight.

It may not be amiss to remark here that horses below the age of seven are an abomination in a campaign in the tropics; they are not matured and are unable to resist disease. But the worst thing they have to contend with is our system of feeding and watering. In the morning we feed and then water; in the evening we water first and then feed, and at this time all the hay for the ensuing twenty-four hours is placed before the animal. From feeding-time in the morning, generally 5:30 A. M., until feeding-time in the evening, generally 4:30 P. M., the horse must fast, although it is well known that he has the smallest stomach of any animal in comparison with weight.

This is the reason why remounts feel and look "like the devil" for from six to twelve months after entering the service. At posts where

grazing is good this is not noticed much; but where the animal puts in the long hours of the day standing on a picket line or getting kicked around a corral by the old stagers of the organization, it is very noticeable indeed.

When one organization is compared with another in reference to the horses and the amount of work they can do without losing spirit and flesh and the relative number on the sick-report at any given time, it will be found that the organization with the greatest number of old horses, say from eight to fourteen, is the one that has the advantage and the one that can be relied upon to "get there" and do things.

The three-, four-, five- and six-year-old horses in the service live upon "horse medicines and dressings," and are the ones usually dragged along at the tail end of the column by disgruntled and swearing troopers.

EDITOR'S NOTICE.

We call attention to our advertising pages. They have been selected with care, and with the purpose in view of calling attention and giving addresses of firms dealing in articles used by military men and their families. We will deem it a favor if in writing to any of the firms you will mention the JOURNAL.

The Colt's Patent Firearms Mfg. Co., Hartford, Conn., whose advertisement appears in this issue, is perhaps pre-eminently the one manufacturing institution in the country whose interest and support an Army publication properly values, not so much from the mercenary standpoint as from the standpoint of modern military science, and particularly as applied to lighter branches of ordnance and small arms. When others the world over have been discussing the possibility of automatic guns and producing more or less practical examples of them, the Colt's Company has been devoting its best attention to machine guns and pistols built on these lines, and so constructed as to be particularly applicable to the wants of the Army, and we venture to predict that the time will not be very far distant when every military and police organization of the country, as well as many other countries, will be fully equipped with the Colt Automatic Rapid-fire Machine Gun for heavy work and some form of the Automatic Pistol with a holster-stock attachment to take the place of all individual small arms now in use. Be this as it may, it is a pleasure to us to feel that there is in this country a concern which both can and does bring to the development of the most modern equipment in the way of firearms for Cavalry and Infantry the skill born of scientific research and long experience.

There are very few food products which add as much to the comfort, health and efficiency of the soldier in the field as does "Evaporated Cream," which enables anyone in camp or on tramp to enjoy his cup of coffee or his breakfast food enriched with a delicious cream just as well as he could at home. This preparation is simply full-cream-milk free from all foreign additions, evaporated to a cream-like consistence, canned and so completely sterilized that it keeps perfect in all climates as long as the can remains closed. By addition of water it may be restored to its normal condition, when it furnishes a very refreshing beverage, and when used undiluted, it takes the place of dairy cream. It blends admirably with coffee and gives it a richness and delicate appearance not otherwise obtained. The process of preparing Evaporated Cream was originated in 1885 by the Helvetia Milk Condensing Co., of Highland, Ill., whose "Highland" brand is

well known to military men, since it is supplied in large quantities to the Commissary and Medical Departments of our Armies and Navies at home and abroad.

Among our advertisers is found the name of "Buzzacott," which to the Army is a familiar one. Buzzacott is the inventor and manufacturer of the Army field oven bearing his name. It is needless to point out to Army men its high qualities. It is regarded by the Army as the "first aid" to the weary and hungry soldier. It has been thoroughly tested and found, under varying conditions and circumstances, to meet the demands of the service. The inventor served an enlistment in Troop F, Fifth Cavalry, and while stationed at Fort Supply, Okla., decided to find an improvement over the old "Dutch" oven in use for so many years in the Army. His success was beyond expectation, and since the first appearance of the "Buzzacott," many important improvements have been made.

BOOK NOTICES AND EXCHANGES.

COMPANY TRAINING MADE EASY. By Captain H. C. Evans, Adjutant, Fourth Volunteers, B. N. Manchester Regiment. Gales & Polden's Military Series.

This is a small volume in which the author indicates the company training required by the Royal warrant for the efficiency of volunteers. This information has been placed in the form of lectures which can be delivered by company commanders.

TRUMPET AND BUGLE SOUNDS. (With words.) As used by the British service. Arranged by a British bandmaster. Gales & Polden's Military Series.

Camp and Barrack Call for officers is the first call to greet the eye upon opening the covers of this handy little volume, and these are the words:

"Officers, don't you hear the call sounding?
Sounding so brisk and gay?
It may mean a dressing down,
Or it may go the other way."

THE FURTHER TRAINING AND EMPLOYMENT OF MOUNTED INFANTRY AND YEOMANRY. By Major-General H. Harlam Parr, C.B., C.M.G. Gales & Polden's Military Series.

The author calls attention to the frequency with which infantry is used as mounted force, particularly in small expeditions, where hurried organization is a necessity. Most of the recommendations put forward have been given in a practical test in the service, and from these notes have been prepared for the assistance of officers who may find themselves entrusted with such a duty.

THE UNITED SERVICE MAGAZINE.

April, 1902. 1. Garrisoning Our Naval Basis, by Commander the Hon. H. N. Shore, R. N. 2. Coast Defense and the Fleet: A Reply, by "Garrison Gunner." 3. Some Facts about Port Arthur, by Sniper. 4. Old Attempts at Under-water War, by Major C. Field, R. M. L. 1. B. 5. Pages from the Diary of a Boer Officer, by Another of Them. 6. Guerrilla or Partisan Warfare, by T. Miller Maguire, M.A., LL.D. 7. Some Ideas upon the Training of an Officer, by Major-General C. W. Robinson, C.B. 8. The Anti-patriotic Ulcer, by C. de Thierry. 9. Upper Uva, Ceylon, as a Station for British Troops, by R. G. A. 10. The Royal Reserve Regiments of 1900, by Reserve Officer.

May, 1902. 1. Cecil Rhodes, by the Editor. 2. Nelson's Portuguese Boatswain, by Commander E. T. Troubridge, R. N. 3. The Claims of the Accountant Officers of the Navy, by Fiat Justitia. The Royal Indian Marine, by a Naval Officer. 5. Pages from the Diary of a Boer Officer, by Another of Them. 6. Notes on the Evolution of Infantry Tactics, by Lieutenant-Colonel F. N. Maude, late R. E. 7. Essays on Artillery, by Captain C. Holmes Wilson, R. A. 8. The History and Present Position of the Field Howitzer, by R. F. A. 9. War Training at Home, by Captain R. F. Sorsbie, R. E. 10. The Army Medical Service: The Royal Warrant, by Brigade Surgeon Lieutenant-Colonel William Hill-Climo, M.D., Army Medical Staff, retired. 11. Officers and Men, by Horace Wyndham. 12. Hodson of Delhi: An Appreciation, by Percy-Cross Standing. 13. By the Western Line to Mafeking, by Rooi-Neck.

June, 1902. 1. The Naval Requirements of the Empire, by Rear-Admiral Oxford Churchill. 2. Fire Control in the Navy, by Zadock, R. N. 3. The "Britannia" Naval College, by "Cruiser." 4. Lieutenant Hordern's Prize Essay. 5. Notes on the Evolution of Infantry Tactics, by Lieutenant-Colonel F. N. Maude, late R. E. 6. Essays on Artillery, by Captain C. Holmes Wilson, R. A. 7. The History and Present Position of the Field Howitzer. 8. Report of the Committee on the Education and Training of the Officers of the Army, by T. Miller Maguire. 9. The Education of Officers, by Colonel M. J. King-Harman. 10. Officers and Professional Training, by Skipper. 11. Pages from the Diary of a Boer Officer. 12. The Russian Battle of Dorking, More Than Thirty Years After; or, A Christmas Dream. PROCEEDINGS OF THE UNITED STATES NAVAL INSTITUTE.

March, 1902. 1. A New Type of Battle-ship, by Lieut. Matt. H. Signor, U. S. N. 2. The Training-ship, by Lieutenant Edward L. Beach, U. S. Navy. 3. The Recruiting of the Navy Personnel, by Lieutenant Commander Roy C. Smith. 4. Range or Direction Indicator, by Lieutenant Armistead Rust, U. S. Navy. 5. Bethlehem Steel Company—Test of Conical and Cylindrical Breech-blocks, by J. F. Meigs. 6. Notes on the Method of Making the Scale for a 24-inch Sounding-tube of the Tanner-Blish Pattern, by Lieutenant H. E. Parmenter, U. S. Navy.

JOURNAL OF THE ROYAL UNITED STATES SERVICE INSTITUTION.

April, 1902. 1. The Town of Colesburg, Cape Colony, showing Coleskop in the Background. 2. Gold Medal Prize Essay. Subject: "What Should Be the Disposition of the Materiel and Personnel of the British Navy in Time of Peace, and How Can the Peace Strength be Most Readily Expanded to War Strength?" by Lieutenant Lionel H. Hordern, R. N., retired. 3. India's Power to Aid the Empire, by Major A. C. Yate, Twenty-ninth Baluch Infantry. 4. Military Observations on the War in South Africa, translated by permission, from the *Militär Wochenblatt*. 5. The Block-house System in South Africa, by Lieutenant-Colonel R. M. Holden, Fourth Bn., "The Cameronians."

May, 1902. 1. Two Views of H.M.S. "Woodcock" Ascending the Upper Yang-Tse. 2. The Advantages of Compulsory Service for Home Defense, together with a Consideration of Some of the Objections Which May be Urged against It, lecture by Mr. George Sheer. 3. Is a Second-class or Smaller Battle-ship Desirable? lecture by Admiral Sir J. O. Hopkins, G.C.B. 4. Training Recruits at Regimental Dépôts, by Major A. W. A. Pollock, Second Provisional Battalion. 5. Correspondence: A Criticism on Lieutenant-Colonel Maude's Lecture, "Continental *versus* South African Tactics," by Lieutenant-Colonel C. B. Maine, R. E.

PROCEEDINGS OF THE ROYAL ARTILLERY INSTITUTION.

February and March, 1902. 1. Training the Intelligence, etc., of Officers, and N. C. O's and Men, by Colonel L. W. Parsons, R. A. 2. Twelfth Battery, R. F. A., in China, by Captain J. F. I. H. Dwyer, R. F. A. 3. A Consideration of the Different Duties of the Branches of the Royal Artillery, by Major T. R. C. Hudson, R. A. 4. Recent Development of Field Materiel on the Continent—France, by Captain R. L. Kenyon, R. A. 5. Field Glasses and Telescopes, by Lieutenant-Colonel T. V. W. Phillips. 6. Signaling to Range Launches, by Captain C. N. Buzzard, R. A.

THE SEVENTH REGIMENT.

March, 1902. 1. The Coming Industrial Empire of Puget Sound, by D. B. Bogle. 2. Equipment and Methods of the Indian Dockyards, by A. C. Bowden. 3. Economy in Fuel Combustion and Steam Generation, by W. W. Christie. 4. Gold Mining and Milling in Western Australia, by A. G. Charleton. 5. Influence of the Exposition on the French Steel Industry, by Henry Guerin. 6. Actual Working of American Locomotives on British Railways, by C. Rous-Martin. 7. Engineering Opportunities in Central and Southwestern Asia, by A. H. Ford. 8. The Determination of Costs in Isolated Electric Plants, by P. R. Moses.

THE SEVENTH REGIMENT.

REVUE DU CERCLE MILITAIRE.

OUR DUMB ANIMALS.

REVUE DE CAVALERIE.

In Memoriam.

Colonel Abraham K. Arnold,

U. S. Army,

First President of the United States

Cavalry Association,

Died

At Cold Spring-on-Hudson,

New York,

November 23, 1901.

A WORD FROM GENERAL MERRITT.

STEAMER "FRIEDRICH DER GROSSE,"

AT SEA, April 21, 1902.

I have been requested by the Executive Council of the United States Cavalry Association to write, as the President of the Association, an introduction to the first number of the CAVALRY JOURNAL, which is shortly to be re-published. This re-publication is to be commenced by the enthusiastic decision of a majority of the members of the Association.

I write this introduction gladly, with the wish that I had the requisite ability to place the matter in the strongest light. It is not necessary for me to enter into the causes which account for the non-appearance of the JOURNAL since December, 1899. The Spanish-American War and the dispersion of the Cavalry on its legitimate service during that war are ample reasons for the discontinuance of the publication.

The re-publication of the JOURNAL seems to be a fitting occasion to impress on the Cavalry of the Army the necessity for renewed effort to make the JOURNAL a fit representative of the increased and new element of the service.

The work done by the Cavalry in Cuba, Porto Rico and the Philippines during the Spanish War, both mounted and on foot, demonstrates an increased sphere of action and usefulness, and has taught us lessons which prove that the opinions formed by our former officers of cavalry were correct, and that cavalry can be educated to fight on foot as well as on horseback.

This lesson is impressed by the war between the English and the Boers in South Africa. It is our duty to elaborate these lessons. The increase of the cavalry arm of the service and the proportion of cavalry strength in the Army serve to impress this lesson. Everything points to the greater importance of the Cavalry, as considered in modern warfare, and of its growing utility. The celerity of its movements, even though the character of the terrain may require its action on foot, is much to its advantage in modern wars.

We have now in this country the *United Service Journal*, representative more especially of the Infantry of the Army, the *Artillery*

Journal and the *CAVALRY JOURNAL*. These are all necessary under the changed conditions of the Army. It had been proposed to abandon the publication of the *CAVALRY ASSOCIATION JOURNAL*, but I am glad to say the proposition has not been concurred in.

The good effect of an association like that which has been in existence and is now to be resumed with the publication of the JOURNAL is bound to be of importance in the future.

Let every cavalry officer, though he may subscribe to and support to the extent of his ability the other publications, do his utmost for the CAVALRY JOURNAL, and I am sure that success will crown the effort.

I have my doubts as to the wisdom of establishing branches of the parent association at small posts. But at all posts let the officers write and send what they have written to the JOURNAL, and let the editor select all or part of the production for publication. Let all exert themselves in the direction of success, and success is sure to follow.

I have been told by more than one officer whose advancement in the Cavalry service has been marked, THAT MUCH OF THE SUCCESS WAS DUE TO THE INFLUENCE OF THE STUDIES INDUCED BY THE CAVALRY ASSOCIATION.

WESLEY MERRITT.

Major-General U. S. Army.
President U. S. Cavalry Association.

PRIZE ESSAY.

I.

At a meeting of the Executive Council of the Cavalry Association, held April 21, 1902, the following resolutions were adopted:

Resolved, That the Cavalry Association continue the undertaking of producing a history of the American Cavalry, in the form of a series of historical essays, to be published in the JOURNAL; and to this end be it further

Resolved, That the Cavalry Association does hereby offer a prize of \$100.00 in cash for the second essay of the series.

The prize will be awarded under the following conditions:

1. The competition to be open to all persons.
2. The essays not to exceed 30,000 words.
3. Three typewritten copies of the essay to be sent in a sealed envelope to the Secretary on or before April 1, 1903.

4. The essay to be signed *only* with the *nom de plume* adopted by the author. A sealed envelope bearing the *nom de plume* on the outside, and enclosing full name and address, must accompany the essay. This envelope will be opened in the presence of the Council after the decision of the Board of Award has been made.

5. The successful essay shall become the unconditional property of the Cavalry Association, and will be published in the CAVALRY JOURNAL.

6. The second essay shall receive honorable mention, and if desired by the Council, shall, upon payment of \$25.00 to the writer, become the unconditional property of the Cavalry Association.

7. The prize shall be awarded upon the recommendation of a Board, consisting of three suitable persons chosen by the Publication Committee, who shall be requested to designate the essay deemed worthy of the prize, and also the essay deemed worthy of honorable mention.

Should members of the Board determine that no essay is worthy of the prize, they may designate one deemed worthy of honorable mention. Should the Board deem proper, it may recommend neither prize nor honorable mention.

The recommendations of individual members of the Board will be considered by the Council as strictly confidential.

In determining the essay worthy of the prize the Board will consider, *first*, historical accuracy; *second*, professional excellence; *third*, literary merit.

II.

The subject selected by the Publication Committee for the second essay of the series is as follows: "The History of the Cavalry of the Army of Northern Virginia (Confederate) During the Civil War." The subject is to include organization, armament, equipment and supply, as well as the operations of the Cavalry.

L. C. SCHERER.

Captain Fourth Cavalry.

Secretary.

CONSTITUTION OF THE UNITED STATES CAVALRY ASSOCIATION.

Adopted at Fort Leavenworth, Kansas, January 17, 1895.

ARTICLE I.

TITLE.

This society shall be known as "The United States Cavalry Association."

ARTICLE II.

HEADQUARTERS.

The headquarters shall be at Fort Leavenworth, Kansas.

ARTICLE III.

DESIGN.

The aim and purpose of this Association shall be to unite all persons directly or indirectly interested in the Cavalry arm of the military service, for the professional improvement of its members and the advancement of the mounted service generally.

ARTICLE IV.

MEMBERSHIP.

SECTION 1. This Association shall consist of (1) regular members, (2) associate members, and (3) honorary members.

SEC. 2. The following shall be eligible to regular membership: (a) Commissioned officers of the Cavalry of the regular Army. (b) Former commissioned officers of the Cavalry of the regular or volunteer services, provided their records are honorable. (c) General officers of the regular Army and former general officers.

SEC. 3. 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 (other than those mentioned in Section 2), or in the Navy. (b) Persons who are, or who ever have 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.

SEC. 4. Honorary members may be elected from men distinguished in military and naval service and from eminent men of learning. They shall be elected as such for the period of five years. Honorary members shall be elected by the Executive Council, and it shall require a two-thirds vote of all members of the Council to elect.

SEC. 5. Any person eligible to regular or associate membership may become such upon making application to the Secretary, accompanied with the amount of the annual dues for the first year (\$2.00), and upon furnishing satisfactory evidence of his eligibility to such membership.

SEC. 6. Any person or society may become a subscriber for the quarterly JOURNAL; and all persons paying for and receiving the JOURNAL, but who are not regularly admitted and entered as regular, associate, or honorary members, shall be considered as subscribers merely.

SEC. 7. Any member may withdraw from the Association at any time by tendering his resignation in writing, provided he be not in arrears.

SEC. 8. Any person may be expelled from the Association for cause by the Executive Council, but it shall require the consent of two-thirds

of the members of the Council, unless the cause be the non-payment of dues or other obligations to the Association, in which case a majority vote of the members of the Council present shall suffice. Any member may be expelled whose indebtedness to the Association is \$4.00 or over.

SEC. 9. Membership shall date from the first day of the quarter in which the member joins, January 1st, April 1st, July 1st, October 1st, and his annual dues shall become payable on that date in each succeeding year.

ARTICLE V.

RIGHTS AND OBLIGATIONS OF MEMBERS.

SECTION 1. Every member of the Association, of whatever class, shall be entitled to one vote at all regular or special meetings of the Association. This vote may be cast in person or by proxy, in which latter case the authority therefor must be in writing.

SEC. 2. Regular members only shall be eligible to hold office, or to vote upon alterations of, or amendments to, this Constitution. With those exceptions, all members, of whatsoever class, shall have equal rights and privileges, and be subject to the same obligations, except that honorary members shall pay no annual dues.

SEC. 3. All members, of whatsoever class, shall receive the quarterly JOURNAL without other cost than the annual dues. The subscription price to non-members shall be two dollars per year in advance.

SEC. 4. The annual dues of all members, except honorary ones, shall be two dollars, payable at the beginning of each year of membership.

SEC. 5. Additional pecuniary obligations can be imposed upon the members only by an act of the Association at a regular or special meeting, a two-thirds vote of the members present or duly represented by proxy being required to carry such measures.

ARTICLE VI.

MEETINGS AND ELECTIONS.

SECTION 1. The regular meetings of the Association shall be held once each year at Fort Leavenworth, Kansas, on the third Monday in January.

SEC. 2. Special meetings shall be called to meet at the same place by the President upon the written request therefor, signed by fifty members. When such special meetings are called, at least fifteen days' notice shall be given thereof to each member by the Secretary. The same notice shall be given in the case of regular meetings also.

SEC. 3. Twenty per cent of the total membership of the Association, either present in person or represented by proxy, shall constitute a quorum for the transaction of business.

SEC. 4. The annual election of officers shall take place at the regular annual meeting of the Association. The election shall be by ballot, and a plurality of all votes cast in person or by proxy shall elect.

ARTICLE VII.

OFFICERS.

SECTION 1. The elective officers of the Association shall be: a President, a Vice-President, and five members of the Executive Council. Their terms of office shall be one year, or until their successors are elected, and all except the President shall be residents of Fort Leavenworth, Kansas.

SEC. 2. The appointive officers of the Association shall be two; viz., an Editor, a Secretary and Treasurer. They shall be appointed by the Executive Council, and shall hold office at the pleasure of the same.

SEC. 3. The duties of the officers shall be such as usually pertain to their respective offices, and such additional ones as may be prescribed in this Constitution or the By-laws enacted by the Executive Council under the authority granted by this Constitution.

ARTICLE VIII.

EXECUTIVE COUNCIL.

SECTION 1. The Executive Council shall consist of the President, the Vice-President, the five elected members, the Editor, and the Secretary and Treasurer. But when the President is not a resident of Fort Leavenworth, he shall for all purposes be considered as not belonging to the Executive Council, unless actually present.

SEC. 2. The Executive Council shall meet from time to time at the call of its Chairman, who shall be the senior member of the Council present at the headquarters of the Association.

SEC. 3. Five members shall constitute a quorum for the transaction of business. But if through the removal of officers from Fort Leavenworth, or other cause, the Council be reduced below five members, such number as remain shall constitute a quorum for the purpose of filling vacancies, but for this purpose only.

SEC. 4. It shall require a majority vote of all members of the Council to carry and proposition, except an adjournment, which shall require a majority of those present.

SEC. 5. The several members of the Executive Council shall have an equal voice and vote in the determination of all questions acted upon by the Council, except that the Editor and the Secretary and Treasurer shall have no vote upon questions connected with their own appointment or removal, or their own compensation.

SEC. 6. The Executive Council shall be responsible for the general administration of the affairs of the Association. To this end they are empowered to carry out any measures whatsoever, which, in their judgment, seem expedient in order to further the interests of the Association, or to attain the ends and aims of the organization; *Provided, however*, That such measures do not conflict with any of the provisions of this Constitution. Within such limits the Council shall have power to make permanent regulations, which they shall in such cases designate as By-laws, in contradistinction to their ordinary regulations, and such By-laws shall be binding upon the Association and its members, and shall remain in force until duly revoked.

SEC. 7. The Executive Council shall have power to fill vacancies for unexpired terms, which may occur in its membership.

SEC. 8. The Executive Council shall carefully examine and audit the accounts of the Secretary and Treasurer as soon as practicable after the close of the fiscal year, and at such other times as they may deem expedient.

SEC. 9. Funds of the Association can be expended only upon the order of the Executive Council, and money paid out or obligations incurred by the Secretary and Treasurer without such order shall be at his own risk, and if not subsequently approved by the Council, he shall make the same good to the Association; but the auditing and approving of the accounts by the Council shall be considered as authorizing all transactions and expenditures previous to such action.

ARTICLE IX.

THE JOURNAL.

The Association shall publish a JOURNAL devoted to the interests of the organization, and in furtherance of its ends and aims as laid down in Article III. of this Constitution. This JOURNAL shall be published quarterly, and, as far as practicable, about the close of each quarter of the calendar (or fiscal) year.

ARTICLE X.

THE EDITOR.

The Editor shall edit the quarterly JOURNAL, and such other documents as may from time to time be published by the Association. In the performance of this duty he shall be subject to the supervision of the Executive Council, to whom he shall be directly responsible.

100 CONSTITUTION OF U. S. CAVALRY ASSOCIATION.

ARTICLE XI.

THE SECRETARY AND TREASURER.

The duties of the Secretary and Treasurer shall be such as usually devolve upon such officers. He shall keep a journal of the proceedings of the Association, and a separate record of the proceedings of the Executive Council. He shall keep in form suitable for reference permanent records of the By-laws that may from time to time be enacted by the Executive Council. He shall be generally the organ of the Association in matters of finance, business and correspondence.

In the performance of these duties he shall be subject to the supervision of the Executive Council, to whom he shall be directly responsible. The books, papers and accounts pertaining to his office shall be always subject to examination by the Council. At each regular annual meeting he shall submit a report showing the financial condition of the Association at the time. Within thirty days after the close of each fiscal year of the Association (which shall be considered as identical with the calendar year) he shall submit to the Council a detailed report of the business transactions of his office during the preceding twelve months. This report shall show: the cash on hand at the beginning of the fiscal year; the receipts and expenditures during the year; the cash on hand at the close of the fiscal year; the assets of the Association; the outstanding obligations of the Association; the membership in the various classes at the beginning of the year and the gains and losses in the same during the year; such other matters as may be called for by the Council. He shall also make such additional reports at such times and upon such subjects as the Executive Council may desire.

ARTICLE XII.

In order to effect the transition from the old Constitution to this new one, the following sections are hereby enacted:

SECTION 1. Except as regards matters concerning which a different rule is herein prescribed, this Constitution shall go into effect upon the day of its adoption.

SEC. 2. Although life memberships are no longer contemplated, such as are in existence at the time of the adoption of this Constitution shall continue to exist under the same conditions as originally granted.

SEC. 3. Members who joined the Association previous to September 30, 1897, shall date from the first day of the calendar year, as originally prescribed; but the membership of such as have joined the Association subsequent to September 30, 1897, shall date from the first day of the quarter, exactly as if this Constitution had been in force at the time of joining.

SEC. 4. All who, under the old Constitution, were regular or associate members at the time of the adoption of this Constitution shall become such members under this Constitution, even though they might not be eligible under its provisions.

SEC. 5. Such persons as are honorary members at the time of the adoption of this Constitution shall become such under its provisions, and they shall be considered as having become such upon the date of the adoption of this Constitution.

ARTICLE XIII.

ALTERATION OF THE CONSTITUTION.

SECTION 1. The Constitution may be added to or amended by a two-thirds vote of the regular members present or properly represented by proxy, at an annual meeting of the Association. Proposed alterations shall be furnished the Secretary in writing, signed by five or more members, not less than three months prior to the meeting at which they are to be acted upon. The Secretary, under the direction of the Executive Committee, shall publish such proposed alterations to the Association not less than sixty days prior to said meeting.

THE UNITED STATES CAVALRY.

FIRST CAVALRY—COLONEL ALMOND B. WELLS.

Adjutant, CAPTAIN SAMUEL B. ARNOLD; Quartermaster, CAPTAIN JACOB G. GILBREATH; Commissary, CAPTAIN MILTON F. DAVIS.

HEADQUARTERS, MANILA, P. I.

Troops—A, B, C, D, I, K, L, M, Manila, P. I.; E, Fort Washakie, Wyo.; F, G, Fort Yellowstone, Wyo.; G, Fort Keogh, Mont.

SECOND CAVALRY—COLONEL ELI L. HUGGINS.

Adjutant, CAPTAIN THOMAS J. LEWIS; Quartermaster, CAPTAIN WILLIAM F. CLARK; Commissary, CAPTAIN FREDERICK W. SIBLEY.

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—ALBERT E. WOODSON.

Adjutant, CAPTAIN HENRY L. RIPLEY; Quartermaster, —

Commissary, CAPTAIN GEORGE H. MORGAN.

HEADQUARTERS, FORT ASSINIBOINE, MONT.

Troops—A, B, C, D, G, H, K, L, M, Under orders to United States; E, F, Yosemite National Park, Cal.

FOURTH CAVALRY—COLONEL CAMILLO C. C. CARR.

Adjutant, CAPTAIN GEORGE H. CAMERON; 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 WILLIAM A. RAFFERTY.

Adjutant, CAPTAIN EDWIN P. ANDRUS; Quartermaster, CAPTAIN NATHANIEL F. McCLORE; Commissary, CAPTAIN LAWRENCE J. FLEMING.

HEADQUARTERS, MANILA, P. I.

Troops—A, B, C, D, I, K, L, M, Manila, P. I.; E, F, G, H, San Francisco, Cal.

SIXTH CAVALRY—COLONEL THEODORE J. WINT.

Adjutant, CAPTAIN JOHN W. FURLONG; Quartermaster, CAPTAIN GEORGE L. BYRAM; HEADQUARTERS, MANILA, P. I.

All troops of regiment serving in Philippine Islands.

SEVENTH CAVALRY—COLONEL THEODORE A. DALDWIN.

Adjutant—Quartermaster, CAPTAIN SOLOMON P. VESTAL; Commissary, CAPTAIN WM. H. PAYNE.

HEADQUARTERS, CHICKAMAUGA PARK, GA.

All troops of regiment stationed at Chickamauga Park, Ga.

EIGHTH CAVALRY—COLONEL LOUIS H. RUCKER.

Adjutant, CAPTAIN ANDREW G. HAMMOND; Quartermaster, STEPHEN L. H. SLOCUM; HEADQUARTERS, JEFFERSON BARRACKS, MO.

Troops—A, B, C, D, Fort Sill, Okl.; E, F, G, H, Jefferson Barracks, Mo.; I, K, L, M, Fort Riley, Kan.

NINTH CAVALRY—COLONEL EDWARD S. GODFREY.

Adjutant, CAPTAIN GEORGE W. READ; Quartermaster, CAPTAIN FRANK S. ARMSTRONG; HEADQUARTERS, MANILA, P. I.

All troops of regiment serving in Philippine Islands.

TENTH CAVALRY—COLONEL J. AUGER.

Adjutant, CAPTAIN ROBERT G. PAXTON; Quartermaster, CAPTAIN CHAS. H. GRIERSON.
HEADQUARTERS, FORT ROBINSON, NEB.

Troops—A, B, C, D, I, K, L, M, Fort Robinson, Neb.; E, F, G, H, en route to U. S.

ELEVENTH CAVALRY—COLONEL FRANCIS MOORE.

Adjutant, CAPTAIN STEPHEN H. ELLIOTT; Quartermaster, CAPTAIN LETCHER
HARDMAN.

HEADQUARTERS, MANILA, P. I.

All troops of regiment serving in the Philippine Islands.

TWELFTH CAVALRY—COLONEL WM. C. FORBUSH.

Adjutant, CAPTAIN ROBERT E. L. MICHIE; Quartermaster, CAPTAIN JOSEPH E. CUFACK
Commissary, CAPTAIN 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.

THIRTEENTH CAVALRY—COLONEL E. M. HAYES.

Adjutant, CAPTAIN WILLIAM J. GLASGOW; Quartermaster, CAPTAIN WALTER M.
WHITMAN; Commissary, CAPTAIN THOMAS M. CORCORAN.

HEADQUARTERS, FORT MEADE, S. D.

Troops—A, Fort Yellowstone, Wyo.; B, Fort Meade, S. D.; C, Fort Yellowstone, Wyo.;
D, Fort Meade, S. D.; E, F, Fort Keogh, Mont.; G, H, Fort Assiniboine, Mont.;
I, K, Fort Meade, S. D.; L, Fort Yates, N. D.; M, Fort Meade, S. D.

FOURTEENTH CAVALRY—COLONEL THOMAS C. LEBOW.

Adjutant, CAPTAIN MATTHEW C. SMITH; Quartermaster, CAPTAIN OREN B. MEYER.
HEADQUARTERS, FORT GRANT, ARIZONA.

Troops—A, Fort D. A. Russell, Wyo.; B, Fort Huachuca, Ariz.; C, Fort Mackenzie,
Wyo.; D, Fort Huachuca, Ariz.; E, Fort Russell, Wyo.; F, G, Fort Wingate,
N. M.; H, Fort Logan, Col.; I, K, L, M, Fort Grant, Ariz.

FIFTEENTH CAVALRY—COLONEL WM. M. WALLACE.

Adjutant, CAPTAIN FRANCIS C. MARSHALL; Quartermaster, CAPTAIN LINCOLN C. ANDREWS;
Commissary, CAPTAIN KENZIE W. WALKER.

HEADQUARTERS, MANILA, P. I.

All troops of regiment serving in Philippine Islands.

CAVALRY OF THE NATIONAL GUARD.

NOTE.—The following have no mounted troops: Alaska, Arizona, Delaware, District of Columbia, Florida, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Michigan, Minnesota, Nevada, North Carolina, South Dakota, West Virginia, Vermont.

ALABAMA.**FIRST CAVALRY SQUADRON—MAJOR JAMES T. BECK.**

Adjutant, Captain A. G. Forbes. Quartermaster, Captain J. F. Burns.
Commissary, Captain L. L. Lassiter.

HEADQUARTERS, CAMDEN.

Troop "A," Montgomery, Captain W. O. Garside; Troop "B," Camden, Captain
J. D. Jenkins; Troop "C," Selma, Captain V. B. Atkins; Troop "D," Birmingham,
Captain E. J. McCrossin.

ARKANSAS.

Troop "A," Panoia, Major M. C. House; Troop "B," Captain S. W. Murtishaw.

CALIFORNIA.

Troop "A," San Francisco, Captain Chas. Jansen; Troop "B," Sacramento, Captain
W. L. Kay; Troop "C," Salinas, Captain Chas. J. Fulle; Troop "D," Los Angeles,
Captain John D. Fredericks.

COLORADO.

FIRST SQUADRON OF CAVALRY—MAJOR JAMES H. BROWN, COMMANDING, DENVER.
First Lieutenant A. M. Chase, Adjutant.

Troop "A," Grand Junction, Captain J. M. Kennedy, First Lieutenant R. E. Meserve, Second Lieutenant T. H. Van Buren; Troop "B," Denver, Captain Z. T. Hill, First Lieutenant F. A. Perry, Second Lieutenant W. F. Hayden; Troop "C," Denver, Captain H. D. Smith, First Lieutenant C. S. Card, Second Lieutenant J. G. Dickinson.

CONNECTICUT.

Troop "A," New Haven, Captain Luzerne Luddington, First Lieutenant William J. Bradnack, Second Lieutenant Robert J. Woodruff.

GEORGIA.**FIRST CAVALRY, COLONEL P. W. MELDRIM.**

Lieutenant Colonel B. Gordon, Major J. S. Dozier, Major W. P. Waite, Major B. T. Sinclair.

HEADQUARTERS, SAVANNAH.

Troop "A," Savannah, Captain W. W. Gordon; Troop "B," McIntosh, Captain A. G. Cassels; Troop "C," Springfield, Captain C. F. Berry; Troop "D," Reidsville, Captain E. J. Giles; Troop "E," Johnson's Station, Captain J. W. Hughes; Troop "F," Gainesville, Captain G. F. Canning; Troop "G," Darien, Captain R. D. Fox; Troop "H," Jesup, Captain H. W. Whaley; Troop "K," Augusta, Captain A. J. Twigg; Troop "L," Atlanta, Captain Geo. M. Hope.

ILLINOIS.**FIRST CAVALRY.**

HEADQUARTERS, 229 FRANKLIN STREET, CHICAGO.

FIELD AND STAFF.

Colonel Edward C. Young, Lieutenant Colonel Robert B. Fish, Major Frank B. Alsip, Major Milton J. Foreman; Adjutant, Captain Willis Counselman; Inspector of Rifle Practice, Captain Harry C. Cassidy; Quartermaster, Captain Leo Wampold; Commissary, Captain Burnett Chipperfield; Veterinary Surgeon, Captain Stewart S. Baker; Squadron Adjutant, First Lieutenant Martin Peterson and Walter A. Rosenfield; Surgeon, Major T. Jay Robeson; Assistant Surgeon, Captain Jesse Rowe; Assistant Surgeon, First Lieutenant Otis H. MacLay.

Troop "A," Chicago, Captain Joseph C. Wilson; Troop "B," Shirley, Captain Isaac F. Douglas; Troop "C," Chicago, Captain Emil A. Hoeppner; Troop "D," Springfield, Captain John W. Vorhes; Troop "E," Chicago, Captain Charles A. Alsip; Troop "F," Chicago, Captain Frederick B. Sherwin; Troop "G," Peoria, Captain Stephen O. Tripp; Troop "H," Macomb, First Lieutenant W. E. Shields.

MARYLAND.

Troop "A," First Brigade, Pikesville, Captain Joseph W. Shirley, First Lieutenant Edmund C. Stewart, Second Lieutenant C. Lyon Rogers, Jr.

MASSACHUSETTS.

FIRST BATTALION OF CAVALRY—MAJOR WILLIAM A. PERRINS, JAMAICA PLAIN.
Adjutant, First Lieutenant Albert E. Carr. Quartermaster, First Lieutenant John C. Kerrison, Revere.

HEADQUARTERS, BOSTON.

Troop "A," Boston, Captain Frank K. Neal.
Troop "D," Boston, Captain John Perrins, Jr.
Troop "F," Unattached, West Chelmsford, Captain John J. Monahan.

MISSISSIPPI.**MISSOURI.**

One troop formed in St. Louis, but not yet admitted to National Guard.

MONTANA.

Troop "A," Billings, Captain J. C. Bond.
Troop "B," Bozeman, Captain J. F. Keown.

NEBRASKA.

Troop "A," Seward, Captain Harley E. Bromwell.
South Omaha Independent Cavalry Troop, South Omaha, Captain William L. Holland.

NEW HAMPSHIRE.

Troop "A," Peterborough, Captain Charles B. Davis.

NEW JERSEY.

First Troop, Newark, Captain R. Wayne Parker.

Second Troop, Red Bank, Captain Edwin Field.

NEW MEXICO.

FIRST BATTALION OF CAVALRY—MAJOR ROBERT C. RANKIN.

Adjutant, First Lieutenant A. F. Tarkington; Quartermaster, First Lieutenant Robert Gross; Commissary, Second Lieutenant R. C. Reid; Chaplain, Captain Geo. Selby.

HEADQUARTERS, EAST LAS VEGAS.

Troop "A," East Las Vegas, Captain W. C. Reid; First Lieutenant James G. McNary; Second Lieutenant Geo. A. Fleming.

Troop "E," Santa Fe (not reorganized).

NEW YORK.

SQUADRON "A"—MAJOR OLIVER B. BRIDGMAN.

Adjutant, First Lieutenant Robert C. Lawrence; Quartermaster, First Lieutenant Louis V. O'Donohue.

HEADQUARTERS, NEW YORK CITY.

First Troop, New York City, Captain William C. Cammann; Second Troop, New York City, Captain Howard G. Badgley; Third Troop, New York City, Captain Herbert Barry.

Troop "B," Albany, Captain Edward J. Wheeler.

Troop "C," Brooklyn, Captain Charles I. De Bevoise.

NORTH DAKOTA.

FIRST BATTALION OF CAVALRY—MAJOR WM. H. MCKEE, COMMANDING. KENMARE.

Captain Steven S. Howard, Assistant Surgeon, Bottineau. First Lieutenant Albert H. McKee, Adjutant, Kenmare.

Troop "A," Dunsmuir, Captain Joseph D. Eaton.

OHIO.

Troop "A," Cleveland, Captain Frank E. Bunts.

Troop "B," Columbus, Captain Frank H. Beverly.

OREGON.

Troop "A," Lebanon, Captain C. H. Young.

Troop "B," Sumpter, discharged January 21, 1902.

PENNSYLVANIA.

First Troop, Philadelphia City Cavalry, Philadelphia, Captain John C. Groome.

Second Troop, Philadelphia City Cavalry, Philadelphia, Captain Frank Earle Schermershorn.

Sheridan Troop, Tyrone, Captain C. S. W. Jones.

Governor's Troop, Harrisburg, Captain Frederick M. Ott.

RHODE ISLAND.

FIRST SQUADRON OF CAVALRY—MAJOR WM. A. MAYNARD.

Adjutant, First Lieutenant Leo F. Nadeau; Quartermaster, First Lieutenant Lucius H. Newell.

HEADQUARTERS, PAWTUCKET.

Troop "A," Pawtucket, Captain Charles H. Allenson.

Troop "B," Providence, Captain John J. Richards.

SOUTH CAROLINA.

FIRST REGIMENT, SOUTH CAROLINA VOLUNTEER CAVALRY.

HEADQUARTERS, GEORGETOWN.

FIELD AND STAFF.

Colonel J. E. Sparkman, Lieutenant-Colonel Chas. W. Collock, Major S. A. Marvin, Major W. T. Ellerbe, Adjutant J. W. Dear, Judge Advocate M. W. Pyatt, Surgeon D. S. Black, Quartermaster P. H. McMaster; Paymaster A. M. Brallesford, Adjutant, Third Battalion, J. D. West.

Troop "A," Edgemoor, Captain H. G. Evans.

Troop "B," Edisto Island, Captain M. M. Seatrook.

Troop "C," Pamela, Captain E. C. Richardson, Jr.

Troop "D," St. Paul, Captain A. J. Richbourg.

Troop "E," Charleston, Captain Thos. S. Sinkler.

Troop "F," Walterboro, Captain D. C. Heyward.

Troop "G," Gillisonville, Captain W. A. Sauls.

Troop "H," Eutawville, Captain E. G. Causey.

Troop "I," Levy, Captain E. G. W. Bryan.

Troop "K," Santee, Captain B. O. Bourne.

Troop "L," Conway, Captain L. D. Long.

Troop "M," Monck's Corner, Captain W. T. Owens.

Troop Detached, Georgetown, Captain H. T. McDonald.

TEXAS.

FIRST CAVALRY SQUADRON—MAJOR CHURCHILL TOWLES, HOUSTON.

Adjutant, First Lieutenant Ivan Murchison, Houston; Quartermaster, First Lieutenant John W. Hedlin, Austin; Assistant Surgeon, First Lieutenant J. L. Short, Houston.

HEADQUARTERS, HOUSTON.

Troop "A," Houston, Captain W. W. Cockrell.

Troop "C," Austin, Captain D. D. Smyth.

Troop "D," Corsicana, Captain W. H. Murphy.

It is hoped to increase the number of troops to six during the year.

TENNESSEE

Troop "A," Nashville, Captain George F. Hagar.

UTAH.

Troop "A," Salt Lake City, Captain George F. Summers.

VIRGINIA.

Troop "B," Surry, Captain Harry C. Land.

WASHINGTON.

Troop "B," Tacoma, Captain Everett G. Griggs.

WISCONSIN.

Troop "A," Milwaukee, Captain Robert W. Mueller.

WYOMING.

Cavalry Troop, Cheyenne, Captain Robert La Fontaine.

LIST OF REGULAR MEMBERS, UNITED STATES CAVALRY ASSOCIATION.

GENERAL OFFICERS.

MAJOR-GENERAL.

Young, Samuel B. M.
Chaffee, Ada E.
BRIGADIER-GENERAL.
Wade, James F.
Sumner, Samuel S.
Bell, J. Franklin.

ADJUTANT-GENERAL'S DEPARTMENT.

Colonels.
Babcock, John B.
Hall, William F.
Carter, William H.
Lieutenant-Colonel.
Johnston, John A.
Majors.
Parker, James.
Fontaine, Samuel W.
McClernand, Edward J.

INSPECTOR-GENERAL'S DEPARTMENT.

Colonels.
Vroom, Peter D.
Sanger, Joseph P.
Lieutenant-Colonel.
Knox, Thomas T.
Major.
West, Frank.

JUDGE-ADVOCATE- GENERAL'S DEPT.

Brigadier-General.
Davis, George B.
Lieutenant-Colonel.
Crowder, Knott H.

QUARTERMASTER'S DEPARTMENT.

Lieutenant-Colonel.
Pond, George E.
Majors.
Hodgson, Frederick G.
Bellinger, John B.
Alshire, James B.
Bingham, Goodale S.
Captains.
Crane, Thomas
Knight, John T.
Carson, John M., Jr.
Wood, Winthrop S.
Williamson, Geo. McK.
Sewell, Robert
Savona, Thomas H.
Schonfeld, Richard McA.
Walcutt, Charles O.
White, George P.
Crabbs, Joseph T.

SUBSISTENCE DE- PARTMENT.

Major.
Brainard, David L.
Captains.
Bean, Wm. H.
Hart, Wm. H.
Davis, Alexander M.
Gallagher, Hugh J.

PAY DEPARTMENT.

Brigadier-General.
Bates, Alfred E.
Lieutenant-Colonel.
Dodge, Francis S.
Captain.
Whipple, Herbert S.

CORPS OF ENGI- NEERS.

Captain.
Potter, Charles L.
FIRST CAVALRY.
Major.
Ward, Frederick E.
Woodward, Samuel L.
Bomas, Peter S.

Captains.
Galbraith, Jacob G.
Brown, Wm. C.
Brown, Oscar J.
Landis, J. F. Reynolds.
Mills, Albert L.
Scott, William A.
Goode, George W.
Wright, Edmund S.
Rivers, William C.
Bartman, John D. L.
Davis, Milton F.
Lindsley, Elmer
Arnold, Samuel B.
Sills, Wm. G.
Anderson, Alvord Van P.

First Lieutenants.
Drake, Charles B.
Hazard, Russell T.
Foy, Robert C.
Chapman, Leslie A. I.
Second Lieutenants.
Roscoe, David L.
Smith, Melwyn D.
Rodney, Walter H.

SECOND CAVALRY.

Colonel.
Huggins, Eli L.
Lieutenant-Colonel.
Dimmick, Eugene D.
Major.
Schuyler, Walter S.

Captains.
Sibley, Frederick W.
Fuller, Alfred M.
Hopkins, Curtis B.
Lewis, Thomas J.
Rolls, Frederick S.
Gardner, John H.
Levens, Charles J.
Sargent, Herbert H.
Trout, Harry G.
Winn, John S.
Clark, William F.
Herron, Joseph S.
Harrison, Ralph.

First Lieutenants.
Kochersperger, Steph. M.
Pope, Francis H.
Harvey, Charles G.
Smith, Gilbert C.
Knox, Thomas M.
Martin, Walter F.
Lynch, Frank E.

Second Lieutenant.
Collins, Robert L.
Veterinary Surgeon.
Lusk, William V.

THIRD CAVALRY.

Colonel.
Woodson, Albert E.
Lieutenant-Colonel.
Swigert, Samuel M.

Majors.
Steever, Edgar Z.
Hein, Otto L.

Captains.
Ripley, Henry L.
Morgan, George H.
Boughton, Daniel H.
Johnson, Franklin O.
McDonald, John B.
Rice, Sedgwick.
Hedekin, Charles A.
Tate, Daniel L.
Barton, Frank A.
Conrad, Julius T.
Pattison, Harry H.

First Lieutenants.
Chitty, William D.
Sirmeyer, Edgar A.
Babcock, Conrad S.
Comly, George B.
Maize, Sidney D.
Kimball, Gordon N.

FOURTH CAVALRY.

Colonel.
Carr, Camille C. C.
Lieutenant-Colonel.
Augur, Jacob A.

Majors.
Rodgers, Alexander.
Murray, Conliffe H.
Edwards, Frank A.

Captains.
Lockett, James.
Rivers, Tyree, R.
Cameron, George H.
Cress, George O.
Hughes, James B.
Brown, Robert A.
Koshler, Lewis M.
Stewart, Cecil.
Harris, Floyd W.
Scherer, Louis C.
Winans, Edwin B. Jr.
O'Shea, John.
Rutherford, Sam'l McP.

First Lieutenant.
Kelly, William, Jr.
Summerlin, George T.
Boyd, Charles T.
Arnold, Frederick T.
Munro, James N.
Purviance, Samuel A.
McCaskey, Doug. A.
Holbrook, Lucius R.
Mowry, Philip.
Ruggles, Francis A.

Second Lieutenants.
Degen, John A.
Fortescue, Granville R.
Perkins, Edward O.
Henry, James B.

FIFTH CAVALRY.

Colonel.
Rafferty, William A.
Lieutenant-Colonel.
Hatfield, Charles A. P.

Majors.
Paddock, George H.
Watts, Charles H.
Wainwright, Robert P. P.

Captains.
Bishop, Hoel S.
Andrus, Edwin P.
Wheeler, Homer W.
Swift, Eben.
Foster, Fred W.
Goldman, Henry J.
Macomb, Augustus C.
Bryan, Roger B.
Holbrook, Willard A.
Traub, Peter E.
Jenkins, John M.
McClure, Nathaniel F.
Fleming, Lawrence J.
Nissen, August C.

First Lieutenant.
McClintock, John.

SIXTH CAVALRY.

Colonel.
Wint, Theodore J.
Lieutenant-Colonel.
Anderson, George S.

Majors.
Beck, Wm. H.
Gresham, John C.
Pitcher, John.

Captains.
Cheever, Benj. H.
Blockson, Augustus P.
Sands, George H.
Allen, Henry T.

LIST OF REGULAR MEMBERS.

Forsyth, William W.
Steele, Matthew F.
Cole, James A.
Myram, George L.
Howze, Robert L.
Ryan, John P.
Rhodes, Charles D.
Furlong, John W.

SEVENTH CAVALRY.

Lieutenant-Colonel.
Edgerly, Winfield S.

Majors.
Godwin, Edward A.
Varnum, Charles A.

Captains.
Scott, Hugh L.
Sickel, Horatio G.
Slocum, Herbert J.
Waterman, John C.
Beach, Francis H.
Vestal, Solomon P.
Anderson, Edward.
Butler, Matthew C. Jr.
Paine, Wm. H.
Averill, Nathan K.
Mercer, William A.
Hawkins, Clyde E.

First Lieutenant.
Mitchell, Geo. E.

EIGHTH CAVALRY.

Colonel.
Rucker, Louis H.
Lieutenant-Colonel.
Morton, Charles.

Majors.
Sprole, Henry W.
Stanton, William.
Ayres, Charles G.

Captains.
Shunk, William A.
Gaston, Joseph A.
Hammond, Andrew G.
Dickman, Joseph T.
Slocum, Stephen L. H.
Duff, Robert J.
Sayre, Farrand.
Barnum, Malvern H.
Evans, Ellwood W.
Donaldson, Thos. Q. Jr.
Stockle, George E.
Saxton, Charles G.
Saxton, Albert E.

First Lieutenants.
Lott, Abraham G.
Wesson, Charles M.
Roberts, Hugh A.
Oliver, Llewellyn.
Wesson, Charles M.
Kirkman, Hugh.
Otis, Frank J.
Coxe, Alexander B.

Second Lieutenants.
Smith, Talbot.
Terrell, Henry S.

NINTH CAVALRY.

Colonel.
Goldfrey, Edward S.

Lieutenant-Colonel.
Kerr, John B.

Majors.
Garrard, Joseph
Wright, Henry H.
Gile, George H. G.

Captains.
Beach, William D.
McBlain, John F.
Fuller, Alvarado M.
Walsh, Robert D.
Read, George W.
Sance, John T.
Bigelow, Mortimer.
Sievart, Herman A.

TENTH CAVALRY.

Colonel.
Whitlside, Samuel M.
Lieutenant-Colonel.
Hughes, Martin B.

Majors.
Stedman, Clarence A.
Scott, George L.
Fuller, Ezra B.

Captains.
Bigelow, John, Jr.
Read, Robert D., Jr.
Grierson, Charles H.
Watson, James W.
Freeman, Samuel D.
Macdonald, Godfrey H.
Hay, William H.
Paxton, Robert G.
Livermore, Richard L.
Fleming, Robert J.

First Lieutenant.
Kennington, Alfred E.

ELEVENTH CAVALRY.

Colonel.
Moore, Francis

Major.
Finley, Walter L.

Captains.
West, Parker W.
Haines, John T.
Brooks, Edward C.
Hardenman, Fletcher.
Elliot, Stephen H.
Langborne, George T.
Howell, Melvin W.
Jones, Samuel G.
Harbord, James G.
Tomkins, Frank
Clayton, Powell, Jr.
White, Herbert A.

First Lieutenant.
King, Edward L.

TWELFTH CAVALRY.

Colonel.
Forbush, Wm. C.

Lieutenant-Colonel.
Dorst, Joseph H.

Majors.
Guliford, John F.
Kendall, Henry F.

Captains.
Nicholson, William J.
Littebrant, William T.
Hornbrook, James J.
Anderson, Edward D.
Rockenbach, Samuel D.
Cusack, Joseph E.
Morgan, John M.
Mickle, E. L.
Parker, F. Le J.
Morgan, John M.
Craig, J. W.

First Lieutenants.

Breen, Herbert J.
Cochran, Harry S.
Lee, Fitzhugh, Jr.
Case, F. L.
Long, John D.
Sharpley, Arthur G.
Lusk, Oscar S.
Morey, L. S.
Olney, E. M.
McDowell, R. E.
Potter, A. H.
Schloss, Frederick S.
Cass, L. W.
Troxel, O. C.
Mays, C. R.

**THIRTEENTH CAV.
ALRY.**

Lieutenant-Colonel.

Thomas, Earl D.
Majors.

Hunt, Levi P.
Jones, Thaddeus W.
Taylor, Charles W.

Captains.

Lockridge, F. D.
Dade, Alexander L.
Fenton, Charles W.
Corcoran, Thomas M.
Glasgow, William J.
Phillips, Ervin L.
Sweeney, Claude E.
Whitman, Walter M.
Babcock, Walter C.
Myer, Benjamin E.

First Lieutenants.

Longstreet, James, Jr.
Winters, William H.
Sturgis, Dexter
Moffet, William P.
Lowe, William L.
Steensberg, George.
Smith, Walter H.
Bristol, Matt. C.
Dougherty, Clarence A.
Clifton, Wm. H., Jr.
Reynolds, Robert W.
Ball, Henry T.

Second Lieutenant.

McLane, Paul E.

FOURTEENTH CAV.

ALRY.*Colonel.*

Lebo, Thomas C.

Lieutenant-Colonel.

Cooper, Chas. L.

Majors.

Dodd, George A.
Hardie, Francis H.
O'Connor, Chas. M.

Captains.

Gray, Alonso.
Overton, Clough.
Seyles, Edwin M.
McNamee, Michael M.
Meyer, Orva B.
Howard, Harold P.
Reeves, James H.
Walker, Kirby.
Adams, Sterling P.
Smith, Cornelius C.
Yates, William.
Smith, Mathew C.
Crosby, H. B.

First Lieutenants.

Day, Clarence R.
Heldt, Grayson V.
Hayne, Paul T., Jr.
Lippincott, Aubrey.
Whitlock, Frank O.
Pfleger, Winston.
Russell, Geo. M.

Second Lieutenants.

Jordan, Harry B.
Bign, Kerr T.
Hunt, John H., Jr.
Jewell, James M.
Esthorst, Otto W.
Finher, Ronald E.
Hume, John E.

FIFTEENTH CAV.

ALRY.*Colonel.*

Wallace, Wm. M.

Majors.

Hunter, George E.
Craig, Louis A.

Captains.

Pershing, John J.
Blunt, J. Y. Mason
Rooster, Francis J.
Merrillat, Alfred C.
Marshall, Francis C.
Hickok, Howard B.
Kirkpatrick, George W.
Andrews, Lincoln C.

INFANTRY.

Barber, Henry A., Capt.
24th Reg.

ARTILLERY.

Van Dusen, George W.
Capt.

RETIRED LIST.

Bacon, John M., col.
Baird, William, capt.
Batson, Matthew A., capt.
Bell, James M., brig.-gen.
Bernard, Reuben F., lt.-col.
Biddle, James, col.

Boutelle, Frazier A.,

capt.
Braden, Chas., 1st lieut.
Breck, Samuel, brig.-gen.
Burnett, George E.,

1st lieut.

Carlton, Caleb H.,

brig.-gen.

Carpenter, Louis H.,

brig.-gen.

Carr, Eugene A.,

brig.-gen.

Carroll, Henry, col.

Cole, George W., capt.

Compton, Charles E., col.

Converse, George L.,

capt.

Cooney, Michael, col.

Davis, Nick, col.

Evaas, George H., capt.

Forsyth, James W.,

maj.-gen.

Grierson, Benjamin H.,

brig.-gen.

Harris, Moses, maj.

Hovle, George G., maj.

Hunt, George G., col.

Jackson, Henry, col.

Jackson, James, lt.-col.

Kelley, Joseph M., maj.

Kellogg, Sanford C., maj.

Kendall, Henry M., maj.

Keyes, Alexander S. E.,

maj.

King, Chas., capt.

Lockwood, John A.,

capt.

Loud, John S., maj.

McGregor, Thomas, col.

Mackay, Edward G., maj.

Merritt, Wesley,

maj.-gen.

Mills, Anson, brig.-gen.

Norvell, Stevens S.,

lt.-col.

Noyes, Henry E., col.

Oakes, James, col.

Olmstead, Freeman E.,

1st lieut.

Powell, Philip P., capt.

Richards, James E., capt.

Russell, Gerald, maj.

Sheridan, Michael V.,

brig.-gen.

Viele, Charles D., col.

Wagner, Henry, lt. col.

Waltz, Henry De H.,

1st lieut.

Wesendorf, Max, capt.

Wheeler, James N., col.

Wheeler, Fred, maj.

Wood, Thomas J.,

brig.-gen.

JOURNAL

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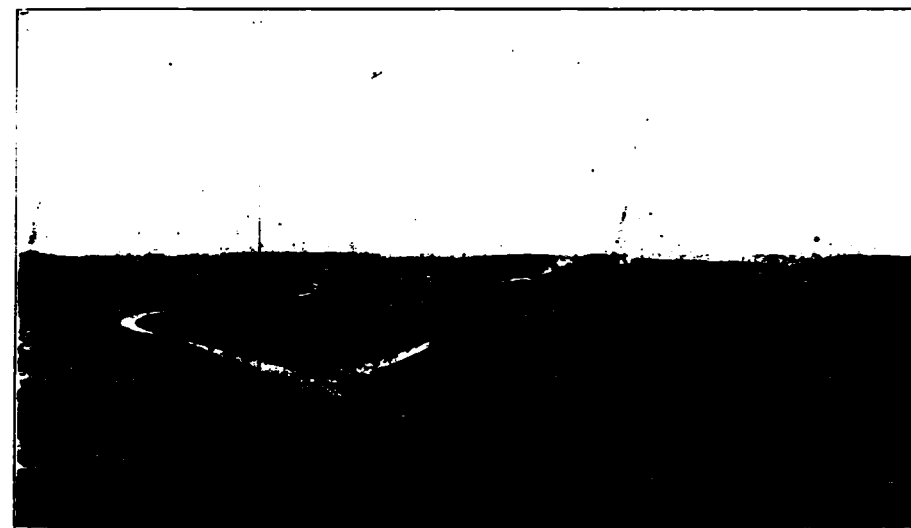
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No. 46.

THE CAVALRY POST OF FORT RILEY, KANSAS.



GENERAL VIEW OF FORT RILEY.

IN 1852 the establishment of a military post at the junction of the Kansas River with the Republican fork, in the Territory of Nebraska, was considered by the military authorities to be important for two reasons: first, for the protection of emigrants to the Pacific coast, the trails to New Mexico, California and Oregon diverging at this point;

second, for the moral effect on the powerful Indian tribes who then inhabited that portion of the great West. Troops could take the field from a month to six weeks earlier in the spring and remain in the field for the same period later in the fall from this point than they could from Fort Leavenworth. The site was selected by a board of officers appointed September 21, 1852, by the Secretary of War. This board proceeded to the junction of the two rivers in October, 1852, and recommended that location as one having all the desirable advantages for a post intended to be the principal station and depot of supplies to troops stationed on the frontier.



ADMINISTRATION BUILDING.

In the Army Appropriation Act, approved March 3, 1853, \$65,000 was appropriated for the erection of buildings on the site selected by the board the preceding autumn, and on May 17th Captain CHARLES S. LOVELL, with Companies B, F and H, Sixth Infantry, established the post pursuant to Orders No. 9, Headquarters 6th Military Department, Jefferson Barracks, Missouri, March 30, 1853. The post was named Camp Center, being very near the geographical center of the United States. By General Orders No. 17, War Department, Adjutant-General's Office, June 27, 1853, the name was changed to Fort Riley in honor of Brevet Major-General BENNETT RILEY, Colonel First Infantry, who died on June 9, 1853.



COLONEL C. C. CARR, FOURTH CAVALRY,
COMMANDING OFFICER, FORT RILEY.

Major F. A. OGDEN, quartermaster, escorted by Troop B, First Dragoons, under Major, CHILTON, proceeded from Fort Leavenworth to the new post at Camp Center with orders to erect the necessary buildings, and some temporary buildings were erected in 1853 and 1854, the original plan being for an eight-company post.

The Congress which adjourned March 4, 1855, made an appropriation for the purpose of preparing Fort Riley for a cavalry post. The plans were prepared in Washington. Major OGDEN put in charge, five hundred laborers and mechanics brought from Fort Leavenworth by wagon, and work begun in July, 1855. The troops were sent out on a summer campaign, leaving in the post only Major OGDEN, Surgeon SIMMONS, Chaplain CLARKSON, Bandmaster JACKSON, Wagonmaster P. G. LOWE, the hospital steward, and a few of the Sixth Infantry band. On August 1st cholera broke out and a panic among the workmen ensued. Major OGDEN was taken down with the scourge on the 2d of August, and several deaths occurred that day. Major OGDEN died the following day. Work was suspended and laborers deserted by the score. The disease ran its course in six days, during which time there were seventy-five or a hundred deaths. The workmen became unmanageable and demanded their pay. There was no one to pay them and the money was locked in the safe. A gang of laborers broke into the sutler's store, rolled out a barrel of whisky, knocked in the head and helped themselves with tin cups, until they became intoxicated. They then broke into the ordnance storehouse, armed themselves, met on the parade-ground, and threatened to break into the safe and take their pay. They were about to make the attack when Wagonmaster Lowe rode into the post from the camp on the Republican. The leader of the mob threatened LOWE with a revolver. LOWE knocked him down and held a revolver on him until he plead for his life. The panic was allayed and the various trades organized squads to preserve order when the work of construction was resumed.

The post as completed under Major OGDEN's orders remained practically the same until 1885, and was very much smaller than at present. It was in the form of a rectangle. On the north side and at the present junction of Forsythe Place and Sheridan Avenue were the commanding officer's quarters. On the right of the commanding officer's quarters were two sets of officers' quarters: one on the ground now occupied by the double set No. 22, and the other the present club: on the left were two sets of quarters: one on the ground now occupied by the double set No. 23, and the other the present officers' mess. On the east and west sides of the parade-ground were two sets of cavalry barracks, in line with the present double sets Nos. 35, 36, 38 and



LIEUTENANT-COLONEL GEORGE E. POND,
DEPUTY QUARTERMASTER-GENERAL.

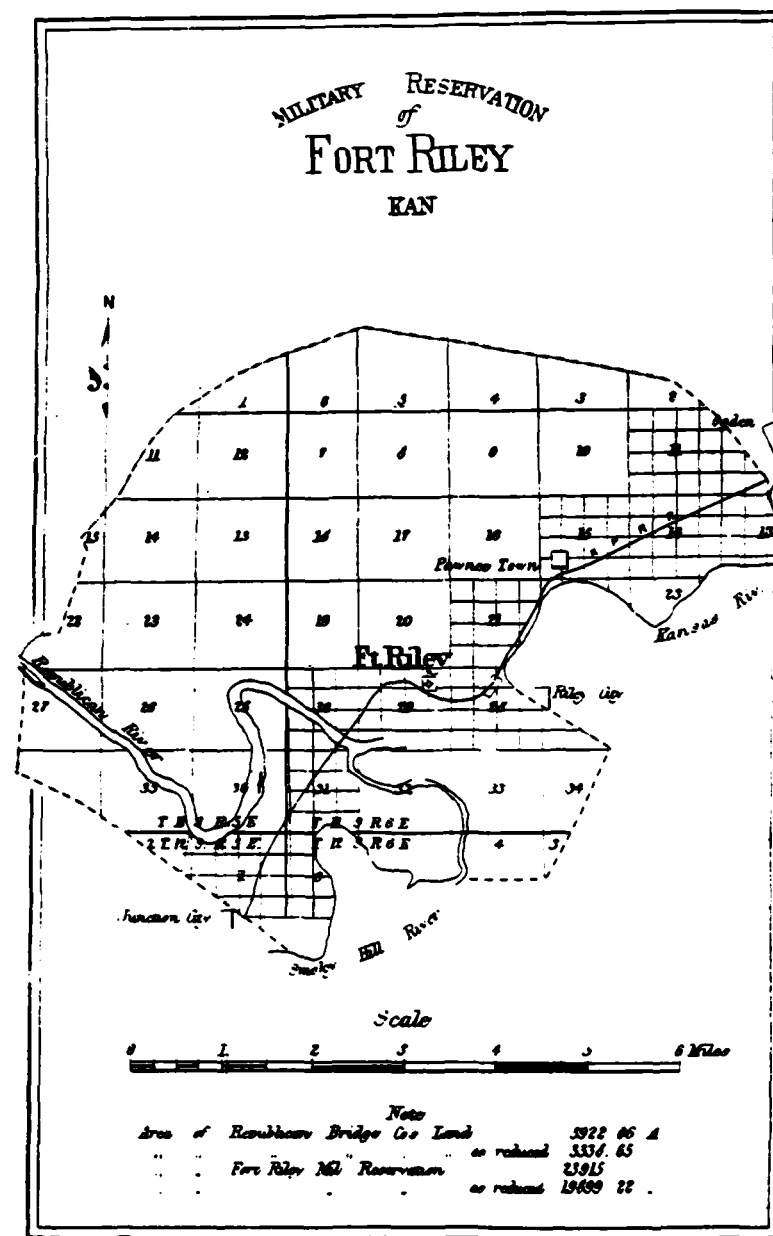
39, the guard-house being in rear of the space between the two sets on the west and the hospital in rear of the space between the two sets on the east, on the ground at present occupied by the administration building. On the south side of the parade-ground were three sets of officers' quarters equally spaced. In the center of the parade-ground was the band-stand, with paths leading to each set of cavalry barracks and to the commanding officer's quarters.

The plan* of the present post began to take form about 1885. In that year the present two double sets of cavalry barracks nearest Sheridan Avenue, and in 1887 the two remaining sets on the same line, were built. The three sets of officers' quarters on the south side of the parade-ground, the two double sets of cavalry barracks nearest Sheridan Avenue, the commanding officer's quarters and the guard-house were torn down in 1887, and in 1888 the two remaining double sets of cavalry barracks and the hospital. In 1889 the large building known as the Mess Hall, and used during the operation of the general mess, was built. The years of construction of the present buildings are shown in the "Legend" to the "Plan of Post."

The water supply of the post is furnished by a pumping plant located about a mile from the post on the "Republican Flat." The plant is furnished with two pumps, only one being used at a time, having a capacity of 25 gallons to the double stroke. The water is taken from a system of eight wells in line, so arranged that any well can be cut off from the system and cleaned without interfering with the working of the plant. The distributing point is a reservoir, capacity of 500,000 gallons, situated about three-quarters of a mile from the pumping station on the hills west of the post. This gives a head sufficient to throw water over the highest building on the system. The water is remarkable for its purity, and analysis shows that it contains no foreign matter, except lime, with which it is strongly impregnated. During the month of May of the present year 9,000,000 gallons were furnished by this system.

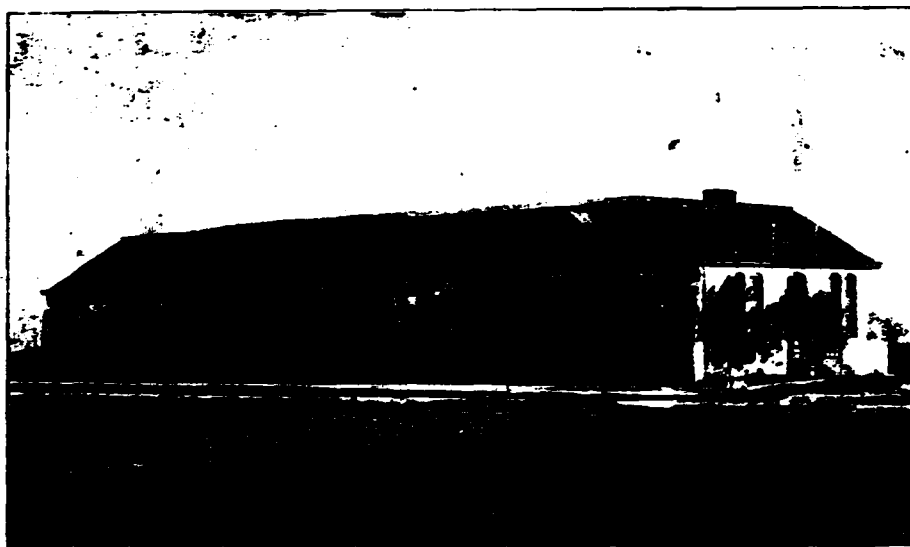
The present steam-heating system was put in in 1889. The plan consists of a battery of seven boilers and pump-room. The plant is in excellent condition, and has on its system eighty-three buildings. It is in operation from about November 1st until the month of April, depending on the season. The consumption of fuel is about sixteen to twenty-five tons of coal per day. The abandonment of this sys-

*The plan of the present post was prepared by and under the direction of Colonel GEORGE E. FORD, Assistant Quartermaster-General, who was selected for this duty by General SHERIDAN, under whose direction he worked. Colonel FORD was sent to Fort Riley in 1885, and remained in charge of the work until 1891, expending more than a million dollars in the work of reconstruction. In addition to the plans of the post, he prepared the plans for the waterworks, the sewerage system, the beautiful roads on the reservation and through the post, and also the splendid steel bridge which spans the Republican River.—EDITOR.



tem is contemplated. All the new buildings are to be provided with separate heating plants, and the remodeling of the barracks includes separate heating systems. The Mess Hall and the establishment of the general mess in 1889 resulted in the removal of the kitchens from the barracks. The general mess having been abandoned as unsatisfactory, the remodeling of the barracks includes the replacing of kitchens and dining-rooms.

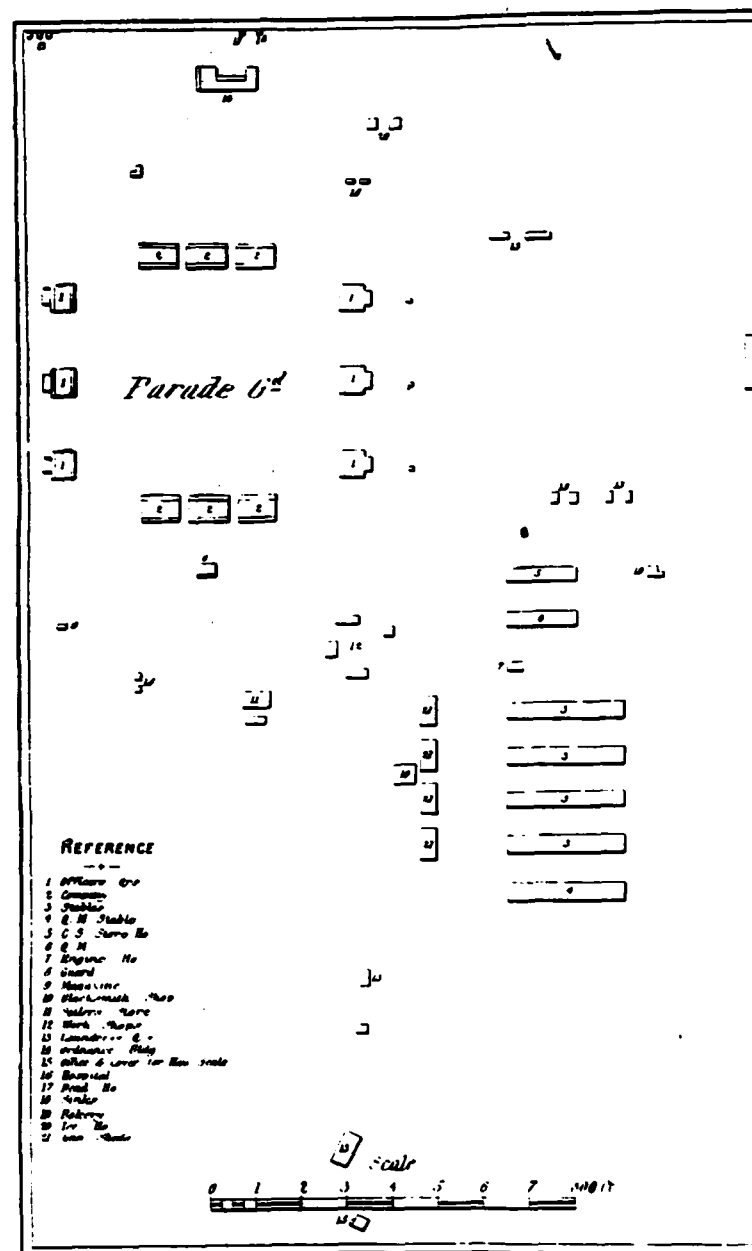
There is no gymnasium at present at Fort Riley. The present Mess Hall could very easily, however, be arranged to contain a gymnasium at small cost.



POST MESS-HALL.

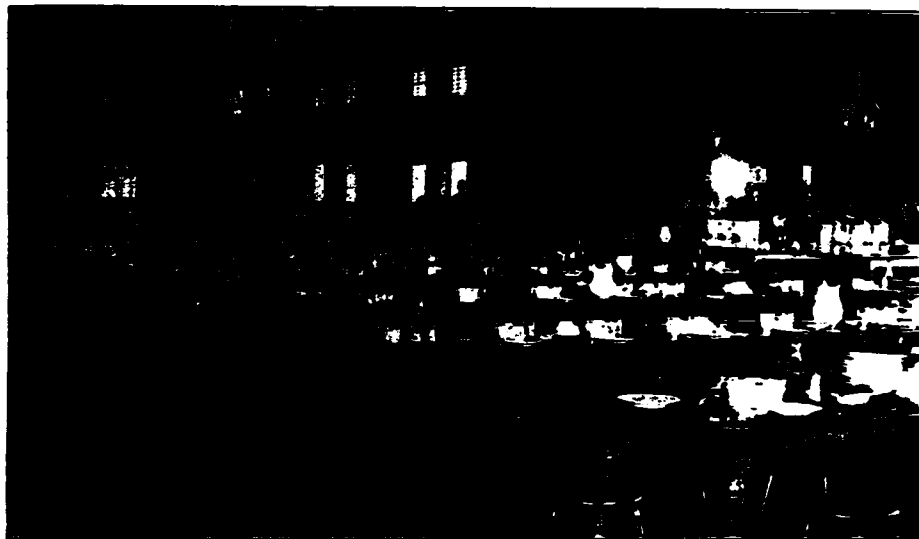
The present or reduced reservation, as it is generally called, contains 19,899 acres, and is about eight miles in its greatest length by six miles in its greatest width. In 1867 four thousand acres of land belonging to the reservation, lying between the two rivers and Junction City, were given to a local company for the building of a bridge across the Republican River. The bridge fell into the river before it had been used, but the company retained possession of the land. The bridge was finally built by the Government in 1885.

There are three regular drill-grounds at Fort Riley, all about equally distant from the post. The largest, and perhaps the best, is the level



PLAN OF FORT RILEY OF 1855.

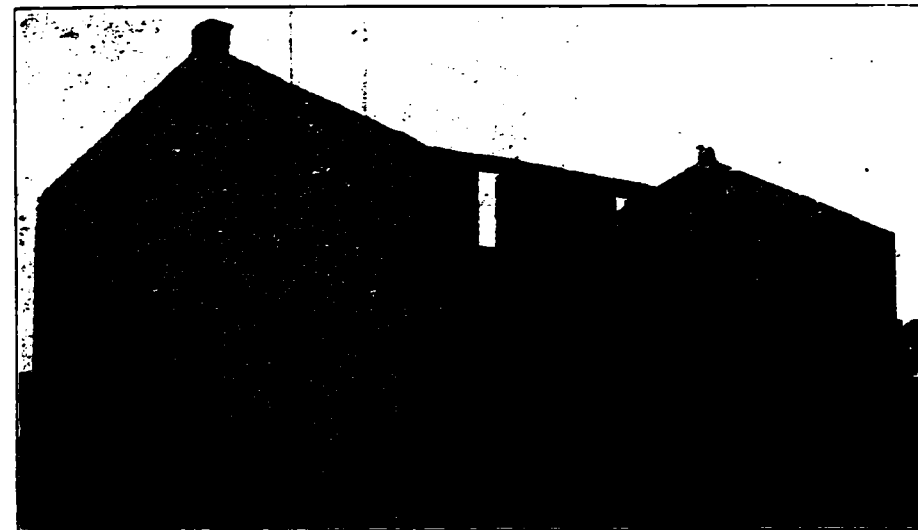
stretch to the east across the Kansas River, and contained between the Kansas River on the west, the Smoky Hill River on the south, and the chain of low bluffs on the east. This is known as the "Smoky Hill Flat," and is a beautiful level piece of bottom land, absolutely free from stones or obstructions of any kind, and is in itself ample for any garrison which could ever be accommodated by the cavalry post. If troops could reach it directly, its distance from the post would be less than half a mile; but as it is necessary to go by the bridge, it is about a mile distant.



INTERIOR VIEW OF POST MESS-HALL.

West of the post and about a mile and a half distant is the extensive level bottom along the Republican River, known as the "Republican Flat." This is probably as great in extent as the "Smoky Hill Flat," but is more irregular, though of the same general character. It is confined a little more closely by the river bluffs than is the "Smoky Hill Flat," giving less of a sweep away from the river. On the "Republican Flat," just beyond the pumping station, is located the target-range, which has a limit of 1000 yards. The ground beyond the target-range is used for skirmish firing, volley firing and company field practice. North of the post, and distant perhaps a mile and a quarter, is the level ground along the Kansas River, closely shut in by the bluffs, and known as "Pawnee Flat." This was the

site of Pawnee City,* the original capital of the Territory of Kansas. Two ruined stone buildings still remain to mark the spot, the larger and better preserved one being the capitol building where met the first legislative assembly of Kansas, July 2, 1855. "Pawnee Flat" is much smaller than either of the other drill-grounds, but is similar in character. It is used principally for ceremonies and for some artillery drills.



RUINS OF KANSAS' FIRST STATE-HOUSE.

These drill-grounds are all available for herding purposes, as are also the rolling portions of the reservation. The target-range is built

*Upon the passage of the law and its approval by the President, May 30, 1854, creating the Territories of Kansas and Nebraska, a company was formed in September of the same year for the purpose of selecting a site and building thereon a town with a view of making it the territorial capital. Fort Riley being regarded as the geographical center of the United States, lands adjoining its reservation on the east were selected, the town located and named Pawnee. During the following winter and spring some building was done, and this included a two-story stone structure to serve as the first capitol of the Territory. The Legislature was called together, and the first session was held in the building, July 2, 1855. Owing to the very inadequate accommodations for the legislators, and the fierce antagonisms existing between the free State and pro-slavery parties, the session was at work but four days, and adjourned to meet at Shawnee Mission on the 16th of the same month. That was the first and last session of a Kansas legislature at Pawnee. The town went out of existence more rapidly than it was created, and all that is now left to mark the spot of the first territorial capital are the ruins of the capitol building, as shown by the illustration. The land upon which stands this historic structure is now a part of the Fort Riley reservation. In 1901 the Legislature of Kansas passed a concurrent resolution asking the general Government to cede to the State one acre from the reservation, on which is located this building. Pending action by Congress, the War Department has issued to the Kansas Historical Society a revocable license, giving temporary charge of the building, and there has been placed upon each end of the building a sign, in large letters, indicating that it was the first capitol of Kansas.—EDITOR.

for twelve targets back to 600 yards. At 800 and 1000 yards but two targets are used, though more might be.

Junction City, the nearest town, is located about four miles southwest of the post, and connected with it by an electric car line. Cars run every hour during the day and every half-hour from 6:30 P. M. till midnight. The Union Pacific Railroad has a station at Fort Riley, where all regular trains stop.

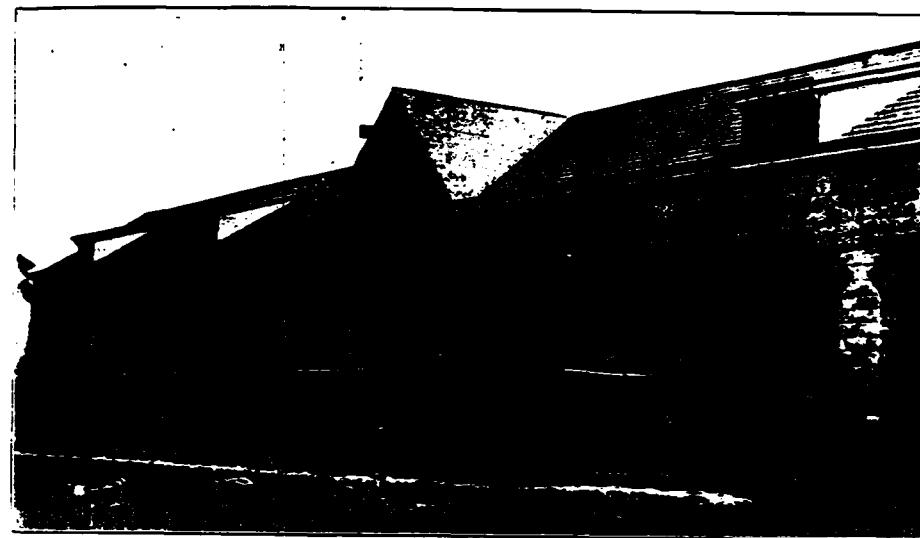
Until 1887 there was no artillery post at Fort Riley. In 1886 the Fifth Cavalry were camped on the ground in the vicinity of the com-



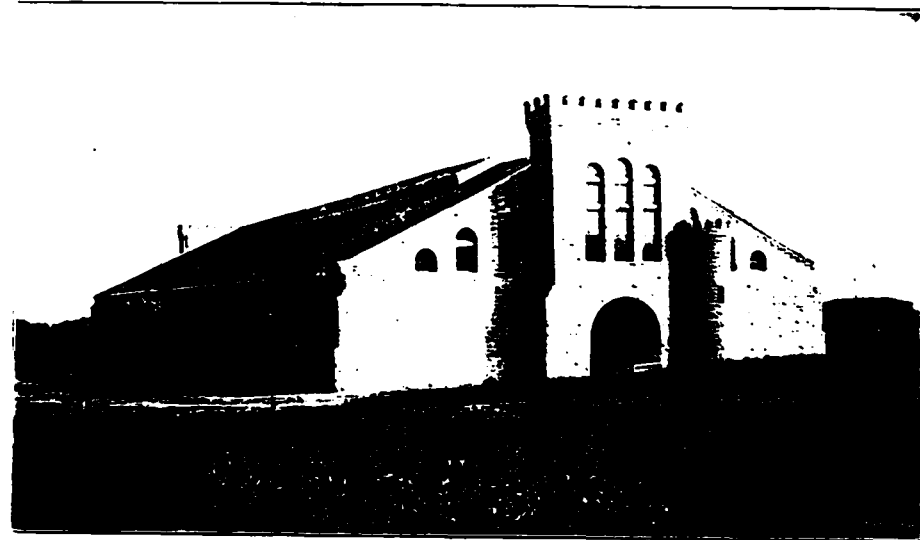
ADMINISTRATION BUILDING. ARTILLERY POST.

manding officer's quarters of the present artillery post. In 1887 the construction of the commanding officer's quarters of the artillery post, four double sets of officers' quarters, two barracks, five stables, two gun-sheds and the artillery administration building was let under one contract. The contractor failed in a few weeks, and the contract was completed by his bondsmen. Since then the artillery and cavalry posts have been built up together. When the present plan is finished, the artillery post will accommodate five batteries of field artillery.

In the latter part of October, 1901, Major HODGSON, of the Quartermaster's Department, visited the post for the purpose of obtaining



ARTILLERY GUN-SHED.



RIDING-HALL.

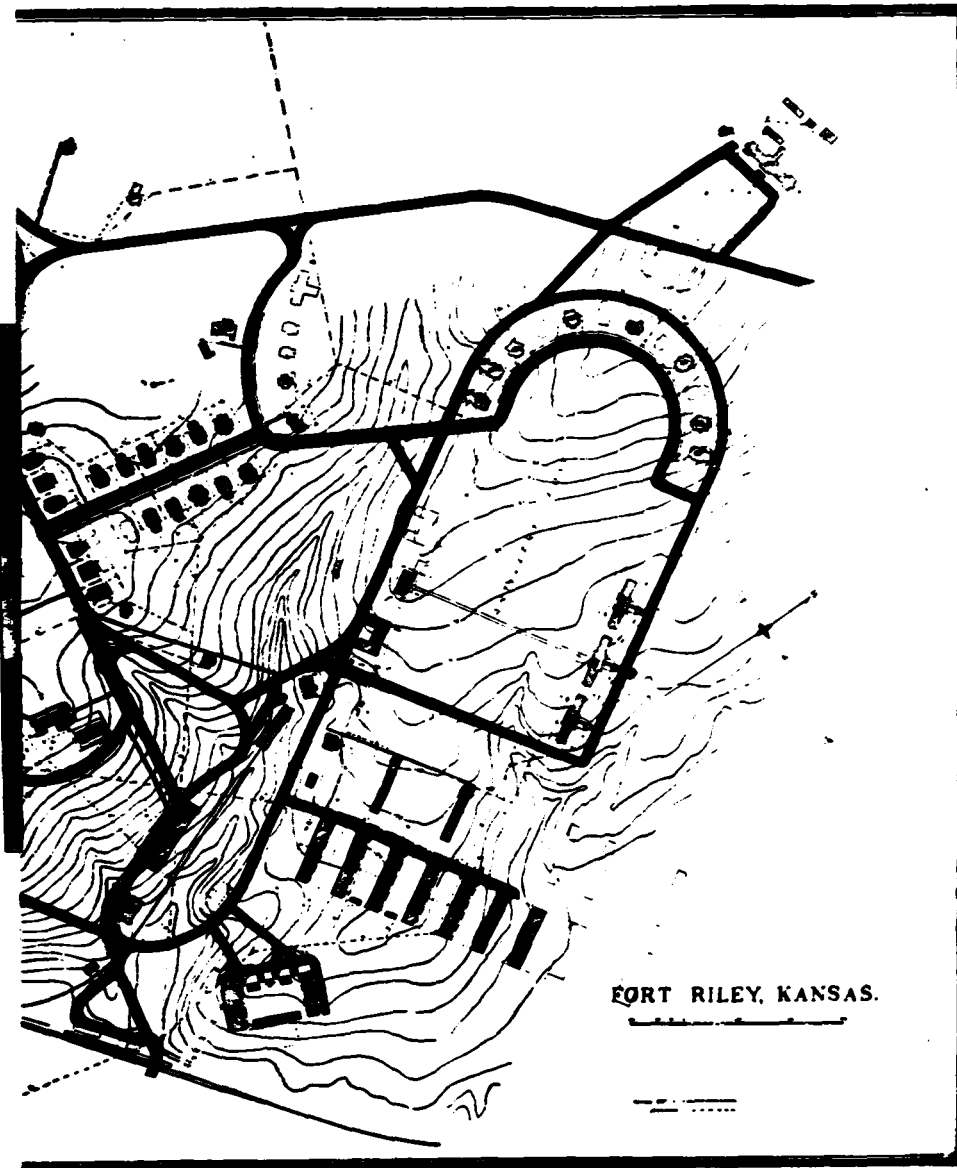
details as to the remodeling of the old barracks and selecting sites for the new buildings. An allotment was made, from moneys already appropriated, for beginning the work, and in March of this year, 1902, the contracts were let and construction begun. Under those contracts the following buildings are at present under construction: one double set of cavalry barracks, east of Mess Hall; one artillery barracks, south of artillery administration building; one hospital ward annex. On June 10th bids were opened for the following: one double set of officers' quarters, cavalry post, to be No. 18; one double set of officers' quarters, artillery post; one bachelor officers' quarters



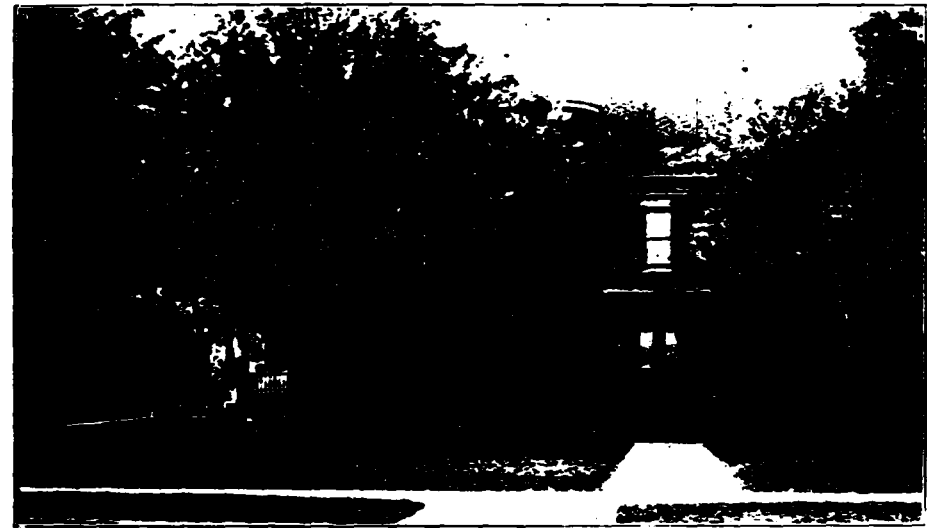
INTERIOR VIEW OF RIDING-HALL.

across the road from the chapel; two cavalry stables, capacity ninety animals; one artillery stable, capacity one hundred and thirty-four animals; two gun-sheds; remodeling of six cavalry barracks and three artillery barracks. Remodeling consists in rearrangement of interiors and in providing each organization with kitchen and dining-room. One year from the date of the acceptance of the bids, July 1, 1902, will find Fort Riley almost the finished plan which was contemplated fully fifteen years ago. As finally completed, the post will accommodate three squadrons of cavalry and five batteries of field artillery.





The climate of Fort Riley, though not in many respects desirable, is yet one which is favorable to military work, in that troops can be drilled outside during the greater part of the year. As a general rule, the summers are dry and hot winds prevail. Winters are uncertain: snow cannot be depended upon. The temperature falls below zero and high winds prevail. The present season, however, is exceptionally fine. The rainfall during the month of May has been unusually large and vegetation is far advanced. The atmosphere has remained cool and damp the entire latter half of the month.



RESIDENCE OF COMMANDING OFFICER.

It seems strange, looking at the post as it appears at present, with all its natural advantages, to think that it was at one time recommended for abandonment. In 1874 General SHERIDAN, commanding the West, recommended the abandonment of a number of posts, and the establishment of two permanent posts in Kansas, one at Fort Leavenworth and one at Fort Hays. Fort Riley was among those recommended for abandonment. A bill was submitted to the Kansas Legislature ceding the jurisdiction of the reservations at Fort Leavenworth and Fort Hays to the United States with a view to carrying out General SHERIDAN's idea. When the bill came up for passage, a member of the House from Ellis County, where Fort Hays was located,

opposed it so far as Fort Hays was concerned, and the name of that post was stricken from the bill. General SHERIDAN then recommended Fort Riley to be selected as a permanent post in place of Fort Hayes. It is now destined to be one of the most important stations of our regular Army, and will undoubtedly be one of the points for the contemplated mobilization of large bodies of troops for purposes of instruction.

The old post consisted almost entirely of frame buildings. The present post, with the exception of the non-commissioned staff quarters, which are of brick, and the old quartermaster's storehouse and commissary, both frame buildings, is built entirely of stone, with slate or tin roofs in most cases. The stone used in the buildings is taken from the river bluffs on the reservation. An almost perfectly level stratum of this fine building-stone runs through all the river bluffs close to the summit, showing a distinct water formation.

No. of Building.	Year of Construction.	Character.
A	1854-55	Old quartermaster or commissary storehouse.
B	1854-55	Old quartermaster or commissary storehouse.
C	1854-55	Stable.
D	1854-55	Stable.
E	1854-55	Stable.
G	1854-55	Stable.
21	1854-55	Officers' quarters, now club.
24	1854-55	Officers' quarters, now mess.
3	1854-55	Old chapel.
35	1885	Double set cavalry barracks (capacity, 136 men).
39	1885	Double set cavalry barracks (capacity, 136 men).
23	1886	Double set officers' quarters.
1	1887	Commanding officers' quarters.
7	1887	Double set officers' quarters.
8	1887	Double set officers' quarters.
11	1887	Double set officers' quarters.
12	1887	Double set officers' quarters.
20	1887	Double set officers' quarters.
22	1887	Double set officers' quarters.
25	1887	Double set officers' quarters.
36	1887	Double set cavalry barracks (capacity, 136 men).
38	1887	Double set cavalry barracks.
108	1888	Hospital.
37	1888	Mess hall.
15	1889	Double set officers' quarters.
16	1889	Double set officers' quarters.
26	1889	Field officers' quarters.
28	1889	Dispensary.
29	1889	Guard-house.
34	1889	Double set cavalry barracks (capacity, 176 men).

No. of Building.	Year of Construction.	Character.
40	1889	Double set cavalry barracks (capacity, 176 men).
72	1889	Heating plant.
44	1889	Stables, cavalry (capacity, 65 animals).
50	1889	Stables, cavalry (capacity, 65 animals).
60	1889	Stables, cavalry (capacity, 65 animals).
62	1889	Stables, cavalry (capacity, 65 animals).
64	1889	Stables, cavalry (capacity, 65 animals).
2	1890	Field officers' quarters.
9	1890	Double set officers' quarters.
10	1890	Double set officers' quarters.
19	1890	Field officers' quarters.
30	1890	Administration building.
69	1890	Granary.
32	1891	Riding-hall.
70	1892	Quartermaster and commissary storehouse.
13	1894	Double set officers' quarters.
14	1894	Double set officers' quarters.

RECOLLECTIONS OF FORT RILEY.*

By PERCIVAL G. LOWE.

LATE in the fall of 1852, Maj. R. H. CHILTON, with his Troop B, First Dragoons, of which I was then first sergeant, escorted Maj. E. A. OGDEN from Fort Leavenworth on an expedition to locate a new military post in the vicinity of the forks of the Kansas River—the confluence of the Smoky Hill and Republican. The site selected was afterwards named Fort Riley,† now one of the finest military posts in America. Some buildings were erected in 1853 and 1854, most of them, temporary, and the post was garrisoned by infantry. I quote the following from an address delivered by me before the State Historical Society, January 14, 1890:•

"Of all charming and fascinating portions of our country, probably there is none where Nature has been so lavish as within a radius of 150 miles, taking Fort Riley as the center. In rich soil, building material, in beauty of landscape, wooded streams and bubbling springs, in animal life, in everything to charm the eye, gladden the heart, and

*Address delivered before the Kansas State Historical Society, at its twenty-fifth annual meeting, January 15, 1901.

†The post was named in honor of Brevet Major-General HENNET RILEY, U. S. Army, who entered the service in 1813, and died in 1852. He distinguished himself in campaigns against Indians in Florida, and was breveted brigadier and major-general for meritorious and gallant conduct in the war with Mexico.—EDITOR.

yield to the industry of man, here was the climax of the most extravagant dream, perfect in all its wild beauty and productiveness; perfect in all that Nature's God could hand down to man for his improvement and happiness."



MONUMENT AT FORT RILEY IN MEMORY OF THE SEVENTH CAVALRY OFFICERS AND ENLISTED MEN WHO DIED IN BATTLE WITH INDIANS.

The Congress that adjourned March 4, 1855, made an appropriation for preparing Fort Riley for a cavalry post by erecting new quarters, stables for five troops of cavalry, storehouses, etc., the plans of which were prepared in Washington; and Maj. E. A. OGDEN, quarter-

master, U. S. A., was ordered to take charge of the work. The buildings were all to be of stone to be taken from quarries in the vicinity of the post. The major made contracts with SAWYER & McILVAIN—or McILVAIN, of Cincinnati, for the necessary woodwork, doors and frames, window-sash, etc., to be made at the factory in Cincinnati and shipped with the necessary lumber, hardware, glass, etc., by boat to Fort Leavenworth, and thence by wagon to Fort Riley. Mr. SAWYER was employed as architect and superintendent. I was post wagon-master at Fort Leavenworth when the order came to furnish transportation for the men to Fort Riley, and a request from Maj. OGDEN that I be placed in charge of it. With fifty-six mule teams, I met, on the Fort Leavenworth levee, about 500 men, mechanics, laborers, etc., just landing from steamboats, and camped them in Salt Creek Valley. Excepting a few Mexican War veterans, none of these men had ever been in camp. They were just from their homes in Cincinnati or St. Louis, and, as a large percentage of them were married men, this was a novel experience for them. Fortunately, the day was fine and we got into camp early.

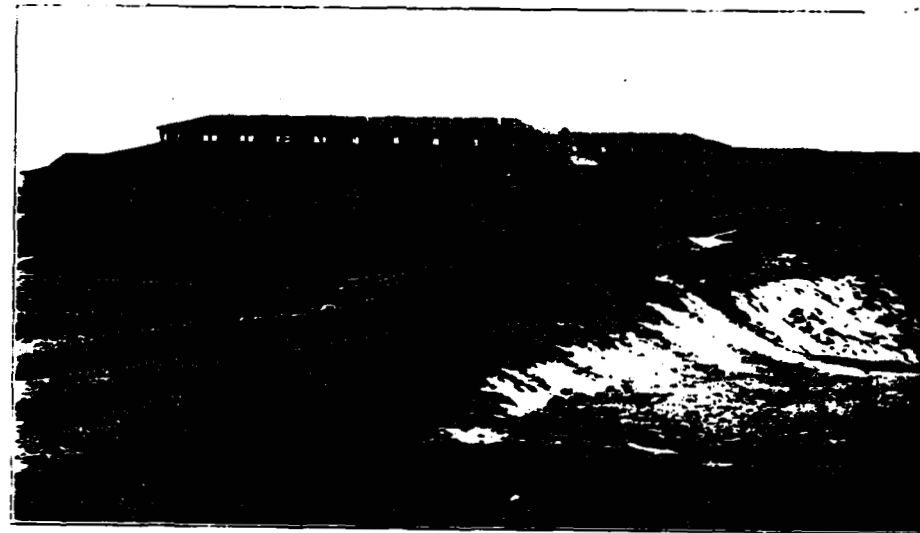
Without incident of much importance we arrived at Fort Riley in four days, without a storm or other serious discomfort. The men cheerfully walked, turn about, in order to make time and get permanently settled. All were located in quarters or camped under canvas, and work in all branches commenced the first week in July. Excavations for foundations, quarrying rock, burning lime, making brick, cutting wood for burning them, hauling rock, sand, wood, etc., burning charcoal—in short, in a few days all of the gangs of mechanics and laborers were adjusted to their work and everything was moving as smoothly as possible. The messing was the most important and the most difficult feature. Some cooks had been brought, but most of them had much to learn about cooking in camp. The carpenters seemed to get along the best, and were from first to last a fine lot of men and gave no trouble. It fell to my lot, under Major OGDEN's instructions, to look generally after all the camps, and from my experience to advise the cooks about preparing the food—the same as allowed to soldiers—and to see that the camps were well located.

By the end of July a kiln each of brick, lime and charcoal had been burned, and one two-story stone building finished, except hanging the doors and putting in the windows, and a number of others well under way. This completed building was taken possession of for offices, and two iron safes containing the funds for paying the men were put in the front room. By contract, the men hired to work until the 15th of November, and were to be paid half their wages at

the end of each month and the balance at the end of the time for which they were hired. They were then to be returned by wagon to Fort Leavenworth, and thence by boat to St. Louis and Cincinnati, whence they came.

Major OGDEN, on horseback or on foot, was conspicuous for his general supervision of everything, ready to call attention to any neglect of work that did not seem to be going on to the best advantage. and in that one month of July I learned more than I ever have during the same length of time. There was very little friction, as the major's experience with men and material was extensive, and his well-directed energy and good judgment made all of the department move as nearly in harmony as was possible among men suddenly taken into camp from their city homes. More than half of them lived in tents. The teamsters probably lived better than any other class of men on the work, as they were accustomed to camp life; some had served in the Army, and were therefore fairly well disciplined and well versed in cooking Government rations. Towards the end of the month a few men became ill, and one or two men died of what was undoubtedly cholera. All hands received their half-month's pay on the 1st of August, and that evening Major OGDEN and I rode from camp to camp inspecting all the messes and the manner of living. He talked freely and cheerfully, notwithstanding the feeling of unrest caused by the few cases of sickness, which had been promptly sent to the hospital. He dwelt carefully upon all the details and expressed the opinion that there would be little danger of cholera if the men lived well. He entered into the matter with his usual gentle earnestness, and restored courage and confidence in many whose homes and friends were far away. But this was his last effort; the last cheering words to the men he had brought to this new territory to build what was then considered a great military post. We also went through all of the quarters occupied by the men, accompanied by Mr. SAWYER, in whom the mechanics had great confidence. When Major OGDEN arrived to build the post, all of the troops had left for the summer's campaign on the plains, so that of the military there were left only the Army surgeon, Dr. SIMMONS, Chaplain CLARKSON, Bandmaster JACKSON and a few other members of the band of the Sixth Infantry, the hospital steward, whose name I am sorry I do not remember, and a young soldier whose term of service would expire in a few months. He acted as orderly for the major. During the night of the 1st of August cholera developed rapidly. The morning of the 2d dawned on a camp in great anxiety and distress. Major OGDEN had been taken sick and, although every effort was made to keep this information from spreading, it flew like

wildfire and caused a panic. A burial party and a gang of men to dig graves were organized. Several died that day. Work was generally suspended, though SAWYER tried to keep men at work, and a few did work, without stopping. I have no idea how many men were sick, but much of the illness was caused by mental anxiety. The slightest indisposition was attributed to cholera, and often resulted in bringing it on. All sorts of wild reports were afloat, and a stranger coming in would think half the garrison in a dying condition, everything was so exaggerated.



CAVALRY STABLES.

SAWYER and HOPKINS, the chief clerk, gave special attention to Major OGDEN. MARTIN, whose business it was to keep the men's time, mingled with them in camp and quarters, including the hospital, and gave much attention to burying the dead and nursing the sick. I never saw a cooler or more intelligently nervous man.

I moved all the teams four miles up the Republican River to a fine, dry camp, partly for the safety of the men and partly to prevent mules being stolen to ride away on, several having been already taken. I instructed the men not to leave camp or allow anyone to approach it, built a corral of the wagons for present use; gave orders to corral the mules every night, and set the men to cutting cottonwood poles and building a large corral, which was needed. I knew that the dis-

ress was great enough to justify sending an express to Fort Leavenworth for medical assistance. The doctor was utterly unable to meet the demands upon him, and I told Mr. ORTON, a wagon-master, to report to me, ready to go, and mounted on his best mule, but not to let anyone know that he was going. I called to see Major OGDEN in the fore part of the evening. There was no hope for him. SAWYER and HOPKINS knew it, and asked me for a reliable man to carry letters to Fort Leavenworth. I told them that Mr. ORTON was ready, and that I had selected him, much as I disliked to part with him, because I knew he would get there as quickly as it was possible to go. He left about 10 P. M., August 2d, and delivered his letters at Fort Leavenworth about 2 P. M., August 4th, having ridden 130 miles on one mule in forty hours. He fed himself and mule several times, but did not sleep.

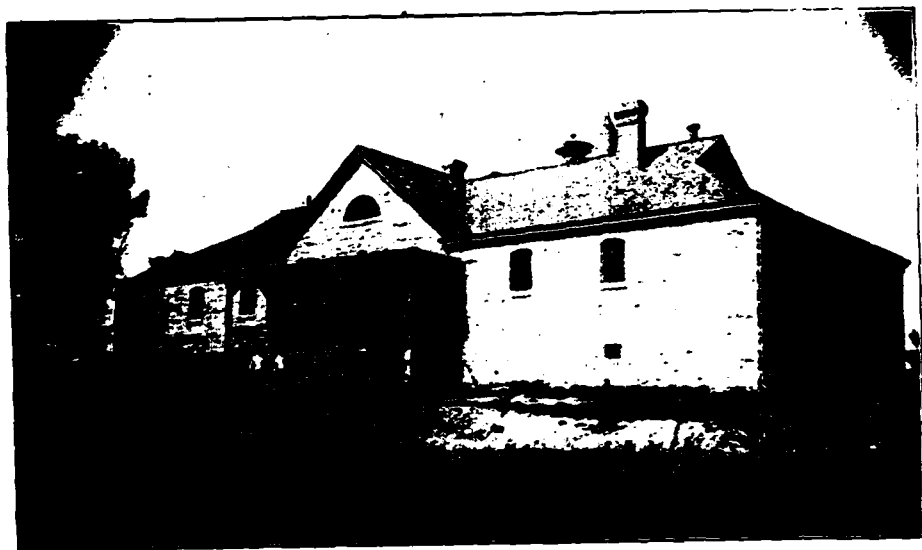
After ORTON had gone, I went to the hospital with MARTIN. SAWYER had appointed nurses, with promise of extraordinary pay, and they seemed to be trying to do their best, but all the sick had not been brought there. Many were in the camps. The hospital steward was a good man, and stuck to his post cheerfully, but the doctor seemed to have given up, and had not been seen about the sick since morning. Murmuring and discontent were general, and it was known that many men had gone—struck off down the road on foot. About midnight MARTIN promised to keep moving about if I would lie down awhile, which I did on a buffalo-robe in the office where the safes were. I had scarcely closed my eyes when I heard groans in the room next to me. I looked in and found HOPKINS in great agony, with a bad case of cholera. Two men were doing their best for him. I stayed with him a few minutes and then went to the steward, at the hospital, who gave me some brandy. On my way back I called at the doctor's quarters. He came to the door himself. I told him of Mr. HOPKINS' illness, and asked if he could go and see him. I saw that he was nearly a physical and mental wreck. He shook his head sadly and said, while he shoved up his sleeves and rubbed his arms and hands: "Mr. LOWE, I am unstrung—unfit for anything. I want to take my family to St. Mary's Mission. I wish you would send me an ambulance. I want to get off as quickly as possible." I told him I had no ambulance under my immediate charge—in fact, there was not then an ambulance at the post. I returned to HOPKINS with the brandy, and then went to Major OGDEN's headquarters. SAWYER was about receiving his last message to his wife. "Tell her," he said, "that I appreciated her love to the last."

The distress on August 2d was as nothing compared with the horrors of the 3d. Brèvet Major Wood had gone to Fort Kearney with his company, leaving his wife and two children. All had cholera. Brèvet Major ARMISTEAD, afterwards Major-General ARMISTEAD of the Confederate Army, had gone up the Smoky Hill with his company, leaving his wife and two children. His wife had cholera. Additional cases were noted all over the post. Thus the morning of the 3d opened. An ambulance had gone after Major ARMISTEAD. Reverend Mr. CLARKSON, the post chaplain, with his wife and niece, were the only nurses for Mrs. WOOD and her two children and Mrs. ARMISTEAD. I never saw braver or more devoted nurses and friends than the CLARKSONS. They took Mrs. ARMISTEAD's two children home, and did everything that could be done for the others. But Mrs. WOOD and her two children and Mrs. ARMISTEAD died during the day. Mr. SAWYER wanted to use the messenger—the young soldier acting orderly for the major—but I found him in the room over the office where I had tried to sleep, dying of cholera. SAWYER procured the lead linings from the tea-caddies in the commissary, and had Major OGDEN's coffin made air-tight.

Fifteen in all died on the 3d of August—Major OGDEN, Mrs. ARMISTEAD, Mrs. WOOD and two children, the major's orderly, and nine workmen. A few men were at work all the time, and Mr. SAWYER encouraged them to continue, but their surroundings were distracting. A delegation waited on Mr. SAWYER and earnestly insisted that the balance due them should be paid and they allowed to go. SAWYER explained to them that, even if they were entitled to more pay, it could not be given to them, as there was no one to pay them, and the money was locked up in the safe, which could not be opened. A little after noon I galloped off to my camp on the Republican, found everything all right, and no sickness among the fifty men there. I did not dismount, nor did I allow anyone to come near me. I returned to the post about three o'clock, and saw Mr. SAWYER and Rev. Mr. CLARKSON sitting on the latter's front porch looking at a band of men in the middle of the parade-ground. SAWYER called to me, and I hitched my horse and joined them on the porch. Mr. CLARKSON made the following statement: Mr. ROBERT WILSON, the post sutler, who had a very large stock of goods in his store, had locked up everything and taken his family away in the morning, accompanied by one of Major OGDEN's clerks. Soon after I left, about one o'clock, the store was broken into by a gang of men, some goods scattered about, a barrel of whisky rolled out, a head knocked in, and, with tin cups, the men helped themselves. When well liquored up, led by a big stone-

mason, some of them broke open the building used for the post ordnance department, and armed themselves with guns, pistols, and ammunition.

And there they were, in a half-drunken condition, on the parade-ground, airing their grievances, threatening to break open the safes and pay themselves, etc. But a small portion of the revelers armed themselves (about twenty-five), and they formed a circle, with their leader inside, while all sorts, drunk and sober, looked on. We could hear plainly most that was said, and they meant that we should hear; and, if carried out, it looked serious. A committee headed by this fellow



GUARD-HOUSE.

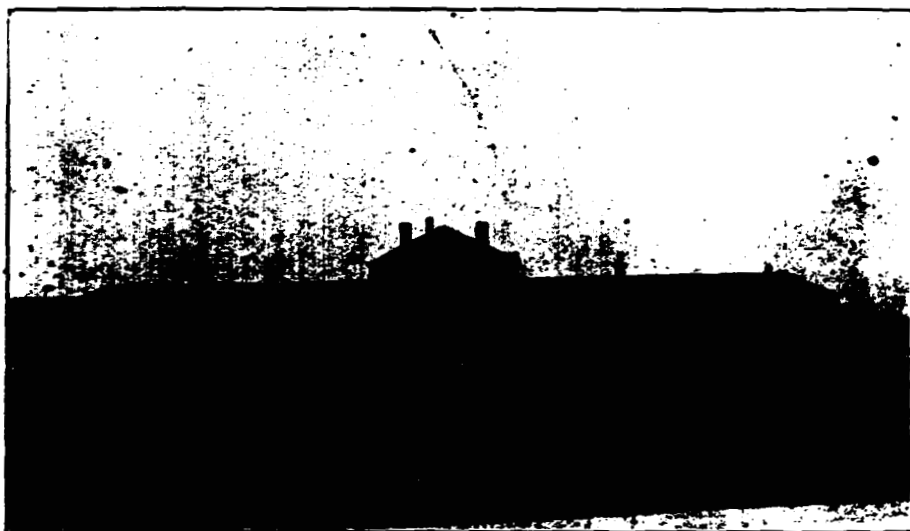
had waited upon SAWYER before they broke into the sutler's store and demanded the pay they claimed was due them. SAWYER was a man of good courage, but of quiet disposition, and not a very strong man. Seeing the apparent determination of the fellow and his following, SAWYER parleyed a little, and said that when I came we would consult about it. The man said that if I did not come d—d quick, they would not wait. And this violent demonstration on the parade-ground seemed to be a warning to accede to their demand. Of course, SAWYER's reference to me was a mere ruse to gain time and form some plan of action. I suggested that I go and talk to the men, since my name had been mentioned. I knew the leader pretty well, and

thought he would listen to me; at any rate, I might check him up until we had a little more time, and perhaps bridge over until he would sober up. I never was more anxious for a good company of soldiers under a good officer.

SAWYER rather demurred at my trying to pacify these men—it was against his judgment, and might precipitate trouble. I assured him that I would not make matters worse. The day was exceedingly hot and I took SAWYER's umbrella. As I approached, I saw that most of this valiant chief's followers were hopelessly drunk. The leader stood in the center of the crowd flourishing a pistol, which was apparently cocked. A drunken man noticed me, and cried out, "Hurrah for the mounted chief!" a name given me, and by which I was generally referred to, because I was always moving about pretty lively on horseback, while others in charge of work or exercising any authority were on foot. I stepped into the circle and said to the leader, "What is the matter, Mr.—?" Quick as lightning he sprang back and leveled his pistol, and if it had not been at full cock, I would have been shot. Up to this time I had no definite plan of action—had no arms and no fixed notion of what I would do. Whatever I did dawned upon me instantly. The violent threats of the man caused me to act; the impulse was irresistible. Dropping the umbrella, I seized his pistol, gave him a trip and quick jerk, and his huge body fell so heavily that the breath was knocked out of him. I had his pistol and threatened to kill him if he moved. As soon as he could get breath, he begged for his life. The crowd seemed dumb. With my left hand I jerked a gun from the nearest man, who was so drunk that he fell over. Throwing the gun on the ground, I told the others to pile their guns and pistols on it. I never saw an order more promptly obeyed.

The mutiny, or rebellion, so far as these men were concerned, was over. I called to a lot of carpenters and asked them to carry the guns and pistols to the quartermaster's office, which they did, and put them by the two iron safes. Quite a quantity of ammunition was disgorged by the disarmed men, and a ridiculous part of it was that much of it was not suitable for the arms they had. But few of the guns were properly loaded, and some not at all. It was a drunken outfit all around. I said but little to them beyond the plain and emphatic statement that no Government property should be molested; no noise or drunken rioting would be permitted; no misbehavior of any kind; and the man who broke one of these rules would do so at his peril, for henceforth the line was drawn, and this was to be considered a notice to all bad men. While I believed that nine-tenths of all the men

employed would do their best in this trying time, I exhorted them to stand by and help each other. The fallen and bruised leader protested his sorrow, laying it all to whisky. The indignation expressed by many good men reached the manhood that was trying to assert itself through the fumes of the whisky he had taken. He was a foreman, a fine workman, came to Mr. SAWYER highly recommended, and had a respectable family in Cincinnati. The terrible condition so demoralized him that with the heat and whisky he became crazed. I learned afterwards that he had no hand in breaking into the store, but drank freely when he found the whisky. There had to be a



POST HOSPITAL.

severe check somewhere, to set the reckless element to thinking, and bring the better element to the front and establish leaders.

This was the turning-point. It happened oddly enough, but was effective. Men of different trades organized themselves into squads to keep good order and to assist each other. Nurses volunteered for the hospital and in the camps. Voluntary help came pouring in, though I found that many men had left the post. There was no way of stopping them, and under the circumstances perhaps it was well that they should go. But where could they go? There was no settlement in the immediate country. There was one family at the bridge across the Little Blue, nineteen miles east, and the Catholic

mission and Pottawatomie village of St. Mary's, fifty-two miles east, where good Father DUEKINCK had established a college and was gathering in the young Pottawatomies and teaching them, with admirable success, to become good citizens. Here Mrs. BERTRAM kept the only hotel worth the name between Fort Riley and Leavenworth. Captain ALLEY's store at Silver Lake, the Pottawatomie homes and the eating-place at Hickory Point finishes the list of settlements, save here and there at long intervals a squatter's shanty. (I do not say "cabin," because that indicates a home built of logs, with a fireplace, where warmth, comfort and contentment abound in winter and cool restfulness in summer.) Such houses did exist at long intervals along the streams, but seldom on the high prairie. A shanty, boarded up and down, with a stovepipe through the roof, was the rule, and a decent man ought to have died alone rather than intrude himself on one of these poor families, under the circumstances.

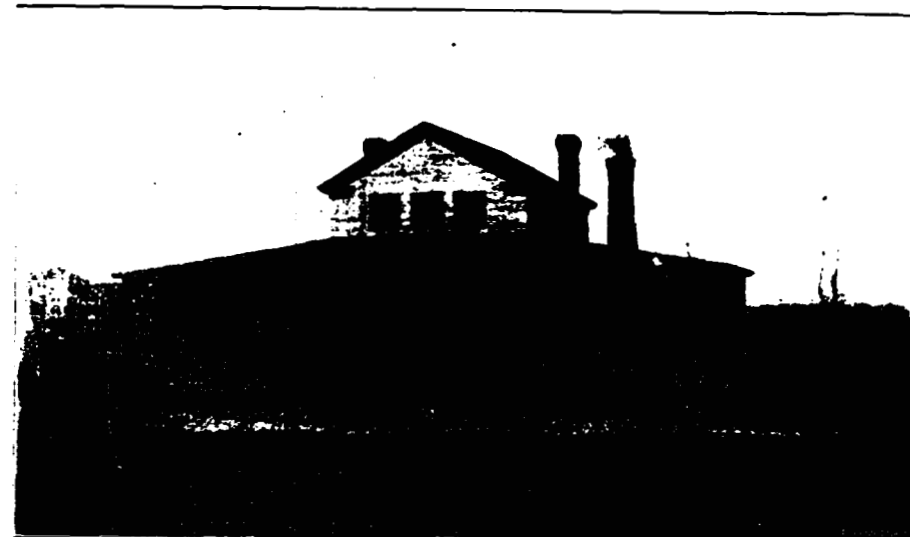
A small steamboat had run up the Kaw to Manhattan, twenty miles east of Fort Riley. (At the time I write of I had not seen Manhattan, and do not know what settlements were there.) A lot of the stampedees from Fort Riley took possession of her and ran down the river for a few miles, got aground and had to leave her. MARTIN told me of a raft of logs down in the river, tied to some trees. He learned that the men who had made the raft were waiting for night, when they would cover it with lumber from a pile of pine flooring near by. I went with him, cut all the ropes, and set the logs floating singly down the river. This saved the lumber. The men probably deserted.

Major ARMISTEAD's quarters were the second west of the quartermaster's office. Mrs. CLARKSON and her niece had prepared the body of Mrs. ARMISTEAD for burial, but it was not to be confined until the major's arrival. Entering the hall through the door from the south porch, one walked about ten feet north and entered a room through a door on the left. At the left of the door stood a bed, with head to the east. From the mantel at the west end of the room a candle shed a dim light over the room and the bed, on which lay Mrs. ARMISTEAD, the white bed-clothes covering her as if asleep. Her face was not covered, and to one standing a little way from the bed she seemed to be sleeping peacefully, and no one not cognizant of the fact would have thought her dead—a lovely picture of a lovely woman. Mr. CLARKSON informed me that his wife and niece were worn out, but would attend to Mrs. WOOD's quarters, where she and her children were confined, ready for burial in the morning, and he asked me to take charge of the ARMISTEAD quarters, which I promised to do.

Counting the time that the ambulance had been gone. I expected the major sometime before midnight. I knew that the faithful driver, K. B. CECIL, now a wealthy farmer of Platte County, Missouri, would spare no effort to bring him quickly. About ten o'clock I heard an ambulance rattling over the stony road, knew it was the major, and dreaded to meet him. As the ambulance stopped at the porch, I opened the door and the major sprang out, shook my hand and inquired: "How about my family?" I hesitated a little, which he interpreted as a bad omen and continued: "Are they all gone—wife, children and all?" "No, major," said I, "your children are safe at Mr. CLARKSON'S. He said no more then. Taking hold of his left arm, we walked to and stepped inside the room. Taking off his hat, he cried out: "Oh, my poor wife! Oh, my poor wife!" The agony of that minute during which he gazed on her was terrible. I led him gently away. When on the porch, he said: "I will take my children on the plains with me. I will take them away to-morrow." I assured him that I would have his quarters cared for, and he went to Mr. CLARKSON'S, where his children, a boy and a girl, were located. MARTIN came to me about midnight; he said he had gotten quite a nap and would relieve me. I went to the office, put an unhung door on the two iron safes, two robes on that, and tried to sleep. I did not fear an attack on the safes, though I was well prepared for it. For two days and nights I had scarcely closed my eyes. I thought I had seen enough suffering and wickedness in this one day to haunt me a life-time. In the room overhead was the dead soldier: HOPKINS, in a critical condition, was in the adjoining room; Major OGDEN, Mrs. ARMISTEAD, Mrs. WOOD and her two children were dead—all within a short distance of each other. Others were still unburied and an additional one reported dead from time to time. Several new cases were reported to me while at Major ARMISTEAD'S quarters. At the rate of increase, the outlook was alarming.

How good cones of evil was illustrated here. The outrage of breaking into the sutler's store and of taking arms from the ordnance building created great excitement throughout the post. Disarming the rioters and their probable immediate departure soon after relieved the minds of the better element, gave new courage, cemented a brotherhood among those remaining, and created a determination to help—to assist instead of destroy; and I have always believed that if I had met nothing but the continued distress prevailing, I should have collapsed. But this exciting episode cleared my head and stirred my energies to greater action, and many others were similarly affected.

I had not slept long when I was aroused by some loose animals rubbing against the front porch. It was three o'clock by my watch. I was surprised that I had slept at all. I then went over to the ARMISTEAD quarters. MARTIN had fastened the door leading from the hall into Mrs. ARMISTEAD'S room, and he lay asleep in the hall. I mounted my horse, rode to my own tent, where the cavalry stables now stand, and got breakfast. I then went over to the hospital. The dead were being coffined and carried out, while others took their places. Heroic efforts were being made to keep the hospital and bedding clean. Mr. SAWYER had made the best arrangements possible.



CENTRAL DISPENSARY.

under the circumstances, for nursing, washing, cleaning quarters, etc., and it was a surprise to me how well the attendants did. To change bedding and attend to the necessities of a long room full of men in the agonies of the fatal disease required attentive and intelligent work. Burial parties were under way, and I rode over to the cemetery and found the grave-diggers already at work under a foreman. I am writing now of the morning of the 4th of August. The doctor and his family had gone; fifteen had died on the 3d, and probably fifty were under treatment.

In writing this I would like to refer less frequently to myself, but I only tell what came under my own observation—what I saw or knew

of. I went to Mr. SAWYER, and reported the status of affairs as I saw them. He and MARTIN would attend to the burial of the major, Mrs. ARMISTEAD, Mrs. WOOD and her two children. Leaving SAWYER, I went to the dispensary in the hospital to get from the steward a bottle each of brandy and port wine to carry with me on my rounds among the camps. The steward introduced me to a young man who had just come in on horseback, Doctor WHITEHORN. He came from Dyer's Bridge, nineteen miles east, near which he had a claim. For fear of doubts of his being a doctor, he was showing the steward his diploma and other testimonials, including a letter from Mr. DYER. He was a light-built, wiry, sunburned youth, and carried on his saddle the old-fashioned doctor's saddle-bags. I told him that Mr. SAWYER was now at the head of affairs, but that I would introduce him and then show him around, which I did, and he was warmly welcomed. Cholera was a new disease to the doctor, and he was very young; but he was cool, quiet, self-reliant, intelligent, and possessed good judgment. When he entered the hospital, word passed from one to another, "We have a doctor," and this had a good effect. He soon impressed them very favorably. A spoonful of brandy or port wine by the doctor's order would do more good than from me. I spent the forenoon with him, and showed him the quarters, camps, etc.

I then rode to my teamster camp on the Republican River during the afternoon, and found all well. Towards evening, while riding around, I stopped to talk with a young stone-cutter from St. Louis. I had often talked with him and liked him. Major ARMISTEAD had selected a stone to be put up at his wife's grave, and this young man was cutting the letters and figures on it. He seemed well and said that he felt so, but he was not as cheerful as usual and I tried to encourage him. The next morning this handsome young fellow joined those on the side of the hill beyond the deep ravine. I mention this instance to show how suddenly and unexpectedly the strongest and best were taken away. I do not know just how many died this day, but about the same number as on August 3d. Miss FOX, step-daughter of Foragemaster LOWE, was among those who died on the 4th. I am sorry that I do not remember the names of the men who worked day and night to help those who could not help themselves.

GEORGE W. McLAIN, a newspaper man of Weston, Mo., was driving through the country in a buggy, and came into Fort Riley from Council Grove. On asking for the commanding officer, he learned that he was dead, and of the condition of things generally. He found me, and I advised him to drive on and to hold his breath until miles away. He seemed inclined to do that, but could not resist the temp-

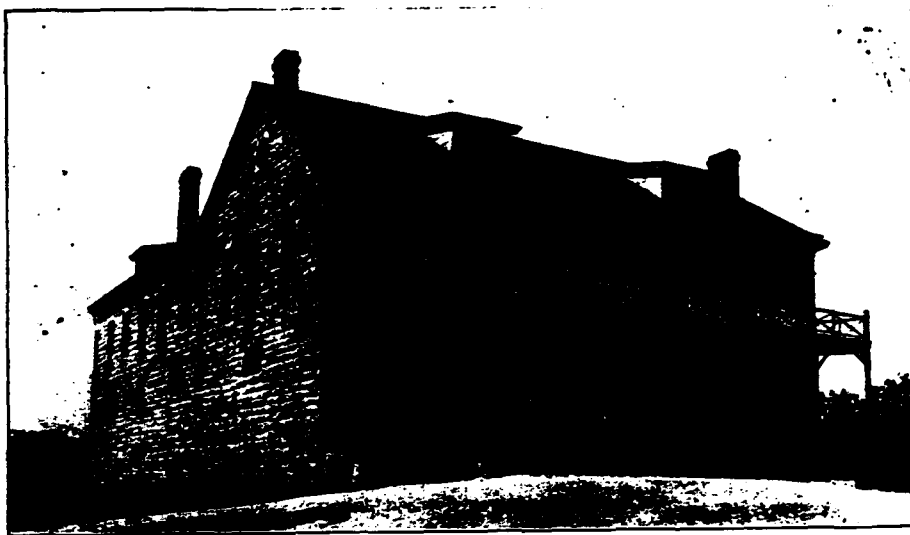
tation of getting items enough to write up the conditions. As we passed a small house on our way to his buggy we heard a female voice in great distress. On going in, we saw a woman, wife of a corporal who was away with his company, apparently in the agonies of death. On a bed, with hands, feet and limbs cramped, and a frenzied expression, she was a terrible picture. She had been ill but a short time. There was no one to help her—a woman could not be found to attend her. McLAIN took off his coat and hat, laid them on a chair, rolled up his sleeves and went to the stove, where there was a kettle with warm water in it—in short, took an inventory of the surroundings. I went to the hospital for brandy and port wine, and when I returned McLAIN was rubbing the woman vigorously and talking to her in the most cheerful manner; told her he was a doctor and would surely cure her. No woman could have handled her better than he did, and, being a strong man, he was not easily tired. He gave her some brandy, and turning to me, said in a low tone: "Lowe, my heart is in this thing. This woman, without a friend within reach, her husband serving his country in the Army, must not be left here to die. She is going to live; I'll see that she does." Turning to her, he said: "I'll wait on you all night and all day to-morrow, until you are well."

I left him in a few minutes, had his team cared for, sent him something to eat, and called early the next morning. The woman was asleep, and McLAIN said that her symptoms were good. She got well. If she had not thought him a doctor, the shock would have been fatal. This man afterwards became very prominent. He was known throughout the country as Gen. GEORGE WASHINGTON McLAIN, started newspapers, and was always a correspondent. He was generous when plenty smiled, and patient when poverty stalked abroad, and after a life of ups and downs, he balanced his accounts, paid off all his earthly debts and passed to his reward a few years ago in Leadville, Colo. He had lived much at the national capital, knew the prominent men from every State in the Union, and had friends everywhere. He possessed a brilliant mind, and with an unlimited fund of information, was a most charming companion. I never knew his lineage, but the blood that coursed through his heart and fed his brain was not of the common sort. Whatever his faults, and he had them, he deserved a better fate than that which overtook him. His virtues covered his faults miles deep.

HOPKINS improved. I firmly believe that much of the sickness was caused by mental trouble—the horrors of the surroundings. There were not so many deaths on the 5th as on the 3d or 4th, but a good many. The outlook was better. We had lost 150 or more men by

desertion. All discordant elements were now gone, and we were getting used to working together.

We had a good deal of pine tar in barrels, brought to the post to mix with gravel as a covering for the stable roofs. Someone suggested that it was a good disinfectant, and on the evenings of August 4th and 5th, when a gentle south wind favored, we had fires built where the fumes and smoke would float into the open windows, and burned tar at all of them. Whether this did much good or not, it counteracted offensive odors. The doctor thought well of it. The night of the 5th I slept well on the top of the safes. There were not



POST EXCHANGE BUILDING.

so many new cases reported the morning of the 6th, and every good report gave renewed hope. As the 6th wore on I thought it time to hear something from the message sent by ORTON. Down the road I saw a four-mule Government ambulance a mile and a half away. I knew it must contain a doctor and probably an officer, and I galloped down to meet it. Just before I met the ambulance my horse sprang suddenly to one side and came near throwing me. He was frightened by a dead negro, who had died of cholera and been buried in a shallow grave, and the wolves had dug him up and pulled him into a leaning posture, his body mostly uncovered and one arm raised above his

head. He was a horrible-looking sight. This had been the camp of the Government hay contractors, Messrs. DYER & CO.; the negro was their cook. All the other members of the party had left for their homes in Clay County, Missouri.

The ambulance contained Lieutenant CARR, now General EUGENE CARR, retired, and Dr. SAMUEL PHILLIPS,* my room-mate at Fort Leavenworth, a young contract doctor. I never was more pleased to see a man in my life. CARR I knew as a young officer *en route* to New Mexico the year before. I was anxious for a commanding officer with authority. The discretionary power of the military commander is very great, no matter what his rank. If not hampered with instructions, he can often do what a man with less power would hesitate to do. I have always admired a man who would not hesitate to take responsibility. Lieutenant CARR was not sent to replace Major OGDEN permanently, but to take charge in the emergency and do whatever a good officer could do under the stress of circumstances. These remarks apply also to PHILLIPS. No better man could have been selected for such an emergency. While CARR received from SAWYER an account of the situation, PHILLIPS proceeded at once to the hospital, met Doctor WHITEHORN, and went from place to place to examine the sick. The medical department was now under PHILLIPS' control—it had a head with authority. To show the effects of confidence in a doctor, good nursing and encouragement, each day brought fewer cases, men settled down to work more cheerfully, until there was no more cholera. I do not know how many died—in fact, I think I never did know, but the number was not less than 75 nor probably more than 100. Of the men who left in the excitement, a few were known to have died. I presume the records show all who left, all who died at the post, and all who remained.

The post, since its establishment, had been supplied with water from the Kaw River, just below the junction of the Smoky Hill and Republican. The Smoky Hill was milky and brackish, the Republican clear. The two mingled where the water was dipped up. On the morning of the 2d I went with the water-wagon and showed the men where they would get water until further notice. Surely the Republican was clear and pure; but feeling some delicacy about assuming authority in a matter of so much importance as the water supply, I took a jug full from each place, and one from a large spring, to Dr.

Dr. PHILLIPS volunteered for this duty to General E. V. SUMNER, then commanding the post at Fort Leavenworth, every one of the many young physicians practicing in the city at Leavenworth declining this service. For this professional work Dr. PHILLIPS was paid by General SUMNER less than forty dollars, though his inclinations to pay him a much larger sum were the best. It was all he had at his disposal. Dr. PHILLIPS continues to practice his profession in the city of Leavenworth, and is a vigorous man for his advanced years.—EDITOR.

tor SIMMONS, and asked him to examine and see which was best. He seemed in great distress about his family, and said that he could give me no advice. SAWYER, HOPKINS, CLARKSON and MARTIN thought it a good move, and often afterwards expressed the opinion that, while the water formerly used did not cause the cholera, the Republican water was much safer and probably had something to do with restoring health. For several nights before the cholera broke out, and continuing to the night of the 3d, we had violent storms of rain, thunder and lightning, lasting several hours and ending about midnight. One would think that this would purify the air—perhaps it did. I do not suggest that the cholera grew out of it, but merely mention it as a peculiar circumstance. No doubt the germs of the disease were brought originally with the men.

Near a spring west of where Junction City now is, two men were attending a lime-kiln. On August 5th I sent a team over after a load of lime. A little German from Herman, Mo. (I cannot remember his full name—Henry, we called him), one of the most faithful men I ever knew, drove the team. As he did not come in as soon as I expected, I rode down to the river about dark and met him coming across. He said that one man was "bad sick" when he got there. He helped the other man care for the sick one until he died. They put the dead man in the wagon and started, and the other one was now sick. The teamster had to stop many times to help the sick man, who "go died" just before the team reached the river. The poor teamster was greatly distressed, and apologized for not bringing the lime. He had volunteered to go because the lime-burners were his friends, and he wanted to see how they were getting along. He lived through and conveyed the dying messages of the two to their friends.

From day to day there was improvement, work went on in all departments, and more men were sent from Fort Leavenworth to take the places of those who died or deserted. Lieutenant CORLEY, Sixth Infantry, relieved Lieutenant CARR, and by the 1st of September everything was in full blast and work progressing rapidly. Some building supplies were needed and work would be retarded unless they were brought quickly. I was ordered to take thirty-six mule teams and go after them. I got the order at three o'clock p. m. The wagons were all dismantled, covers and bows stored away, and the beds arranged for hauling stone, sand, lime, wood, brick, or any sort of building material. By sunset I had thirty wagons full rigged, thirty of the best mule teams ready to hitch to them, and rations and forage drawn, all ready to start.

An expressman started about that time with requisition for the supplies that I was to bring, and I told him to say to the shipping clerk at Fort Leavenworth that I would not be long behind him, and would start back as soon as I could load, and to please have the loading so arranged that there would be no delay. I wrote a note to my friend, LEVI WILSON, general superintendent, requesting him to look a little after the requisition, because several hundred men might be delayed more or less on the work at Fort Riley, and I wanted to make a trip that would beat any record for moving six-mule teams. The expressman laughed at the idea of my reaching our common destination soon after he did. I started at sunrise the next morning and camped in Salt Creek Valley, three miles from Fort Leavenworth, the third evening—127 miles in three days—about 42 miles per day. I rode to the post that evening, only twenty-four hours behind the expressman; and he had started eleven hours ahead of me on a good saddle-mule. I spent the evening with friends talking over the exciting events at Fort Riley, of which they had heard many exaggerated accounts. I had been reported dead of cholera at one time and killed by a mob at another. I returned to camp at midnight, and at seven o'clock the next morning was loading at the warehouse and steamboat landing, and by four in the afternoon I was back in Salt Creek Valley, heavily loaded. There was much talk that day about the quick trip I had made, and everybody expected to see the mules in bad condition, and was surprised to see a fine lot of mules and active, wide-awake teamsters—no more hanging back in a tired way, but all pushing and trying to help along. I rolled out of Salt Creek Valley the next morning, and before sunset of the fourth day parked my train at Fort Riley, having made about thirty-two miles per day. The mules were turned into the herd up the Republican, tired but uninjured. We had been eight days and seven nights traveling 260 miles, including loading. No one expected me for two days more, and the fact that no mules were killed or injured, beyond being tired, which they would make up in a week's rest, was a surprise.

Government teams generally make one drive per day. I have seldom met an Army man who did not insist upon doing his day's work, long or short, and then going into camp. I had learned on the Santa Fé trail how AUBREY, BENT, MAXWELL and all the Mexican freighters worked their teams—two and three drives a day. To drive teams with empty wagons forty-two miles a day, or loaded thirty-two miles a day, would soon ruin them, if the drives were continuous. Having made about one-half of my day's drive, I halted, took off harness, and turned the mules loose with lariats on, but without picket-pins.

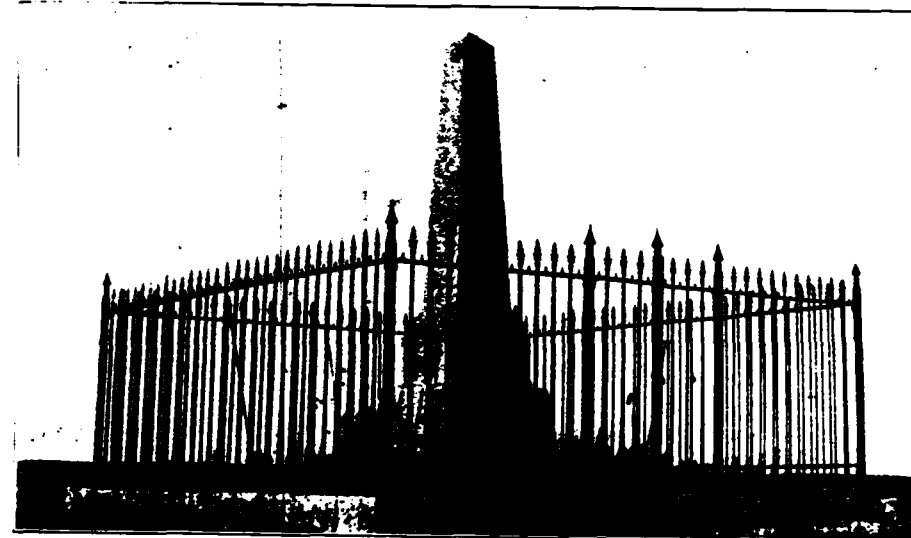
They rolled, drank freely, and grazed an hour, while the men ate dinner. Arrived in camp for the night, the mules were turned loose again the same way, and before dark were caught up, fed corn, and picketed for the night. The first thing in the morning they were watered, then fed corn, and, breakfast over, were hitched up and started usually by sunrise. No corn was fed at noon, but the grass was fine and much better for them. On the evening of my return I showed the quartermaster and Mr. SAWYER my memorandum of the contents of each wagon—each numbered and its contents put down under the number. From this they knew where each wagon should be unloaded.

From this time there seemed to be no check, deficit, or friction: a sort of steady discipline, rare among large numbers of men of various trades in civil life, prevailed all the way through, and all that could be expected was accomplished. Undoubtedly the retained pay had a steadying influence, but I think that after the exodus, during the prevalence of cholera, there was a remarkably good set of men left. I have always thought that sending the troops away during the building of the post was a mistake. Taking 500 men there who were governed only by self-interest, with no law to curb the bad element sure to exist in any body of men, seemed to be not a wise move, when ARMISTEAD and WOOD, with their companies, could just as well have remained in the vicinity, changing camp from time to time, and been within call if needed.

I will now refer briefly to the OGDEN monument. The original was designed by Mr. SAWYER, and prepared and erected by quarrymen, stone-cutters, laborers and teamsters, under the direction of Mr. SAWYER and myself, without other cost to the Government than the pay of the men while the work was being done. The stone was of the kinds used in the buildings of Fort Riley. In time, neither the Government nor anyone else heeding it, cattle made of it a rubbing-post, Vandals chipped pieces from it and scratched their names on it, and it became a wreck. It was not expected to be permanent, the hope of the builders being that it would be replaced with something worthy of the man whose memory it was intended to perpetuate—commensurate with his ability and devotion to duty: a monitor to all-entrusted with the care and control of others. Another shaft was afterward erected, much better than the original, but not what it ought to have been. I do not know how nor where the money was raised, nor under whose direction it was put up. This, too, was neglected, left a rubbing-post for cattle after the wooden fence around it rotted

down; and vain simpletons, who like to "see their names and faces in all public places," defaced the stone.

In 1887 General JAMES W. FORSYTH, then colonel of the Seventh Cavalry, took command of Fort Riley. He had never known Major OGDEN, and until I, while on a visit to Fort Riley, told him the story of the death of OGDEN and the erection of the shaft, he did not know its history. He then knew that it was in memory of a brother officer who died at his post in the discharge of duty under the most trying circumstances, and he took prompt measures to preserve it. He secured a small allowance from the Quartermaster's Department with



MONUMENT OF MAJOR E. A. OGDEN, QUARTERMASTER U. S. ARMY, LOCATED AT FORT RILEY, KANSAS, IN 1852.

which, and some labor within his control, he had it repaired—scratches worked out and a permanent iron fence put around it.

In October, 1855, Major JOHN SEDGWICK, of the Artillery (Major-General SEDGWICK, who was killed in the battle of the Wilderness, came to Fort Riley to investigate matters connected with the cholera, and especially Doctor SIMMONS' conduct. SAWYER, HOPKINS, CLARK, SON, MARTIN and myself made written statements. Quite a number were called on for verbal statements. On the information gained by Major SEDGWICK, the doctor was court-martialed and dismissed from the service. I believe he was reappointed at the foot of the list some

years later; was reappointed with increased rank under a law increasing the Medical Department. About the 1st of November, Major OGDEN's remains were disinterred and shipped to Unadilla, New York, where they now rest under a beautiful monument erected by his brother officers and friends. *Requiescat in pace.*

A part of the Second Dragoons came up from Texas in October, 1855. Colonel COOKE came in from the HARNEY expedition against the Sioux, with more of the Second Dragoons, to take command of the post. On the 15th of November, all of the workmen who were entitled to be paid off and transported back to St. Louis and Cincinnati loaded their effects into wagons that I had ready for them—fifty six-mule wagons—and in four days I landed them on the levee at Fort Leavenworth, where boats were waiting to take them away.

In the fall of 1854 Colonel PHILIP ST. GEORGE COOKE, *en route* from New Mexico to Fort Leavenworth with his command, of which I was a member, left the old Santa Fé trail a short distance west of Diamond Springs, now in Morris County, and came through Fort Riley, crossing the Smoky Hill on a ferry about a mile above its junction with the Republican. It was claimed that Fort Riley should be made a point on the road from Fort Leavenworth to New Mexico, and this was one reason for Colonel COOKE's coming that way; but it proved not to be quite as near as by Council Grove, and from Fort Riley across to the old trail, including the poor ferry across the Smoky Hill, not so good.

In September, 1862, I conducted, for the Government, from Fort Leavenworth, 120 mule teams and more than 600 horses to New Mexico, and made Fort Riley a rendezvous *en route*. Starting each train as completed (five trains in all), and each string of horses (eighteen strings in all), each train or string of horses camped in the vicinity of Fort Riley until the arrival of the last one, when the trains and strings of horses were examined and refitted, wagons loaded with corn, and the entire outfit moved on together. Captain D. W. SCOTT, who afterwards died at Fort Riley, was acting quartermaster, and JOHN T. PRICE was chief clerk. There were no troops at the post at that time. Mr. ROBERT WILSON was post trader. I followed the trail used by the Kansas Stage Company, of which L. G. TERRY, of Leavenworth, was superintendent, up the Smoky Hill River to Salina, where there was a stage station; thence to another stage station called Ellsworth, near where Fort Harber was afterwards built, three miles east of the present town of Ellsworth, and where "Kam-pah-lis" now claims a residence; thence across the Smoky, west to what is now called Cheyenne Bottom, across Walnut Creek, coming into the old Santa

Fé trail a little east of Pawnee Rock. I returned the same way, and measured the road for the Government from Fort Union to Fort Riley with an odometer, and for the Government I was guide in chaining the military road from Fort Riley to Fort Leavenworth, in 1876.

THE TERRITORIAL AND MILITARY COMBINE AT FORT RILEY.*

BY GEORGE W. MARTIN, SECRETARY OF THE STATE HISTORICAL SOCIETY.

"* * * But the beautiful place called Fort Riley to-day is not the Riley that was built in 1854 and 1855. Those familiar with the post as it was twenty-five years ago would not recognize an inch of it as it is now. The old has been practically obliterated. With the exception of a few of the stables, the buildings have been torn down and more modern ones erected, the old parade-ground has been cut down at least four feet, roads so changed, and such a growth of splendid elms, that it is entirely a different place. The old fort for years was much neglected, and became very dilapidated. About 4,000 acres of land, lying between the two rivers and the town site of Junction City, were gobbled by a local company for bridge purposes in March, 1867. The bridge was built, the land divided, and then the bridge fell into the river. The neighbors became impatient with such a fine body of land unoccupied, and Congressman ANDERSON was urged to introduce a bill for the sale of all that portion of the reserve south and east of the Smoky Hill and the Kansas rivers. April 4, 1884, the Military Committee of the House reported against the bill upon the recommendation of General SHERIDAN that the land was needed. This brought a letter from SHERIDAN, saying that the military authorities contemplated important things for Riley. In his annual report, December, 1884, the general urged that Fort Riley be made an establishment worthy of the country. The Legislature of Kansas, in 1883, ordered the reconstruction of the bridge across the Republican, which was done August 15, 1885. Captain GEORGE F. POSE, constructing quartermaster, arrived in the fall of 1885, and rebuilding began.

"In 1886 the Legislature of Kansas petitioned the general Government to improve the post. The St. Louis Merchants' Exchange protested against the transfer of Jefferson Barracks to Riley, and the Leavenworth people were apprehensive. Congressmen ANDERSON and RILEY were active but without effect. The military authorities of the

*Extract from an address delivered before the State Historical Society of Kansas, January 1896.

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*Extract from an address delivered before the Old Settlers' Association of Geary County, Kansas.

building of the post dragged slowly. PLUMB had some antipathy to the regular Army. Thanksgiving morning, 1888, after I had removed to Kansas City, Kas., Captain BERTRAND ROCKWELL wrote me that he had a letter from PLUMB in which he said that "Fort Riley was merely a local affair, that nobody cared about it, and intimating that it was useless to do anything." That afternoon I prepared a column newspaper article in favor of Riley, and wrote a letter to each of fifteen newspaper men in Kansas, asking them to reproduce my article or write in a similar strain. Every one responded enthusiastically, and as soon as those papers reached Washington, PLUMB joined the others with the greatest energy, and from that on Riley grew liberally. * * *

A LOST OPPORTUNITY.*

By FRANK C. MONTGOMERY, in THE KANSAS CITY Journal, MARCH 28, 1902

"IT IS a trite saying that the rarest faculty in the world is the ability to recognize an opportunity. INGALLS voiced it in the majestic poem bearing the title 'Opportunity.' Every man, every town, every State, can gaze retrospectively and see the chances for greatness which came and went unheeded. And of this we are reminded by a telegram from Washington which states that the Secretary of War is contemplating the concentration of 20,000 troops at Fort Riley for drill and instruction—the connection being made apparent by the recital of a bit of Kansas history. In 1874 General PHIL. SHERIDAN, then in command of the West, recommended the abandonment of a lot of military posts in his department and the establishment of two permanent posts in Kansas. One of these he located at Fort Leavenworth and the other at Fort Hays, Fort Riley being scheduled for abandonment. Colonel SWAIM, then SHERIDAN's adjutant, prepared for submission to the Kansas Legislature a bill ceding the jurisdiction of the reservation at Leavenworth and Hays

"As all writers of fiction and story must draw upon their imagination, Mr. MONTGOMERY proved no exception. He has furnished a very pretty story, but some of the statements cannot be accepted as historical facts. A thorough search among the official reports of the late General SHERIDAN, of the time to which Mr. MONTGOMERY refers, fails to disclose any such recommendation. The Legislature of Kansas, during the session of 1875, did pass an act ceding jurisdiction over the Fort Leavenworth reservation, but this was done at the request of the War Department, which had failed to reserve the authority at the time Kansas was admitted into the Union as a State—January 29, 1861.

The Indian situation on the Western frontier, in 1874, was far from a condition to warrant the War Department to decide upon a policy as to what posts to retain, and which to abandon. The first intimation found in any of the official reports with reference to making Fort Riley a permanent post is contained in the annual report of General SHERIDAN for the year 1884. While the work of enlarging the post commenced the following year, the Legislature was not asked to cede jurisdiction of authority over its reserve until 1889.

Mr. GEORGE W. HARTIN, secretary of the Kansas State Historical Society, gives in this number of the JOURNAL what is probably the true version of how Fort Riley was "put on its feet." In his narrative he is sustained by the records and official reports. To him, more than to any other Kansan, belongs the credit for the Fort Riley of to-day.—EDITOR.

to the United States Government. When the bill came up for passage, W. N. MORPHY, a brakeman, who had been elected to the House from Ellis County, in which Fort Hays was located, opposed it so far as Fort Hays was concerned, and the name of the post was stricken from the measure. Thereupon, General SHERIDAN recommended that Fort Riley be selected as a permanent post in place of Fort Hays, and such was the action taken by the War Department. When it was too late, the people of Ellis County began to realize the stupendous error committed by their member of the Legislature. At the session of 1875-76 their member voluntarily offered a bill ceding the jurisdiction, as had been asked for by General SHERIDAN, but the War Department had fixed upon Fort Riley and would consider no proposal for a change. The point is that 20,000 troops might be stationed within a mile of Hays City instead of four miles from Junction City, if the people of Ellis County had grasped their opportunity. The people of Hays City are now mightily pleased over a small educational institution which has been located on the Fort Hays reservation by the State of Kansas. Save for MORPHY and his Hays City advisers, however, they might now be turning handsprings of joy all over the prairies."



VIEW OF SHERIDAN AVENUE.

THE ORDER OF THE CINCINNATI.

By CAPTAIN J. A. LOCKWOOD, U. S. ARMY, RETIRED.

TOWARDS the close of the war which led to the separation of the American Colonies from Great Britain, many officers of the Revolutionary Army, feeling the necessity for forming some permanent association among themselves which would serve the purpose of perpetuating the friendships that had been formed in war and keep alive the fires of patriotism, conceived the idea of establishing the Society of the Cincinnati. The Society was formally founded at the Verplanck Manor House on the Hudson on May 13, 1783. Baron DE STEUBEN, the senior officer present, presided at the meeting, and General HENRY KNOX presented his report on the formation of the Society, which was thereupon formally adopted. One hundred years later the centennial celebration of this event was held at the same place. On May 14, 1883 (the 13th falling on Sunday), a Government steamer conveyed a distinguished party of Army and Navy officers and civilians from White Hall to Verplanck Manor House, situated a mile above Fishkill. A descendant of the former proprietor of the mansion, Mr. WM. S. VERPLANCK, extended the hospitalities of the occasion and led the party into the room where one hundred years before the Society was founded.

The aims and purposes of the Cincinnati Society cannot be better set forth than by quoting from the report of General KNOX.

It reads: "It having pleased the Supreme Governor of the universe, in the dispensation of human affairs, to cause the separation of the Colonies of North America from the dominion of Great Britain, and, after a bloody conflict of eight years, to establish them free, independent and sovereign States: * * * To perpetuate, therefore, as well the remembrance of the past event as the mutual friendships that have been formed under the pressure of common danger and in many instances cemented by blood of the parties, the officers of the American Army do hereby in the most solemn manner associate, constitute and combine themselves into one Society of Friends, to endure as long as they shall endure, or any of their eldest male posterity, and, in failure thereby, the collateral branches who may be judged worthy of becoming its supporters and members. The officers of the American Army, having generally been taken from the citizens of America, possess high veneration for the character of the illustrious Roman, LUCIUS QUIN-

TIUS CINCINNATUS, and being resolved to follow his example by returning to their citizenship, they think they may with propriety denominate themselves the Society of the Cincinnati. The following principles shall be immutable and form the basis of the Society of the Cincinnati:

"An incessant devotion to preserve inviolate those exalted rights and liberties of human nature for which they have fought and bled and without which the high rank of a rational being is a curse instead of a blessing.

"An unalterable determination to promote and cherish between the respective States that union and national honor so essentially necessary to their happiness and the future dignity of the American empire.

"To render permanent the cordial relations subsisting among the officers. This spirit will dictate brotherly kindness in all things, and particularly extend to the most substantial acts of beneficence, according to the ability of the Society, to those officers and their families who, unfortunately, may be under the necessity of receiving it."

Each member of the Society upon joining it subscribed to the following:

"We, the subscribed officers of the American Army, do hereby voluntarily become parties to the foregoing institution and do bind ourselves to be governed by the principles therein contained. For the performance whereof we do solemnly pledge to each other our sacred honor."

The funds of the Society were first created by taxing each officer one month's pay. The general Society is divided into State Societies. Ample powers were given to each State Society for the conduct of its affairs, even providing for the expulsion of a member who, by conduct unbecoming a gentleman and a man of honor, may render himself obnoxious to the Society.

The presidents of this historic Society, for more than one hundred years, have been few in number, considering the fact that many of them were advanced in life when first elected. General WASHINGTON was the first president, from the institution of the Society in 1783 until his death just before 1800. Then followed ALEXANDER HAMILTON, from 1800 to 1805; Major-General CHARLES C. PINCKNEY, from 1805 to 1825; Major-General THOMAS PINCKNEY, from 1825 to 1829; General AARON OGDEN, from 1829 to 1839; General MORGAN LEWIS, from 1839 to 1844; General POPHAM, from 1844 to 1848; A. S. DEARBON, of Massachusetts, from 1848 to some time in the fifties, when HAMILTON FISH, of New York, succeeded to the position.

Original membership in the Cincinnati was limited to American officers only. For "the Society was deeply impressed with a sense of the generous assistance this country had received from France, and was desirous of perpetuating the friendships which had been formed and had so happily subsisted between the officers of the allied forces in the prosecution of the war." The privilege of joining the Society of the Cincinnati was eagerly embraced by most if not all of the gallant French gentlemen who had voluntarily participated in the hardships of our war for independence, and the Eagle of the Cincinnati "dangled beside the grand cross of the royal and military orders of St. Louis upon the breast of the most elevated and noble" of the French Army. It is a curious fact that while the American Revolution was the direct forerunner of the French Revolution, and no doubt hastened its advent, and the New World proclamation of the "might of the people and of the citizen came to sap the old social and monarchical system to its base," yet "the Frenchmen who fought for the cause of the Americans either as volunteers or as part of the forces sent under the orders of the Count DE ROCHAMBEAU, were, in the majority of cases, in their own country, the most devoted defenders of royalty and the bitterest opponents of the liberal idea and reforms." France, no doubt, fortunately for us, was actuated largely by an hereditary animosity towards England, and was urged by her own interests, at first, by means of her agents, to excite and encourage the discontent of the Colonies, and, later to render them practical assistance by means of diplomacy money, ships and men. Some individual Frenchmen were, no doubt, soldiers of fortune who fought with the Americans for the love of fighting. Others again volunteered because of their belief in the justice of the American cause, who did not in later years feel that France was ready for the change which seemed to be the manifest destiny of the Americans. It would make an interesting chapter to trace out the fate of the various members of the French branch of the Order of the Cincinnati. GOUVION, who was the friend of WASHINGTON, the favorite of LAFAYETTE, was slain by the Parisian mob in 1792. The Viscount DE NOAILLES met his fate, "at the head of his own grenadiers and in the moment of victory," while his less fortunate wife, the sister of MME. DE LAFAYETTE, was beheaded for her royalist sympathies. Another brave soul, the Chevalier DUPLESSIS-MANDUIT, on whom the Cincinnati eagle had been bestowed by WASHINGTON himself, was murdered at Port au Prince in 1791 in a mutiny of his own men. One of his grenadiers made a cut at him with a sabre, merely scratching his cheek; whereupon, making bare his breast, he cried: "*Tu donne tien mal un coup de sabre pour un grenadier; c'est ici qu'il fallait frapper.*"

Whereupon the grenadier pierced him through the heart, a victim to his own instructions. Gallant Baron DE VIOMESNIL, who, in conjunction with LAFAYETTE, assaulted and captured two redoubts at Yorktown, was murdered on the 10th of August, 1792, at the head of a handful of gentlemen of France, who, armed only with their dress rapiers, defended the palace of the Tuileries against the attack of a mob of thousands in a vain attempt to preserve their king. In his history of the Girondins, LAMARTINE gives an account of the entrance of a mob from Marseilles into Paris in 1792. It was led by the wretched FOURNIER, who dragged after him, in a mock heroic fashion, a collection of the eagles of the Cincinnati and the crosses of St. Louis which had been snatched from the breasts of his unfortunate victims. It has been truly said that "the destinies of the French members of the Cincinnati were not auspicious, and Fortune reserved a happy fate for but a few." LAFAYETTE was one of this small number, and there are those still living who can recall his courtly manners and distinguished appearance when in 1824 he revisited this country and was received with unbounded enthusiasm on all sides.

So late as 1826 the prescribed forms observed on the admission of new members to the Cincinnati were faithfully carried out according to the method adopted when Chancellor ROBERT R. LIVINGSTON was admitted to the order in 1786. An account of the ceremony then says: "The audience being prepared, and the kettle-drums and trumpets having already occupied their places, the standard-bearer of the Society, in his ancient Continental uniform, escorted by four members, also in full uniform, took his position on the right of the dais. Then entered the masters of ceremony; the members, in column of twos; the secretary, carrying the original Institution, bound in light blue satin; the treasurer and deputy treasurer, bearing white satin cushions on which were displayed the eagles and diplomas of the new members; the vice-president; and, last of all, the president, who, on this occasion, was represented by the Baron DE STEUBEN. At his entrance the standard saluted and the kettle-drums and trumpets gave a flourish, until he had taken the chair of state on the dais, when the standard was again raised and the members seated themselves. The new members were then introduced and admonished. This elaborate ceremony has for many years fallen into disuse," together with the old custom that on the Fourth of July every member of the Cincinnati should appear in his cocked hat and side arms.

The verdict of posterity has long since acquitted the originators of the Cincinnati of any evil design against the life of the young Republic, but it was a hopeless task to convince the men who opposed the

Society in 1783 that its aim and object were in no sense political. These men heard with feelings of undisguised alarm that a military order had been established, that its honor had been made hereditary, that the French court smiled upon the new order and the blue ribbon of the Cincinnati was proudly worn by prominent members of a foreign nobility. No more importance now attaches to the Society than is bestowed on the many other social and political clubs which flourish on every hand; but, at the time of its establishment, severe laws were deemed necessary to protect the new-born liberties of the people from its dreaded encroachments. At the date of the foundation of the Society, the American who subscribed his name as a member thereby forfeited in some States his right of citizenship. The country was in no mood in 1783 to bear patiently with such societies. Nothing was more obnoxious to men then than to find that, having by superhuman endeavors destroyed old established orders of nobility, a new order should be set up by the very men who had been most instrumental in destroying the old, nor was opposition to the Cincinnati confined to the ignorant masses. The fears of the multitude were shared, or inspired, by the most far-seeing statesmen, the most acute philosopher. FRANKLIN, the representative of the new country at the French court, was unsparing in his ridicule of the young Society. He undertook to demonstrate in his jocular fashion that as descent from an original member became more and more remote the reputed glory would become less and less. A man's share in his family could, he claimed, be considered but a half part in the second generation, but a fourth part; and when the ninth generation was reached, but the five-hundred-and-eleventh part. When therefore the badges and titles of the Cincinnati had come down to the eldest son of the ninth generation, his share would be but the one-thousand-and-twenty-second part of that of the first recipient. FRANKLIN claimed that the turkey should have been placed on the device rather than the eagle; since the turkey was known to be hostile to red coats. Notwithstanding his ridicule of the Society, FRANKLIN did not decline honorary membership therein when it was offered him. SAMUEL ADAMS was strongly opposed to the order, and feared that it was "a stride towards an hereditary nobility of a military nature as rapid as ever was made in so short a time," and he lamented that so illustrious a man as WASHINGTON sanctioned it. He especially deprecated the admission of Frenchmen into the Society. "As well," said he, "admit Frenchmen into the Congress at the national capital." JOHN ADAMS also thoroughly disapproved of the Society. He opposed it on constitutional grounds, being contrary to the confederation

and against the constitutions of the several States. The Society had been founded without the consent of the governed. He thought this equivalent to establishing a new order of nobility in a monarchical form of government without consent of the sovereign. And opposition to the Society took popular and conspicuous measures. Pamphlets and lampoons were published denouncing it in the strongest terms. Said a Whig journal: "The introduction of the Cincinnati is full of danger to the rights of man. It is concerted to establish a complete personal distinction between the military dignitaries and the people, who are henceforth to be dubbed plebeians. It tends to the rapid introduction of nobility into America, and that kind of nobility which for centuries plagued and domineered over Europe. If this be so, it becomes the duty of legislators, of governors, of magistrates, and, above all, of electors, to prevent by every judicious means in their power the institution from gaining any strength in the commonwealth." The citizens of Cambridge instructed their representatives in general court to have the Society suppressed. Rhode Island disfranchised such of her citizens as were members of the order, and it appears that nowhere in America was the Society fostered or encouraged, and some even of its own members repudiated it. It is difficult to realize the extent of the opposition to the Cincinnati. Many hundred societies have since that day been organized by notoriously ambitious and dangerous men for purposes inimical to the welfare of the State or of large classes in the State. Socialistic societies, communistic societies, Fenian brotherhoods, anarchistic societies and trades-unions without number have sprung up, grown apace and sunk utterly into oblivion without exciting more comment than a passing newspaper paragraph. As the people have grown accustomed to the perpetuity of free institutions the possibility of danger to them has in a great measure passed from the public mind.

The famous medal or device designed by Major L. ENFANT for the Cincinnati consists of an American or bald-headed eagle made of gold with the head and legs and tail feathers in white enamel, flecked with gold. The talons grasp golden olive branches, the leaves being in green enamel, which are continued around the figure so as to form a wreath above the head, to which the clasp is attached. The eyes are of precious stones. Upon the breast is borne an oval shield in white and blue enamel and gold. The principal figure upon the face of the shield is that of CINCINNATUS. He is represented in the act of receiving a sword from three senators of Rome. His wife is represented in the background, standing at the door of a cottage; near by is a plow and other agricultural implements, while around the whole is the legend.

"*Omnia reliquit servare rem publicam.*" The medal is worn suspended by a blue ribbon.

The present city of Cincinnati received its name in honor of the celebrated Society, the old name of Losantiville being changed to Cincinnati by order of the governor, St. CLAIR. It is probable that, owing to the condition of membership of the Society of the Cincinnati, it will continue to lose rather than gain in members, although in some of the States many more have been admitted than was originally intended by the founders of the Society; several brothers, for instance, being deemed eligible, when only the eldest son should have been admitted.

Of late years two more societies having for their object, like the Cincinnati, the perpetuation of Revolutionary memories and associations, have sprung into existence. These societies are known as the Sons of the Revolution and the Sons of the American Revolution. The constitutions and aims of these societies appear to be very much alike, and it is believed that only local and individual jealousies prevent them from reconciling their differences and becoming one society. To be eligible for membership in either society, a man must prove his descent from an ancestor who either as a military or naval officer, soldier, sailor, or as an official in the service of any one of the thirteen original Colonies, assisted in establishing American independence during the War of the Revolution. Societies for women who are descendants of patriots have also been established, and are in a flourishing condition. The general aim and object of these societies are to perpetuate the memory and spirit of the men and women who achieved American independence, and this is being done by the acquisition and protection of historical spots, the preservation of relics and documents, the erection of monuments, the encouragement of historical research and the publication of results obtained. The idea that such societies have an anti-democratic tendency is fallacious. On the contrary, at the banquets of these societies you will find seated at the same table, rubbing elbows, so as to speak, United States senators, judges of the Supreme Court, governors of States, generals and many men who are in very obscure positions and even humble circumstances. All are on an equality for the time, united by the bond of patriotic American descent, a bond which money cannot buy.

SOME PRACTICAL POINTS IN SANITATION.*

By CAPTAIN FRANCIS A. WINTER, ASSISTANT SURGEON U. S. ARMY.

I DO not know of any way in which the time allotted to me could be better employed than by a short reference to every-day matters of sanitation—matters which are brought to the officers in command of troops almost daily, and the discussion of which is both fitting and proper.

All orthodox discussions on sanitation must embody, sooner or later, a reference to drinking-water. I do not know why we should not start with this subject. Certainly there is no agency by which we so constantly and unerringly put disease agencies into our bodies as by the water we drink, and it is always the prime consideration with the thoughtful officer to insure good water for his command.

It is well established that typhoid fever, cholera and dysentery are produced by the ingestion of water containing the germs of these diseases, and it is certain that many lesser ailments are traceable to the use of impure water.

The fluid is a deceptive article. The most pellucid, sparkling water may be full of the most dangerous disease elements, and I have personal knowledge of surface springs, giving forth what was apparently the best kind of water, to which an outbreak of amebic dysentery could be traced. We generally consider that deep wells, the water in which has been found underneath a stratum of rock, are safely potable, but there is little likelihood that we are going to be familiar with the geological make-up of each particular locality whither our fortunes in campaign may lead us. Apparent depth is full of deception, and a forty-foot well is like as not subsoil water, pure and simple, and subsoil water and sewage are of close kin. Again, we are told that streams, rivers, etc., undergo a purification of their water by virtue of their mobile quality. This is good sanitary philosophy, but instances shake one's faith in its uniform reliability. For example, there is a well-authenticated record of a typhoid epidemic clearly traceable to a primary infection of river water at a point seventy miles above the place where the epidemic broke out. My observation leads me to paraphrase the old saw, and say, "Put not your trust in drinking-water."

*Read before the Lyceum, Jefferson Barracks, Mo.

Of course you want and are entitled to a substitute, and as alcohol is provocative of troubles of such diverse kinds, you again hear the familiar injunction about "boiled water," and I mention it fully aware of the ghost of unproductive effort, which each one of you gentlemen sees arise, and "give you the laugh," from its impalpable shade.

I once knew an Army officer who was in his way a *surant*, and he said: "Tell a soldier to do a thing for his health, and he will be very sure not to do it." This class characteristic may be the reason why our efforts to get soldiers to drink boiled water are non-effective. To my mind, the only way to accomplish the result is by a campaign of education among the men. If I were a commanding officer, I should require my surgeon to give the men practical talks on the subject of water-consumption, and I should listen to his talk, and advise with him as to the practical features of it.

Most human beings are in some measure, at least, strivers after the Socratic principle of knowing oneself, and are willing to listen to a few wholesome truths touching their economies and their possibilities.

Let the soldier be told in simple language what infected water leads to, and then let him be told that practically all disease-causing germs are destroyed by boiling water for five minutes; urge him to fill his canteen with boiled water over night after he has made his coffee; disabuse his mind of the fallacy that he must drink water frequently on the march, and tell him that a healthy man can subsist on two quarts of liquid a day, in addition to his coffee, and I think many soldiers will try it, especially if the officers set them the example. A great many people are deterred from doing things in a hygienic way because of a fancy that to be hygienic one must be hedged about with a great deal of complex detail. This is an error.

Just here it might be well to invite your attention to an every-day error among people who want to use sterilized water.

Let us take a living picture, so to speak, of the error. The water detail from a company reports to the sterilizer for sterilized water. On the way to the sterilizer the men fill their cans with ordinary river water or well water to exchange for the sterilized product which they are to get. The unsterilized water is delivered, and in a few minutes the cans *just emptied of infected water* are filled with the sterilized product. The moment the latter article struck that can it ceased to be sterile, and all the benefit coming from all the work was nullified. The factor of safety lies in having the can sterilized by using boiling water in it, or better, by allowing water to boil within the can itself prior to beginning the use of the vessel as a container. Once sterilized and

thereafter used exclusively for sterilized water, an ordinary vessel will remain pure for a long while. It is important that the can be covered, and if possible a faucet should be at hand, to prevent contamination from the introduction of drinking-cups.

It is a common mistake to suppose that because water is turbid, or otherwise unsightly, it is necessarily morbid. On the other hand, the clearest water may be the most pernicious. It is a well-known bacteriologic principle that certain harmless organisms carry on a ceaseless warfare against the harmful agents which may occasionally invade their domain. The green scum of the pond is not so bad as our eye paints it, for it probably shows the triumph of the innocent organisms which make it.

If I had two springs to select from for a command, the one clear and the other turbid, I should be inclined to other things being equal, to take the turbid one, for two reasons: namely, the men would be more apt to boil the water, and the turbidity is probably caused by the suspension of harmless earthy salts, which in precipitating would carry down with them a goodly proportion of the bacterial agents possibly contaminating the water. This latter is a comparatively ineffective but none the less substantial fact.

The various filters in use are sometimes effective and sometimes not. They are generally difficult to keep in good order, and their product is so often uncertain, that I think reliance upon them alone is to be discouraged. As a preliminary measure to boiling, filtration is a good one.

Certainly there is no matter in the hygiene of the soldier demanding more persistent effort upon the part of his officers than this matter of water supply, and I know from personal experience that close attention to it reacts very favorably upon a command.

The subject of disposing of excreta is fraught with the greatest interest to the inquirer into military hygiene, and it is an important matter. It is one of the great problems in all camps, and its inefficient performance has been responsible for great and decimating incursions of disease.

The scope of this paper does not permit the detailed discussion of the various measures, devices, etc., which have been advocated.

It is my opinion that hygiene is like most other things in life, for the accomplishment or performance of which a multiplicity of methods is given us. The best way out of the maze is to adopt one, and stick to it until by familiarity with all its details one becomes expert in its management. Of course, it is probable that the exigencies of the military service will render it impossible to use one method to the

exclusion of all others, at all times. For instance, no mobile command carries an odorless excavator or a set of dry-earth closets with it as essentials of its paraphernalia, and yet of all systems for disposing of excreta, the earth closet is perhaps the one most universally favored, and certainly it is a good method in many cases. There are, however, features about the use of earth closets which make me think that they necessitate too much labor.

Earth closets really represent a transitional stage in the disposal of excreta, because they must be emptied at frequent intervals, and it is a difficult matter to get them emptied at all—a practical impossibility to get them emptied as the process should be carried out. The soldier called upon to perform this office suffers a degradation in his own esteem, and his fellows do not regard him as one in whose "skill, fidelity and patriotism" any overweening degree of confidence is imposed. And yet it requires a great, vigorous fund of just these qualities for the proper handling of this same despised adjunct of a cantonment.

The disadvantages and advantages of the system are many. Let us consider first the good features.

The closet furnishes a convenient, comparatively inviting place for attending to the calls of Nature, and this is a factor of very far-reaching import; many men go constipated because of the uninviting provisions for relief. The excreta are deposited over a very limited area, and can be ultimately disposed of over a similarly limited area, in a pit or stream.

There is a good chance to disinfect the excreta before they are finally disposed of, and, kept in a clean, fairly dry condition, the earth closet is a nice solution of a very uncanny matter.

Now as to its disadvantages. First of all, can we induce soldiers to use them properly? *We can not.* There are many men in the world who are absolutely insensible to the obligations of decency and cleanliness. The same insane bestial habit of mind which prompts a man to throw an old pair of drawers into the trap of a modern water closet, and so obstruct an entire system of plumbing, is operative when the top of a closet presents itself as a clean thing to be soiled.

We reproach the Spaniard for his filth and his disregard of the niceties; but let us look to the beam in our own eye, and, I am sorry to say, we shall find therein much to give us pause and make us ashamed of our countrymen. We often forget, I think, that the Spaniard did not have these things given him, and he had no opportunity to use them, and at the same time keep them clean.

Again, the aim of the closet is largely defeated unless the dejecta are covered with dry earth. I have recently been a fellow-subject of expatriation, along with most of you gentlemen, in a country where dry earth was as scarce as fiddlers are rumored to be in heaven. A man looking for dry earth in Luzon during the wet season would be better employed in looking for a padded room with iron bars on the windows.

Each time the cans are emptied more or less of the contents must, of course, be spilled on the ground; ultimately this produces bad results. The cans must be washed after emptying, and, unless a large stream be near at hand, this is difficult of accomplishment. Properly, they should be washed with boiling water—but no more of boiling water. Chemical disinfection and deodorization can be accomplished, but it is both expensive and only to be properly performed by prolonged exposure to the action of the particular chemical employed.

It may be *apropos* to say, just here, that many men in apparent good health are in reality expelling from their bodies each day enough typhoid bacilli to infect whole communities, and the doctrine that healthy human excrement needs no disinfectant is a bad one.

The best chemical disinfectant is carbolic acid in a 5 per cent solution.

Finally, as to emptying the cans, caution is necessary to prevent infection of streams should the cans be emptied into running water. Troops and others below the camp would constantly suffer.

The only alternative is a pit dug in the vicinity of the camp, and into which the excreta are thrown and covered up each day. This brings us to speak of the pit system of sinks, and I think it must be given the first place in any system of disposing of excreta. Its advantages are known to you so well that it would be superfluous for me to enter into a detailed discussion of them.

For moving commands they are very superior, and for camps the exercise of a little care will do everything to keep them in order. Every morning at 9 and every afternoon at 5 o'clock fresh earth should be thrown over the deposits, and, where obtainable quicklime freely used is an agent of great disinfecting power. Carbolic acid and other available chemicals are of service.

I think it is rather remarkable that we so uniformly neglect to use the wood ashes derived from our fires to furnish strong solutions of lye in these pits. This has a pronouncedly antiseptic, possibly a disinfectant effect, and could not fail to be of service.

The great point in the economy of the pit is plenty of earth frequently thrown in. Beyond the exercise of a feeble antiseptic effect,

this earth deodorizes the pit and at the same time prevents the multiplication of flies and the possibility of the matured fly becoming an agent of infection from the pit to the kitchen.

Another point of importance has to do with the enforcement of limiting the amount of stuff our soldiers put into their stomachs. I think none of our men are hurt by the Army ration, but we are all familiar with the American soldier assailing a whole bunch of Filipino bananas, at a sitting. We also know that enteric disorders and diarrhoea were responsible for our great mortality lists from the Islands. It is a plain case of cause and effect. The banana doesn't harbor either the bacillus of typhoid fever or the amoeba of dysentery, but it disturbs the integrity of the lining to a man's stomach and intestines and makes a good soil for disease germs to propagate on.

The generality of American recruits are young men who have never had enough of certain varieties of toothsome foods at one particular time of contact with them, and when this young and venturesome warrior finds himself with a pocket full of money, he often determines to get that repletion which he has probably cherished for years, as a dream. He gets it, and it lands him on the sick-report, and may ultimately give him eligibility to a six-foot berth in some national cemetery.

This matter calls for the exercise of the power of an officer to punish such an outrageous assault upon the soldier's digestion, and one or two such summary punishments can do a very great deal towards impressing men that they must treat an unoffending stomach in a humane and temperate manner. To my mind, the summary court is a much-neglected medium for the propagation of sanitary truth.

Of late an interesting series of developments has been brought out by the work of investigators into the causation and diffusion of malaria and yellow fever. In the light of this work, the mosquito has been shown to play a very important part in the extension of these diseases, and prophylaxis to meet the conditions is simply the inhibition of the activity of these insects.

Most of us rather pooh-pooed the mosquito theory; but I think no fair-minded man, who will take the trouble to read the reports of our Commission in Cuba, will deny the force of the argument they make, supported as it is by such an array of substantial facts. They have credibly and certainly established the fact that yellow fever follows the bite of a mosquito known to have previously bitten a subject of the disease, and they have also shown that infection from clothing, bedding, etc., even when saturated with the discharges of a malignant case of the disease, does not follow.

The literature on the subject is at the command of any gentleman who may care to read it, and I shall be happy to lend it to anyone interested in the subject.

The practical point lies in the destruction of the mosquito by petroleum, and all stagnant water should be covered by a film of this article. It should be applied to the surface of ponds in the proportion of one ounce of petroleum to every fifteen square feet of surface, renewing the application every fourteen days.

Under this petroleum crusade Havana has become a healthy city and the greatest scourge of the tropics has been put under, and I am happy that we of the American Army can claim as our fellows the gentlemen who have done it.

Military Notes.

TRAINING THE RECRUIT.

BY SECOND LIEUTENANT R. GRANVILLE PORTESCUE, FOURTH U. S. CAVALRY.

"Soignez les détails, ils ne sont pas sans gloire; c'est le premier pas qui mène à la victoire."

TOO much care cannot be taken in the training of the recruit. "The foundation of the soldier's entire training is the careful and strict instruction of the individual—only thus can the combined action of numbers be attained. The faulty and incomplete instruction of the recruit, as a rule, affects him prejudicially during his entire service in the performance of his duties. Faults which are allowed to creep in during the initial stages of the instruction are rarely completely eradicated. It is likewise impossible to remedy defective training of the individual by combined practices." This paragraph, taken from the German Drill Regulations, should be kept constantly in mind, for the responsibility of turning out a good, poor or indifferent soldier rests, in a great measure, on the first instructor.

When the recruit joins, his mind is in a receptive state and his future conduct will be influenced greatly by his first impressions. The officer intrusted with the supervision of the instruction of the men should remember that they take him as an example; therefore he cannot be too careful in his bearing and appearance. Needless to say, he will have to exercise the greatest patience under all circumstances; anyone who has received a lot of green men who are to be turned into soldiers in two months' time knows how hopeless the task appears at the first drill. In the cavalry it seems well-nigh impossible. If the work is gone at systematically, a great deal can be accomplished; but personal experience and the regulations of foreign armies would indicate that this period was entirely too short. It is impossible to lay down any hard-and-fast rule as to how long it takes to make a green man a soldier. The standard of intelligence is not uniform.

There will always be a few backward men among the recruits, and these should receive extra care. If they are what is commonly known as "wooden," the instructor should endeavor to train their minds as he proceeds with the drill work.

There are some cases, however, that are hopeless; one such came to the notice of the writer very recently. He was a man, in no way vicious, who tried hard to do the work required, but who did not have sufficient intelligence to perform his duties. He received constant and patient instruction for eight weeks, and at the end of that period knew very little more than when he started. His troop commander would not take him up for duty, being unwilling to take the risk of putting him on guard.

He worked with the troop for some time until a new batch of recruits arrived, when he was turned over to the recruit squad again for more instruction; at this he deserted. There should be a way of discharging men of this stamp without any unnecessary red tape.

With our American ideas, a soldier is no longer a machine, so we must take care not to ruin his individuality—in fact, we must foster and develop this trait as much as possible. We must instill in him pride in his profession from the start of his career.

When the recruit first receives his arms and equipment, he should be instructed as to the name and use of each article, shown how to adjust and clean them, the habit of cleanliness being impressed on him from the very beginning. When he receives his horse, he must be given instruction in regard to the care and treatment of him, and be made to understand that any abuse of the animal will bring down the severest punishment on the man.

A cavalrman is known by the condition of his horse; so with recruits one should try to foster a sentiment of affection between horse and man, which makes the duty of taking care of the animal a pleasure. Here it may be said that the importance of correct biting should be constantly drilled into the men. Putting a recruit on a horse with incorrectly adjusted bit is ruinous to the mouth.

The average recruit needs a thorough course in the setting-up exercises, although the tendency of late seems to be to slight this very important part of the soldier's training, and one seldom sees the well-set up men of the ante Spanish-American War Army.

Gymnastics are gone into very completely in the German Army, the horizontal bar being extensively used.

In this work the instructor should not confine himself to the few exercises explained in the Cavalry Regulations, but should keep the men interested by taking them through the Manual of Calisthenics,

varied with leap-frog, short dashes, high and broad jumping, tug-of-war, etc., etc.

The Manual of Arms, sabre exercises and dismounted drill should be taken up in conjunction with the setting-up exercises, and in this work too much attention cannot be paid to the fine points. In making all explanations, care must be taken to use only such words as the recruit understands; "diagonally" and "successively" are Greek to some men. The instructor will have to enlarge upon the text of the Drill Regulations, and should make things so clear that the most uneducated understand him easily. Having an old soldier execute the movement desired, two or three times as an object lesson, saves many words.

With the sabre exercises the recruits seem to have great difficulty, and this is explained by the fact of the average man's wrist and forearm not being sufficiently well developed to handle the regulation sabre with ease; therefore care must be taken in gradually bringing up these muscles to such a strength as to enable the man to manipulate his weapon forcibly and gracefully.

The fact that they are to use this arm from the horse's back should be emphasized. Although dismounted drill for the horse soldier is slighted in foreign armies, and fighting on foot is considered beneath the dignity of the Continental cavalryman, the American authorities have decided that the "dragoon" is to be preferred to the "hussar," and the war in South Africa seems to have proved the correctness of our theory. According to English ideas, our cavalry is simply mounted infantry. We train our men so that they know how to handle themselves whenever separated from their horses, not as an exercise to teach them to walk smartly to and from stables. Remembering this fact, we train the recruit to maneuver readily on foot, paying particular attention to movements in extended order. In this work he should be taught the principles of fire discipline and the importance of taking cover.

The much-neglected exercise of estimating distances could also be taken up at this time. Now we come to the most difficult task for the cavalry recruit—learning to ride. Never put a recruit on a hard-trotting horse. He has enough trouble in learning the military seat, and his sorrows are increased a hundred-fold by a rough-gaited animal. The old theory that to learn to be a horseman one had to be thrown a dozen times "to gain confidence" and acquire a good seat is wrong without doubt, and an instructor will get the best results from going slowly and carefully with the men.

The first drills should include the mounted exercises, walking and a slow trot only.

It is all a question of the proper training of the muscles, and physical culture experts agree in declaring it injurious to put an unusual strain on any part of the muscular system.

A combination of bareback and riding with saddles brings about the best results, but the instructor must exercise unceasing vigilance to keep the men from taking a slouching seat.

Turning the toes in is another point that needs continual attention; keeping the knees well closed helps in getting the correct position of the feet.

Too much stress cannot be laid upon the importance of having a light hand; an effective way of insuring this is to put the men in column of twos and have the odd and even numbers alternate in leading the horses at a trot, the men on the led horses sitting with arms folded. It is also useful at times to have spurs worn in this exercise, as they compel the rider to turn his toes in. Recruits are very liable to spoil good horses by an incorrect method of employing the aids; so the instructor must be continually on the alert to prevent this. A recruit will usually close both heels and drag back his horse's head when he wants him to move forward. Executing movements by the right and left flank gives good practice in the use of the aids.

As soon as the men have acquired a seat that allows them to dispense with the grip on the mane to keep their balance, they should be put through fours right and fours left unceasingly. These movements are the foundation of troop drill, and if a troop commander receives his recruits well instructed in this regard, he is saved much unnecessary labor.

Long marches at the trot are very effective in shaking the men down in the saddle. An instructor should never let a man go to duty with his troop until he has a firm seat and a light hand; but, unfortunately, one finds men for whom it seems an impossibility to learn to ride, no matter how long and carefully instructed. A man who, after a month's work, cannot stay in the saddle at a trot, and falls off at any increase of gait from the walk, is of no use in the cavalry, and should be transferred to a dismounted branch of the service without further waste of time.

Men who are poor riders, while they are undesirable in the cavalry, might make excellent infantrymen.

Under any circumstances it is utterly impossible to make a recruit an expert horseman in the short time allowed. All an instructor can

hope to do is to give the new soldier a thorough grounding in the correct principles and pass him into the troop with a foundation of the knowledge of the proper management of his horse. As the most important duty of a soldier is shooting, it would seem that more time could be profitably spent in bringing the recruit up to a fair standard in this work before he is allowed to go on the target-range. The best shots agree on the importance of sighting, position and aiming drill and gallery practice, and state that defective shooting is more easily corrected in gallery work than on the range; therefore it is reasonable to contend that a recruit should be kept at this work until he has overcome all the errors due to incorrect position, irregularity in sighting and unsteadiness in trigger pull.

When a man can make at least twenty out of twenty-five possible at the gallery target every time, he is ready to start range-firing. But the same can be said of shooting as has been said of riding; some men will be unable to hit anything after unlimited practice. A man who cannot shoot has no place in the line of the Army; but, as it is difficult to get rid of him on this ground alone, he might be put on some duty where his marksmanship would be of minor importance. In revolver-firing mounted the recruits should have an extended course of instruction without cartridges, simply riding by the targets at the various gaits, snapping their revolvers. This work would develop horsemanship and go far towards bringing up the recruits' average in record-firing.

In conclusion, it may be said that eight weeks is entirely too short a time to make a horseman out of a man who cannot ride, and the recruits' work can only be taken as a grounding in the rudiments of soldiering; however, if the men have been thoroughly instructed in the details and started in the right way, the troop commander, when he takes them in hand, will be relieved of the annoyance of continual small mistakes, and will soon be able to develop that proficiency which can only be expected after much continued practice.

CAVALRY BITS.

BY BRIGADIER GENERAL W. H. CARTER, U. S. ARMY.

ABOUT ten years ago, considerable dissatisfaction arose in the cavalry arm in regard to the Shoemaker curb bit, and various experimental bits were sent out by the Ordnance Department with a view to meeting the wishes of that branch of the service. Comparatively few

officers had studied this subject in a scientific way. The matter was taken up at the Infantry and Cavalry School, and, after considerable experiment and discussion, a model bit was agreed upon and the necessary drawings furnished for its manufacture. Through a misunderstanding of the drawings, the upper branch of the bit was made too short, and this disadvantage was added to by continuing the use of a broad leather curb-strap instead of a flat mail chain, which it was expected would be supplied for use with this bit. The result has been continual dissatisfaction with the bit for all difficult horses. In fact, quiet and well-trained animals suffered so much from pinching of the lips by the strap that efforts were constantly being made by troop commanders to effect a change.

The matter was frequently reported, but never in such a way as to induce the Ordnance Department to go to the expense of correcting the error in manufacture. When General CROZIER was appointed Chief of Ordnance, his attention was invited to this matter, and, upon investigation, it was found that there were twenty thousand curb bits on hand at the arsenal. In order to make sure that this bit could be corrected to meet the wants of the service, the matter was referred to the commanding officer of the Cavalry and Field Artillery School at Fort Riley, and an informal board reported in accordance with the same recommendations which had been repeatedly made before, that by following the original plan in giving proper length to the upper branch and replacing the curb-strap with a flat mail chain, the bit ought to be satisfactory for all ordinary purposes. One thousand bits have been altered in the manner suggested, and have been issued for trial at Forts Riley, Myer and Ethan Allen.

Of course, in preparing requisitions for bits it is essential that troop commanders should specify the length of mouth-piece required, because very few of the larger size are required in the average regiment. The smallest sized bit is adapted to the greatest number of horses.

The board recently in session in Washington, considering uniforms and equipments, has recommended that a new curb bit with four rein rings be issued for trial in competition with the modified curb bit with single rein. The general feeling in the cavalry in the past has been that a curb bit and bridle is a much better arrangement than a curb bit with rings attached to the ends of the mouth-piece. The action of a curb bit with rings at the ends of the mouth-piece is not at all akin to that of a snaffle bit, although, of course, the curb action is just the same. This four-ring bit is frequently called a "Pelham," although the old idea of a Pelham bit was a curb bit with double reins and a

mouth-piece jointed either like the snaffle or a compass. Either of these latter kinds of mouth-pieces is preferable to the unjointed mouth-piece of the curb bit used with double reins.

Officers to whom these bits are issued should give the matter serious study and reflection, in order that that which is best may finally be adopted for the cavalry service. It should be remembered that during all the early history of the cavalry the curb bit and bridoon were used, but it was abandoned during the Civil War under great stress of active field service for a curb bit with a single rein. The experience obtained during the Civil War and in subsequent campaigns on the frontier was very useful in developing and fixing the cavalry equipment. It will be recognized that it would be hard to improve upon the McClellan saddle, as now issued. Various minor features of the equipment have been changed from time to time, and no improvement should be rejected merely on account of a distaste for change.

One of the questions before the Board on Uniform and Equipment was that of the halter bridle. While this halter bridle is, theoretically, a most acceptable part of the cavalry equipment and is used by Russia and some other nations, it has not in the past commended itself to the American officers. The reasons for this are not hard to discover. Inasmuch as the actual time a cavalry horse is in use in a garrison is a comparatively small part of the day, he should be fitted with a halter which is sufficiently loose to be comfortable. The halter that is loose enough to be comfortable will admit of considerable play in the head-strap and will be unsuited for attaching, either by snaps or toggles, a curb bit. That is to say, the play of the head-strap from the poll back along the neck will give considerable action to the curb bit up or down in the mouth and prevent the mouth-piece from occupying the place on the bars for which it is designed. To obviate this movement, it is necessary to place a brow-band on the halter, thus fixing the head-strap in the position it would occupy in a bridle head-stall. To prevent this looseness, a bridle nose-band is required for use on a halter, pure and simple. Thus it will be seen that to make the halter serve the purpose also of a bridle, additional leather almost equal to that in the bridle must be added.

One of the great neglects in the American cavalry service has been the carelessness existing heretofore in regard to the fitting of bits and retaining the same bit and bridle always for the same horse, regardless of the trooper who rides the horse. When it is remembered that after horses are turned out in the corrals or for herd, the stablemen pile the halters in a convenient place for use when the animals are

again to be returned to their stalls, it is quite evident that in throwing the halters in piles it would be extremely difficult for troopers to select their own when the time comes to catch up the horses for the night. Especially would there be trouble about all men who are absent on guard, fatigue, police and other duties which prevent them from being at the stables to catch up their own mounts. It will be readily understood by any old cavalry captain that this would be a serious question when it comes to fitting these halter bridles to individual horses whose heads vary greatly in size. The cavalry trooper who always cleans his equipments as soon as he comes in from drill would be much mortified to go to the stable to prepare for inspection with clean reins and bit, and find himself obliged to attach them to a worn and dirty halter head-stall. The result would be that in a short time each troop would be equipped with a double supply of head-stalls, in order that they might make a creditable appearance at parades and inspections.

There is another feature of the halter head-stall worthy of consideration. In the field it is always necessary to carry a few extra halters, because horses are constantly pulling back and breaking them at unexpected moments when there is no time to make repairs. The Equipment Board intends to provide for this contingency by attaching the curb bit to the halter bridle by means of a strap passing entirely over the head. It will readily be seen that there is not much saving in leather in this proposed new equipment, and its adoption will be of doubtful advantage, so far as superiority over the old equipment is concerned.

The tendency towards utility at the expense of mere appearance has been very pronounced during the past few years, and inasmuch as the object of all military practice and instruction is simply to provide for success in war, utility should always be the first consideration. 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 equipments.

PACKS AND PACKING.

By LIEUT. H. L. H. WAITE, U. S. ARMY, RETIRED.

The ideal pack-mule is active, square-built, short-coupled, gentle and docile, with short legs, and manifest power to maintain a burden. It should be small-boned and more compact than a wheel-mule, and

more weighty and solid than a swing- or lead-mule. It should weigh 800 to 1,000 pounds.

Well-trained pack-mules are easily driven and managed. They are very patient and keep a fixed place in column. The old and experienced leaders resent any attempt of the shave-tails or green mules to pass them or even to draw near to them. They follow a bell-mare, and the bell is very useful in attracting their attention, to assemble them from grazing, and to govern their motions. It is certain that pack-mules ought not to be used when wagons or other vehicles can be employed. It is an enormous waste of power, for an animal can draw five or six times as much as it can carry.

To prevent chafing, the load of a pack-mule must be distributed over a large surface. The center of gravity of the load must be as low as possible, and ought to be in a line above and as near that of the animal as practicable. Hence the load must be placed well down on each side. The saddle and load must be fastened so securely as not to move except as the animal moves, and of course it must be equally balanced on each side. The *aparejo*, or Mexican pack-saddle, fills the required conditions perfectly. It should be made of the best material, and each *aparejo* should be fitted to the animal that is to carry it. It consists of a strong leather sack about two feet wide and from fifty-five to sixty inches long, according to the girth of the animal. A seam running from front to rear divides it into two equal parts, each of which is composed of a double layer of hide, with sufficient space between to introduce a stuffing of grass or hay. These side flaps, when fastened together, form a ridge within which the backbone of the animal rests free from friction or pressure. On the inside of each flap is left a circular hole through which the stuffing material can at any time be reached. An *aparejo* can only be properly set up by an experienced packer. Sticks of wild rose, ash, or other elastic wood, are placed in the compartments. Strong tough grass is carefully laid into the covers. The grass must be carefully and evenly placed. The mule must be watched for the slightest appearance of sore back and the grass pulled out, and the *aparejo* adjusted so as not to chafe the animal. An old mule will immediately show signs of being chafed and will resent being improperly packed, by kicking and bucking and creating a commotion in the train.

The cost of an *aparejo* complete, with *cincha*, *manta*, hammer-cloth, etc., is about fifty dollars, or nearly one-third that of a wagon. All the material has to be of the very best to stand the rough usage of mountain travel; as broken or worn-out material cannot be replaced on a scout.

The terms used in describing the various parts of the *aparejo* are mainly of Spanish origin, and it was the Spanish and Mexicans who brought the art of packing to perfection. No suitable substitute for the *aparejo* has ever been found. A hundred officers will express verbally what in their opinion would take its place, but not one will officially propose a suitable pack-saddle. The abominable cross-buck is not worth considering. Moore's pack-saddle—invented by the former chief packer of the Army—is probably the best substitute, but he never used it in any of his trains.

Panniers can be employed for some purposes. The pack-horse with panniers was at one time in general use for conveying merchandise and for agricultural purposes; and in the mountainous regions of Spain and Austria it still forms the sole medium of transport. The Indians in the central West employed a sort of pannier made of parflech.

In packing with *aparejos*, the hackamore is first placed on the mule, and the animal blinded. The sweat-cloth is then placed on the mule's back, and from one to three blankets, and over these the *corona*, though the latter is now generally dispensed with; it consists of two or three folds of woolen cloth stitched together with a worked ornamental border; then the *aparejo* proper, which is covered with the hammer-cloth. All are secured by the *aparejo cincha*—a piece of strong canvas about six feet long and twenty inches wide folded so that the edges meet at the center. The *latigo* strap is attached to a ring at the end of the *aparejo cincha* firmly secured to a semi-circular piece of leather; the strap is about six feet long. The other end of the *cincha* is provided with two loops of leather and a slide of hard wood.

With inexperienced packers, the load should not exceed one hundred and fifty to one hundred and eighty pounds. The trains of General Crook, under Moore as chief packer, were brought to such perfection that each mule carried a load of over three hundred pounds, and this, too, while crossing the Continental Divide and in the roughest parts of Wyoming and Montana, where there were practically no trails. When packing-boxes are used, they should be about twenty-four inches by eighteen inches and twelve inches deep; and should be rendered water-proof by being covered with canvas or rawhide. They require no cover—the contents being held in place by the *manta*.

Great care is exercised in placing the packs on the *aparejo*. As far as possible, they should be of equal weight. If not, the load must be equalized by placing the heavier pack higher on the *aparejo*. In this way a load of fifty pounds may be made to balance one of one

hundred pounds. The packer carefully judges of the proper position while lifting the pack. Then, too, the load must be constantly watched, and at the slightest slipping, or on any uneasiness on the part of the mule, the load must be instantly adjusted. So a good packer is nearly one-half of the time on the ground. In all of MOORE's trains there were but seven men to every fifty-five mules. So the work was very arduous. The pack-saddle described in the new Cavalry Drill Regulations requires twelve men to every fifty mules.

Much trouble on long marches is often occasioned from the loss of flesh causing the *aparejo* to fit badly. If necessary, a portion should then be cut out of the center of the *aparejo*. Straw pads are useful in protecting the hips and withers. The crupper must be kept perfectly clean. The throwing of the diamond hitch seems very complicated, but it can readily be taught to soldiers by an experienced packer. However, it is only the A B C of packing, and experience alone can teach the proper way of arranging the packs, adjusting the load, the tightening of the lash-rope, and the care and preservation of the *aparejo* and of the mule's back.

The lash-rope—about thirty-five feet long—is attached to a canvas *cincha* eleven inches wide and thirty-six inches long. The *cincha* has a hook of hard wood at the other end. The methods of slinging the load or cargo and lashing the same are described in the Cavalry Drill Regulations.

Troops of cavalry stationed where they may be suddenly called upon to take the field in a mountainous country should be provided with a suitable pack outfit. Twelve is the least number of mules that can be used to advantage. Rations for ten days for eighty men weigh about twenty-four hundred pounds, and but little or nothing else can be carried. These mules should be turned over to the troop commander and should be under his exclusive control. They should be herded with the troop horses, to become accustomed to and attached to them and so rendered indifferent to others. The *aparejos* should be kept in the troop stables and at all times ready for use. Packers thoroughly trained to their duties should be employed, and they should sleep in the vicinity of the troop stables. Ten days' rations should at all times be kept properly packed and ready for instant use. Coffee, sugar, etc., should be packed in rubber or canvas bags; bacon and hard tack should be carefully wrapped and packed in canvas. All should be divided into loads of convenient weight and size. All of one article should not be placed on the same mule, as on rough mountainous trails a mule or pack may fall off a precipice and be lost. An excess of flour and bacon over the ordinary rations should

be carried, to provide for chance couriers or guides who may join the troop. Then, too, the men, being deprived of vegetables and doing very hard work, will require more of the solid part of the ration than when in garrison. These rations should be unpacked and renewed at intervals of at least thirty days. All the soft bread possible should be carried along in addition to the regular ration, the hard tack being reserved to the last moment. With such an outfit a cavalry troop can be ready to take the field at thirty minutes' notice, day or night.

At the commencement of the Ute War in 1879, the news of the outbreak reached Cheyenne at 8 o'clock in the morning. Two hours later the eight troops of cavalry at Fort Russell, with rations, ammunition, horses and men, were all on board of the trains and had started west for Rawlins.

Finally, pack-trains should always be maintained in our Army. They will prove to be of the greatest value in future wars, in the transportation of wounded over rough country, from the actual battlefield, and in bringing up reserve ammunition to the firing-line.

RANGE HORSES FOR CAVALRY.*

By MAJOR S. L. WOODWARD, FIRST CAVALRY.

There has been, and still exists to a considerable extent, in the minds of cavalry officers, a prejudice against range horses for cavalry purposes. There is good cause for this, and I must confess to having shared it until recently, when I was detailed to inspect for purchase, at Fort Meade, South Dakota, horses of this class to mount the 13th Cavalry. Nearly 700 were accepted and issued to the regiment. They came from the ranges in Montana, Wyoming, North and South Dakota and Nebraska.

In earlier years the Western range horses were a product of the cayuse, or Indian pony mares, and inferior stallions, bred more for quantity and cheapness than for quality. They were small, ill formed and vicious, and the various attempts to mount cavalry upon these in Texas and Arizona were a dismal failure, and bred a prejudice against range horses in general that only time and experience will eradicate.

In recent years many of the ranchmen in the Western States, realizing the profit and satisfaction to accrue from an improvement in their stock, have bent their capital and energy to the raising of a

*Read before the Lyceum at Fort Keogh, Mont., March 14, 1902.

better grade of animals, and there are to-day, on many of the ranches in the States I have named, as fine a class of horses for cavalry purposes as can be found anywhere in the world.

They are of good size and form, hardy, free from disease, especially of the eyes, feet, throat and lungs; tractable, and very amenable to discipline and training.

There are still among them many with a vicious broncho strain, and great care must be exercised in the inspection, especially in the tests under the saddle and in handling of their feet, to avoid purchasing untamable and vicious brutes. This was the chief difficulty I had to guard against in the purchase of these horses. Blemishes, such as weak eyes, curb, chapped hocks, thorough pin, spavin, ill-formed or diseased feet, weak lungs or throat affections, were almost unknown among those offered for sale.

Those secured by me were generally young, very few being over six years of age, and the majority four and five; they had never been stabled or fed, except upon grass, and were thoroughly unacquainted with houses or grain. The only training or handling was what they had received in being caught from the herd and broken sufficiently to pass the requirements of "broken to the saddle"; and as they were generally presented by skilled and fearless riders, it was difficult to judge of their suitability for issue to the green and untrained recruits into whose hands they were first placed.

It has been my good fortune to serve ever since with some of the troops to whom these horses were issued, and I have thus been enabled to observe their development and training, which has been gratifying beyond my most sanguine expectations. I believe my assertion in this regard will be confirmed by most of the officers of the 13th Cavalry, who have had their care and training.

After considerable experience in the purchase of horses, having been five months upon that duty in St. Louis, several years ago, and having purchased one hundred artillery horses in Atlanta, Ga., in 1898, I am free to say that, were I called upon to purchase a mount for my own command, I should be very glad to select them from these range horses.

Their cost at present, especially if purchased in open market, direct from the owners, instead of by contract, is about 25 per cent less than that of horses bought in the large markets from contractors.

The first instance in the history and antecedents of the animal is easily obtained, which is desirable; while in the latter case little or nothing is obtainable concerning their character.

Nine months ago there was issued to each of two troops of the 13th Cavalry, now at this post, eighty-four of these horses. The men were generally untrained recruits. The troops have since marched an average of five hundred miles upon expeditions, besides drills, and have not lost a horse, nor are there any which are subjects for condemnation. The officers report that there have never been any cases of serious sickness among them, and they are generally tractable and well trained.

This record cannot be surpassed.

OUR COWBOY REGULATION STIRRUP.

BY MAJOR JAMES PARKER, U. S. CAVALRY, ASSISTANT ADJUTANT-GENERAL.

IN discussing such changes in equipment as may benefit the service it would seem that it is in order to ask, Cannot the present cavalry stirrup be improved?

In the United States Army we use a stirrup unlike that of any other army in the world. It is unlike any stirrup used by civilians; it is a faint copy only of the unusually heavy, clumsy and extraordinary-looking stirrup used by the Mexicans and used by our cowboys. It is a modified cowboy stirrup.

The following seem to be the reasons for the popularity of the cowboy stirrup:

1. In passing through *chaparral* and bushes the hood protects the foot.
2. The feet are protected from the cold wind, rain and snow.
3. The deep tread is comfortable like the "slipper stirrup" of a woman's saddle. In this it resembles the saddle of a cowboy or of a Mexican, which are so deep as to be almost impossible to fall out of. In the same way it is almost impossible to lose the cowboy stirrup.
4. It is less dangerous to an inexperienced rider than the steel stirrup, since it is more difficult for a man losing his seat to be caught in and hang from the stirrup.

The foregoing are believed to be all the advantages that can be claimed for the cowboy stirrup. But they do not account for its adoption and continued retention for the following reasons:

The principal functions of the stirrup are to preserve the equilibrium of the body during violent movements, to lessen the shock to the horse of the man's body, to support the legs in a position where leg-pressure can be applied.

Thus it is required in our Drill Regulations that the legs from the knee down should be vertical, that the heel should be slightly lower than the toe, thus bringing pressure to bear, the ball of the foot pressing upon the tread of the stirrup and maintaining it in position.

This is the natural and convenient position of the leg and foot when a metal stirrup is used. If the heel is not lower than the toe, it is impossible, when the horse is in motion, to keep the stirrup on the foot. The rider is liable to lose his equilibrium and fall.

The tendency, indeed, with the metal stirrup is to ride with the stirrup too short.

But with the hooded stirrup the tendency is the reverse. The uninstructed rider finds that it is easy to keep the stirrup on the foot by the expedient of poking the toes to the front. The stirrups, then, being shoved out of their natural position, are supported on either foot by gravity. The rider is able occasionally to touch the tread of the stirrup of either side, and that preserves his equilibrium. Having his feet shoved forward to the front, the tendency is to throw the upper part of the body backward, leaning, to a certain extent, upon the rein. The legs are straight at an angle of 45° with the horizontal, not being bent at the knee, and the heel coming sometimes in front of the foreleg and the feet not being parallel to the horse's side. Riding in this way does not lessen, to a material degree, the shock produced to the horse's back when a man's body rises and falls with the motion of the horse. It does not allow of proper leg-pressure to support and guide the horse.

But this position is the position of the cowboy, the position naturally assumed by the novice learning to ride with a cowboy's stirrup. It is the position that our recruits insist on taking and which it requires much trouble and pains to break our soldiers from leaving.

Some years ago, before we taught our cadets to use any but hooded stirrups, it was an amusing sight to see a graduated cadet, when, in his extreme confidence in his prowess as a horseman, he first mounts a civilian saddle. Used to but one rein, he is embarrassed as to where to hold the other. He lengthens the stirrups so as to be able just to touch the tread with the ball of his feet. The horse having started, he discovers, to his horror, that the English saddle does not hold him in position. An unexpected motion and one of his stirrups is gone. In reaching for that he loses the other. Depending upon his equilibrium only, he hangs desperately on. A hard-trotting horse, not being accustomed to such maneuvers on his back, is inclined to be frisky, and our cadet, having hung on by his heels for a while, slides ingloriously to the ground.

Or else he pulls his horse up and shortens his stirrups, and even then he has not learned the knack of keeping his stirrups on his feet. His seat is uncertain, and, to his astonishment, he finds that his reputation as a rider has suffered a serious blow.

The irresistible conclusion is that our stirrup does not teach riding.

The object of this paper is to provoke discussion of the present stirrup, in order that, if it is undesirable, it may be replaced by another.

It is believed that the adoption for the use of officers of a neat military stirrup, more like the English stirrup, would be approved by our best horsemen.

If desirable for officers, why not for men?

COMPANY TARGET REPORTS.

By CAPTAIN W. C. BROWN, FIRST U. S. CAVALRY.

Having just completed a course in target-firing with my troop, and required that all scores fired be carefully entered in the Target Book, I am tempted to ask, Why do we keep this record at all?

The Report of Target-Firing, a copy of which is retained in the company, gives the soldier's record at each range, his skirmish, and his aggregate score and per cent of greatest possible score; all worked out to a nicety that should satisfy the most fastidious statistician, and it is to this record, and not the book, that the company commander refers whenever any question arises in future as to men's qualifications in marksmanship.

It is of no moment whether the soldier made a score of 19, we will say, with three bullseyes, a 4 and a miss, or whether he scored it by four 4s and a 3; yet the Regulations require that this all be carefully recorded in the book and retained as part of the company record.

In order to insure an accurate record with a minimum amount of clerical work, I have for several years adopted, for both revolver and carbine-firing, the following:

Score-sheets were kept on the range with indelible pencil, and immediately after the firing turned in to the captain, or other officer charged with keeping the record, who verified the additions. The totals of each score, or each run before the targets at mounted firing, have then been entered upon a consolidated sheet by one of the troop officers, and the score-sheets then turned over to the troop clerk to make the required entry in the target book: not that these

latter entries have been found to be of any real value, but simply to comply with the regulation.

This year the consolidated sheet has been prepared on tracing-linen, and at the conclusion of each day's firing, immediately after entering the totals, a blue print has been made to be posted on the bulletin-board in the quarters for the information of the men, thus stimulating their interest in the practice and enabling them to compare their scores with those of their comrades.

The print thus made contains not only the firing for the day, but for all previous firings; and as it is closely scrutinized by the men, any error, such as an entry opposite the wrong name, is practically certain to be noticed by the man concerned and reported.

The annual target report is made from the last blue print thus prepared, with which it must agree. There can be no tampering with records, for the totals, which are entered on the consolidated tracing-linen sheet, remain always in the personal possession of the captain.

The labor spent in entering each man's score in detail in the Company Target Record Book is thus, so far as practical utility is concerned, labor thrown away.

In the Target Record Book, as well as in the Annual Target Report Blank, the arrangement of headings for reporting skirmish scores is such as to lead to errors in the preparation of reports. In these printed forms the headings appear in the following order:

LYING, KNEELING, STANDING,

placed thus, doubtless, because hits on these figures count 5, 4 and 3, in rotation from highest to lowest.

This arrangement is not a practical one, however, for those who do the work; for as the targets appear on the field to the men firing, and to the officer taking the score, they are in the order—

KNEELING, STANDING, LYING,

and they should be in the same order in all printed blanks to avoid error caused by skipping about in recording their scores, not only on the range, but in the orderly-room as well.

If the blank on which the Annual Target Report is prepared were printed on slightly thinner and semi-transparent paper, with no printing whatever on the back, the copy of the Annual Target Report to be forwarded being made out in India ink, the copy to be retained in the troop could be blue-printed therefrom, saving the labor of manuscript copying and comparing this extra copy.

Reprints.

THE DEFENSE OF CAPTAIN J. A. RYAN, FIFTEENTH UNITED STATES CAVALRY.

[Captain RYAN was charged with cruel treatment of Filipinos under his control, and, before a court-martial investigating the charges, made the following defense in his own behalf.]

THIS is the end, for me at least, of a long siege of investigation, that was based upon an unsworn, carelessly worded statement of a man supposed to be friendly. In thanking you for your uniform courtesy to me during my trial, and in assuring you of my absolute faith in your desire and intent to do absolute justice in this case, I do not forget that much injury has been done me by the spreading open to the gaze of seventy millions of educated people a lot of slanderous allegations that were based, as testified by the author of them, upon hearsay of the flimsiest kind, the refutation of which will never be made known to most, as my facilities for spreading a denial are not so good or so extensive as those for announcing the charge. I appreciate that these things were all not made the subject of investigation by you, and that you are not directly charged with righting my record as to many of them, but this fact does not lessen the sting of what I consider an outrage of justice. Frankly, I feel the situation most acutely, and six months of deferred action, while deprived of my command and of the right to be heard, has not tended to lessen the intensity of my feelings.

I feel that you have been made familiar with most of the facts leading up to the time of my alleged offense. I will, therefore, touch lightly upon them. I must, however, state my belief of the conditions under which I was operating and the necessity for my action.

The little town of Jimenez sprang into new life under the protection of the American garrison during the five months after my assignment to that station. Men surrendered; families came into the town; streets were improved; dilapidated houses were repaired and occupied; and all seemed well. Outside the town it was different, especially after August, 1901, when the insurgents returned to that

coast, under General RUFINO DELOSO, and practically invaded it just below Jimenez.

My troops were active against the insurgents; the people seemed desirous of assisting us, but no material information or real assistance reached me through the officials of the town. My columns in pursuit of RUFINO DELOSO always arrived just a little too late; I grew suspicious. During November, 1901, operations were particularly active near Tudela and Loculan to the south, and Oroquito and Langaron to the north, of Jimenez, as well as in our vicinity, and the district commander made his headquarters at my station for a short time that month, arranging for a combined movement all along the coast.

The excellent work of Lieutenant LEE, Tenth Infantry, at Tudela, brought to light the treason of some of the inhabitants of that town; and the discovery of a letter written by the insurgent general revealed some startling information about my station and its inhabitants. I went to Tudela and examined the letter, and also questioned four men arrested there, who knew all about the subject treated therein. I called up an insurgent major who had previously surrendered, and he admitted that he was at the *junta*; that all the principal men of Jimenez were there; that they brought money, food and clothing. He named two men as RUFINO DELOSO's secret police, one of whom was UBALDO ABING, now *presidente* and a witness in this case, and the other MATEO DURIAS, at whose ranch in the mountains this *junta* was held.

With this information and the letter, I saw how much at the mercy of these people I was. Here was a people residing under the protection of the United States, who had deliberately left town, had gone to the mountains in obedience to the orders of General RUFINO DELOSO, and had supplied him with money, food and information, while the *presidente* of the town was the secret police or spy for him in the same town.

For the last month I had been warned that the insurgents were near my station. One native had been killed and another mortally wounded by a band of them a few days before. Three soldiers repairing the telegraph line near Oroquito had been болоed. One of the *presidente's* policemen, an ex-insurgent, had approached a hospital corps man for medicine for one of the American deserters with RUFINO DELOSO, and by my direction, an arrangement was made to supply this medicine, in the hope to capture him.

This was the proposition for me to handle: a troop of young untrained boys, mostly recruits; a town closely surrounded by a dense growth of tropical trees and shrubbery; an active and cunning chief

back of me in the mountains, who knew every path leading into the town, as he had lived there a long time; and, added to all this, a set of treacherous town officials ready to obey any order that he, General RUFINO DELOSO, might send. They might have their orders at that moment. It was not a time for hesitating, nor did I hesitate. I arrested every man who had attended that *junta*, and others who were letter-carriers, supply agents, or who had a knowledge of this treason. There was no mistake in taking such action.

When I called them up after their arrest, to assure myself of what I suspected, they, and each of them, were "ignorant of it all," or "they did not know." They lied, as I expected they would. Was I to sit idly by, twirling my thumbs, when exposed to the treachery and duplicity of these traitors, these spies, who lived under the shadow of the American flag, constantly plotting with and maintaining our enemies in the mountains? Had I any obligations to my command? Was it my duty to protect them from this treachery? Certainly; and as the commanding officer, I alone was responsible for what was done or to be done. I deemed the situation one that admitted of no delay, and acted accordingly. I felt it to be my sacred duty to know the full extent of the traitorous arrangements or dealings of my municipal officials with the insurgent general, under whom they were really serving.

You know from the testimony in this case how the truth was brought to their lips. Will any man of experience say it was cruel, say it was even harsh? And yet it tapped the fountain source and truth gushed forth. It brought results, and brought them quickly.

From it I learned what I had long suspected, and had but just heard in Tudela; which was that I was living in a community of so-called peace-loving natives, who, while enjoying our protection, were plotting the destruction of my small command. This was to be accomplished when the occasion was propitious and when it would be safe for their friends to act.

After the arrest and admissions of these two leaders, others came forth, penitent, and told me all; and I mark you, confirming what these two had told me. Among other things, they all admitted that all the people were to hold themselves in readiness to obey any and all orders RUFINO DELOSO might send; that they had supplied rice till I had put on too sharp an embargo, and for which I was so severely criticised; and furthermore, that money was collected and communication kept up continually with RUFINO DELOSO, their insurgent chief and real friend. I learned that the night before my conference with the insurgents, this RUFINO DELOSO was at the house of the *presi-*

dente's clerk, who provided for his entertainment at his farm about eight miles out of Jimenez. This clerk remained there till RUFINO DELOSO returned from the conference, and that night was also passed there. RUFINO DELOSO went on next day to his stronghold in the mountains, and this clerk came back to report to the *presidente* what orders RUFINO had for him. I must add that the clerk was formerly a clerk of RUFINO when he had been in command of Jimenez, and that he was appointed to the same position by the *presidente*, UBALDO ABING.

So it was; a hundred facts came out to show the double dealings of the *presidente*, the *vice-presidente*, the secretary and the *consejales*, these men who composed the so-called civil government of Jimenez.

You know of my efforts to have these men tried by a military commission; of the abortive attempt to try them by civil court; their subsequent release without trial and punishment; and their immediate installment in their old positions of trust and influence, by the provincial governor.

And now what happens? All these traitors are liberated and restored to power and positions of trust; while I, the officer who arrested them, am brought to trial for an alleged offense. Am I to understand by this, that treason of natives that looks to and contemplates the massacre of American soldiers is not to be punished; the traitors are to be released, patted on the back and restored to office with its emoluments, while the Army officer who discovers their conduct, and offers proof of it, is peremptorily relieved of his command, severely criticised by his superiors, and finally brought to trial for the means necessarily taken to discover and make public this treason? What is the inference to be drawn by me? I do not, by this, intend to criticise a superior of mine; but I certainly have a right to call attention to facts that exist, and to suggest conclusions from them.

Did my sticking the heads of these treacherous, lying, native office-holders into a pail of water, thereby washing away an impediment in their speech, constitute a greater crime than treason against the flag and the soldiers who defend it? Could I have done anything else than to arrest these guilty officials?

Having arrested them and knowing that the truth can be gotten from the average native only under pressure or fright, especially this being true during active insurrection, must I lay aside my sword and take up the functions of the missionary? It may be so, but to me it appeared to be an occasion for the exercise of common sense, and that

I owed duties to the members of my command and to my country, and the safety of my command could not await the tardy commission. About eight months before this I had tried a *presidente* in North Camarines for a similar offense, and as a result he is now serving a twenty years' sentence in Bilibid. Is treason in Mindanao different from treason in Luzon? Misamis is well known as having been made a penal colony by the Spaniards, a sink for the vilest from all the Philippine tribes.

Aside from that feature of the case, I turn to the soldier's view. From the many severe and fault-finding arraignments against the Army, received from the States, one would imagine that our first duty, on capturing one of these treacherous people, was to the captive; to make him happy in his sorry plight. Sentiment aside, the first duty of an officer, who discovers and captures traitors of this character, is to his command; the safety of his command is paramount.

When, as in this case, it is found that the very native officials who are outwardly representing the United States Government are in reality serving an insurgent general, they are not only spies, but war traitors or war rebels; they are not prisoners of war.

Paragraph 5 of the famous General Orders No. 109 of 1863 says: "To save the country is paramount to all other considerations."

Paragraph 17 says: "It is lawful to starve the hostile belligerent armed or unarmed, so that it leads to the specific subjection of the enemy."

Paragraph 52 says: "If the people of a country, or any portion of the same, already occupied by the Army, rise against it, they are violators of the laws of war and are not entitled to their protection."

Paragraph 60 goes so far as to say that "a commander is permitted to direct his troops to give no quarter in great straits, when his own salvation makes it impracticable to encumber himself with prisoners."

Is the officer's first concern to be the comfort of the enemy, or the safety of his command?

Paragraph 90 says: "A traitor under the laws of war, or a war traitor, is a person in a place or district under martial law, who, when unauthorized by the military commander, gives information of any kind to the enemy, or holds intercourse with him."

Paragraph 91 says: "The war traitor is always severely punished. If his offense consists of betraying to the enemy anything concerning the condition, safety, operations, or plans of the troops holding or occupying the place or district, his punishment is death."

This was the case presented to my mind. It was a case in which I, and I alone, as commanding officer on the ground, must decide. Upon investigation, I honestly believed my command in peril, and that these officials knew to what extent I felt it my duty to know from their own deceitful tongues the exact situation, and I felt that, in acquiring this information in this manner, I might expect to inspire in their cowardly hearts a realizing sense of their crimes, and thereby not only protect ourselves, but instill into them some needed respect for us.

Who would excuse me or my failure to probe this treachery to the bottom, if by neglecting it my little command had met with disaster? Who would be blamed if disaster followed upon the heels of my negligence? The very people who have been holding me up to censure for what I have done would in such contingency, and by no means a remote one, be condemning me for not knowing the first lessons of a soldier. Only my own death with my men would have hushed criticism. It was not my lot to have to steer between the Scylla of treason and the Charybdis of neglect of plain duty.

To say that under such circumstances as these, the ducking of the *presidente's* and *vice-presidente's* heads into a pail of water was unlawful is to my mind crying out "Law" where there is no law. Trying to find a law to fit this case is like looking for an *insurrecto* in the brush. He may be there, and some allege that he is, but experts cannot find him. If any law on this subject is in existence, experts in the law cannot find it.

Now, comparing the punishment which could have been, and which in my opinion should have been, awarded these traitors, with the so-called punishment I caused to be inflicted upon them; and what do we find? That the arrested natives could have been legally shot or hung.

I know that these men, by their co-operation with me, could have led to the capture or killing of this outlaw and his band within a week from the landing near Jimenez, and thereby have saved my soldiers and myself long night marches through swamps and thickets, sleepless nights in wet clothes, and days on sick-report with fever and sore feet, to say nothing of preventing a number of assassinations of American soldiers.

What would the insurgent general, their real chief and ruler, have done to them, had they committed the same offense against him or his command? You know, as their records show you. They would have been assassinated by the *refugoes* or executioners employed for that purpose, and they know it full well.

Here is an instance illustrating, taken from the Civil War:

"HEADQUARTERS, DEPARTMENT OF THE GULF.

"Special Orders No. 70.

NEW ORLEANS, June 5, 1862.

"WILLIAM B. MUMFORD, a citizen of New Orleans, having been convicted before the military commission of treason and an overt act thereof, tearing down the United States flag from a public building of the United States for the purpose of inciting other evil-minded persons to further resistance to the laws and arms of the United States, after said flag was placed there by Commodore FARRAGUT, of the United States Navy:

"It is ordered that he be executed according to sentence of said military commission on Saturday, June 7th instant, between the hours of 8:00 A. M. and 12:00 M., under the direction of the provost marshal of the district of New Orleans; and for so doing, this shall be his sufficient warrant.

"By command of Major-General BUTLER, Comdg. Department.

"WM. H. WEIGEL.

"1st Lieut. and Actg. Asst. Adjutant-General."

I could not inspire into their dark intellects the same fear to make them loyal to me and to my Government as he could to make them loyal to him. The result is simple: they took their chances with the less rigorous of the two parties, and events have proven that their reasoning was correct. I do not hesitate to state that so long as these methods are pursued, the same results may be looked for. The Filipino will delight in an outward show of Americanism, and gloat inwardly over his real loyalty to insurrection.

But this could not stand between me and my duty. They were traitors still, and always will be; they are unpunished still, and they are American office-holders still. The blanket of charity has been thrown over all such, but no charity is extended to the American soldier. The American youth learns from his mother's knee that treason is the most heinous crime that a man can commit against his country. Are we to change all this? Is this lesson to be unlearned because an officer's loyalty to his country has caused the enemy harm, in saving his command from treachery?

If this class of traitor is allowed to go free, and is used to prosecute the loyal American Army officer for discovering and bringing to light his treason, then well may the earnest, faithful officer feel discouraged. If subject to secret "privileges," attacks from men untrained to war's demands and conditions, well may he feel that all the principles taught

him must be unbarred when these whispers are made a basis of serious charges.

I feel a debt of gratitude to the convening authority of this court for bringing my case before such a jury of my peers. Whatever your decision may be, it will be accepted without a murmur: for I have no fear of your judgment as to my military conduct. If you believe and so declare, that I, in ducking these traitors to get information, under the conditions presented to you in this case, have committed an unlawful act, then I shall humbly bow to the inevitable, and shall feel that it is the conscientious opinion and mature judgment of twelve officers, and that it is entitled to the respect of all men.

If you do so, I wish to say to you in all frankness, that you will change my honest and conscientious interpretation of G. O. 100 of 1863, which, according to my humble opinion of that order, confers an exceedingly wide latitude upon the commanding officer of a separate command in the field, in an enemy's country, in time of insurrection, I felt at the time of my action, and I feel now, that I was endowed with very great latitude. I felt, and I have always felt, that the latitude given to officers situated as I was should not be curtailed without most urgent reasons; reasons strong enough to even over-balance the rights of self-defense and the protection of the command. In short, this latitude and discretion should not be endangered by criticism where support of such criticism can, by any change, operate to fetter other officers, not thoroughly acquainted with the facts, in taking the initiative. Self-reliance and prompt action are the first duties of an officer in an emergency. Let not these be endangered by the fear that incidental trifles will be modified, and the results belittled.

While I am perfectly satisfied to undergo punishment or criticism where brother officers award either, yet I am anxious to avoid causing injury to our younger generation through a misunderstanding or misconstruction in my case. I feel now, and I have always felt, that my acts and all of my acts of December 1, 1901, as they affected the parties named in the charges against me, were not only legal, but that I was fully justified in performing them; thought that I was performing a sacred duty, and I still think so.

If you, after such deliberation, decide that the powers of a commanding officer of a detached command are to be curtailed in any respect from the construction I have announced, I think you should make it perfectly clear, so that another who may follow me will not go astray in the conscientious performance of what he regards his plain, simple duty.

Your decision will have a far-reaching effect: it will affect more than me in its operation: it will tell every Army officer and every soldier in our Army that they will be supported in the future as in the past, in the honest execution of their orders: or new ideals must be established yet unknown to our service, that will require another insurrection to demonstrate whether they deserve a place among the laws and customs of war.

Again I thank you for your conscientious and strict attention to my defense, under what has been to many of you most trying circumstances.

GLANDERS AND FARCY.

By N. S. MAYO, VETERINARY DEPARTMENT, EXPERIMENT STATION,
KANSAS STATE AGRICULTURAL COLLEGE.

GLANDERS and farcy are different forms of the same disease. When the disease attacks the mucous membrane of the nostrils, it is called glanders; when the lymphatic glands of the body, especially of the legs, are attacked, the disease is called farcy. Glanders is a contagious disease caused by a germ (bacillus mallei) that attacks horses, asses and mules, and can be transmitted to other animals, including man, by inoculation through wounds, sores or mucous membranes. The germs of glanders do not float through the air. The disease is commonly transmitted from a glandered horse by means of the discharge from the nostrils or sores. This discharge contains large numbers of germs of glanders, and may be transmitted to another horse directly, or by means of watering-troughs, feed-boxes, mangers, hitching-posts, equipment or utensils that may be infected with the discharge. It is possible that it may be carried by flies.

SYMPTOMS.—Glanders may occur in a mild chronic form, in an acute form or attacking the lymphatic glands in the form of farcy. In the early stages it is often difficult to recognize, especially in the chronic form. One of the first symptoms noticed is a discharge from one or both nostrils. At first the discharge is thin, sticky, and often resembles linseed oil; it dries about the nostrils, making them appear smaller than usual. As the disease progresses the discharge becomes more profuse, thicker, yellowish in color, and sometimes streaked with blood. The mucous membrane lining the nose, especially on the partition between the nasal chambers, becomes ulcerated. The ul-

cers are raw, depressed in the center, with reddish edges. In some cases the ulcers may perforate the partition between the nostrils. In severe cases the mucous membrane of the nose becomes bluish or slate-colored instead of a healthy pink. The lymphatic glands beneath the jaw usually enlarge, are firm to the touch, and often seem grown fast to the bone. These glands rarely gather and break, as they do in distemper. As the disease progresses the animal falls away in flesh, gets out of condition, and the coat looks bad. In severe cases there is often excessive discharge of urine.

When the disease attacks the lymphatic glands of the body, it is called farcy. It is most frequently seen in the region of the hind legs, but may occur anywhere on the body. It usually begins with firm lumps forming beneath the skin that may attain the size of a hickory nut or larger, and often occur in a string up and down the inside of the hind leg on the course of the large lymphatic vessels. These enlarged glands are commonly called farcy "buds." They often break and discharge an amber-colored fluid that dries upon the hair. These sores do not heal readily and often show a tendency to spread.

TREATMENT.—Glanders and farcy are practically incurable, and all diseased animals should be destroyed and burned or buried deeply. In doubtful cases the disease can be recognized by injecting mallein (a chemical product of the glanders germ). If the horse has the disease, there will be a rise of temperature of two degrees or more, with a well-defined swelling at the point of injection. All suspected animals should be carefully isolated from others and watered and fed from separate receptacles. Infected quarters should be thoroughly cleaned and disinfected by removing and burning all litter and similar material. Stalls, mangers and feed-boxes, neckyokes, etc., should be cleaned and scrubbed with a 5 per cent solution of carbolic acid in water, and when dried, should be whitewashed or painted. Equipment that cannot be burned can be disinfected by boiling for one hour. Persons caring for glandered horses should be careful not to contract the disease.

Manhattan, Kansas, August 19, 1902.

THE BREEDING IN CANADA OF HORSES FOR ARMY USE.*

By J. G. RUTHERFORD.

WHILE the supply of horses suitable for military use has always, even in times of peace, been a serious question, the experience of our South African troubles has given it an importance altogether new and somewhat startling. It has now been clearly shown that troops under modern conditions of warfare must be able to move rapidly from place to place, and that the mounted soldier has thus an immense advantage over the less mobile infantry man.

This development has led to the purchase by the British Government, during the present campaign, of a very much larger number of horses than would otherwise have been required. Nor has the lesson been learned by Britain alone; all military nations have been closely watching the operations in South Africa, and there is no room for doubt that the general demand for horses suitable for army purposes will be much greater in the future than in the past. Of the horses purchased for use in Africa the Dominion has by no means furnished her fair share, although, in addition to those taken by our own contingents, a considerable number have been picked up in Eastern Canada by Lieutenant-Colonel DENT, of the Remount Department of the British Army. It is not, however, an easy matter at present to obtain in this country any large number of horses altogether suitable for army use. No encouragement to produce them has, until very recently, been shown to breeders, and there being no very active home demand for any but the very best of the sorts now asked for, they have not been bred to anything like the extent of which the country is capable. After the visit of Colonel RAVENHILL in 1887, the western ranchers, in expectation of a market, went to much trouble and expense in securing and importing suitable foundation stock, and as a result were successful in producing many first-class cavalry horses. As, however, beyond a limited number taken by the Northwest mounted police and a few by foreign buyers, there was no sale for them as such, the breeders have largely turned their attention to other and, under the circumstances, more profitable lines of stock.

The natural conditions in Canada are, it need hardly be said, most favorable for the production of the animals wanted, while in the

*From the Halifax (N. S.) Evening Chronicle, August 16, 1902.

event of serious international disturbance Canadian horses would always be available for imperial use while it might be impossible to procure them in foreign countries. Again, through the medium of our great trans-continental railway, they could be shipped from either Atlantic or Pacific ports to any part of the world where they might be required.

In view of the strong probability that the demand hitherto lacking will in the future be such as to warrant the breeding in fair numbers of the horses needed for military use, a brief description of those now being sought for and purchased by the agents of the British War Office, and a few hints as to how they will be produced, will not be out of place.

They are of three fairly distinct types, as required for artillery, cavalry and mounted infantry.

At the Canadian horse show held in Toronto in April, 1900, the Dominion Government gave special prizes for each of these classes; and as Lieutenant-Colonel DENT, the imperial remount officer detailed to purchase in Canada, was one of the judges, thus making the selections authoritative, a description of each first-prize animal, together with its measurements, will be appended to the general list of requirements in all three divisions.

THE ARTILLERY HORSE.

The artillery horse asked for by the army buyer is really a smart, active van or express horse on short legs, with plenty of bone and substance and enough quality to insure staying power in fairly fast work. He should stand from 15-2 to 16 hands, weigh not less than 1,300 lbs., and measure at least 8 inches below the knee and 72 inches in girth. Considerable variation in type is permissible, the work of the horse artillery demanding greater speed and therefore more warm blood than are necessary for ordinary field artillery, while in all batteries properly horsed the rear and centre pairs are slightly taller and more rangy than the wheelers, the latter requiring greater strength and substance. The first-prize entry at Toronto last spring was of the lighter sort, being in fact the pure-bred, hackney mare Cassandra. She stood 16 hands, weighed 1325 lbs. and girthed 76 inches. She measured 8½ inches below the knee and 20½ inches round the arm; from crest to withers 36 inches, withers to croup 29 inches, croup to tail, an important point in all military horses, 19 inches. Although in this particular instance the prize went to a hackney, it does not, by any means, follow that gun horses should be either wholly or partly of that breed. They may be obtained by the judicious use of the thor-

oughbred horse on mares of size, substance and action, or by stinting good half-bred or strong roadster mares to a biggish hackney or breezy coach sire. So long as they show sufficient quality to ensure activity and endurance and at the same time meet the requirements as to size and substance, the question of pedigree is of secondary importance.

THE CAVALRY HORSE.

The cavalry horse is of a somewhat different type, and one at present too rare in Canada, owing to the preference shown by many light horse breeders for the American trotting sire, an animal possessing but few of the qualities and characteristics of the riding horse.

Colonel RAVENHILL in his report says: "A malformation in the Canadian horses which might advantageously be brought to the notice of breeders is that their quarters are short and very drooping, a serious defect in a military horse; indeed, we had to reject as unsuitable a considerable proportion of this account. This is not only a great dis-sight, but where a mounted soldier has to carry a kit on his horse's back it amounts to an insuperable objection: it has arisen from the too extensive use of the American trotter for stud purposes, this defect being very apparent in that horse. This is an additional reason for the more continuous introduction of the English thoroughbred, or such horses which are very straight in their backs and quarters, with tail set on high.

To get good cavalry horses the thoroughbred sire is almost indispensable, as in no other way can the lengthy rein, sloping shoulder, deep chest, strong loin and long quarter so necessary in this class be obtained with any certainty or regularity. Freedom of movement is essential, but high action and great trotting speed are neither required nor wanted. Horses of this class should stand not less than 15-1 nor more than 15-3, and should measure at least 8 inches below the knee and 70 inches in girth.

The first prize at Toronto was taken by a brown gelding named General, said to be by a thoroughbred horse. He was remarkably well proportioned weight-carrier of considerable length and great substance. His measurements were as follows: height 15-3, cannon bone 8 inches, arm 21 inches, crest to withers 37 inches, withers to croup 33 inches, croup to tail 15 inches, girth 74 inches.

Horses of this stamp can best be procured by the use of selected thoroughbred sires on strong halfbred mares, or on the better class of roadster mares, or on mares from hackney or coach sires, provided they show some blood and quality. On mares having a preponder-

ance of warm blood or those showing any inclination to weedliness, a good hackney horse might be advantageously used.

THE MOUNTED INFANTRY HORSE.

The mounted infantry horse for which such an unprecedented demand has recently arisen and which is likely to be even more sought after if present war conditions continue to prevail is a smaller and cheaper animal than either of those already described. He is in fact a cob, a strong pony on short legs, with as much quality as can consistently be looked for in conjunction with the substance required to carry an armed man. He must have a fair shoulder and a good back, be deep through the heart and stand squarely on good legs well furnished with bone. In height he may be from 14-1 to 15-1, but 14-3 is the favorite standard with Lieutenant-Colonel DENT. Strength is the great desideratum, but a reasonable amount of activity is indispensable.

The little horse Hero, which took first prize in Toronto, stood 15-1, measured 7½ inches below the knee and 19½ round the arm; from crest to withers he was 34 inches, withers to croup 27 inches, croup to tail 15 inches. He girthed 73 inches, and, as the measurements show, was an excellent type of the weight-carrying cob. Such horses can be obtained by a stout thoroughbred sire from French Canadian or other strong pony mares, or by the judicious use of the hackney horse on the smaller roadsters and on those little mares too common in Canada, resulting from the ill-advised use of the racing or rather sprinting type of thoroughbred on light mares of racing or trotting blood or other mixed breeding.

GENERAL REQUIREMENTS.

In times of peace no horses are bought at less than four nor more than seven years old.

As regards color, bays, browns, chestnuts and blacks are preferred; a few grays are required for special corps, but odd-colored horses are not wanted.

No unsound or seriously blemished horse will be taken; the veterinary examination is fairly strict, but is also strictly fair. Undocked horses are preferred, and no horse with a very short tail will be taken.

In times of war, however, when the demand, as a rule, exceeds the available supply, purchasing officers overlook many minor defects, provided the animals offered are sound and serviceable, while conforming generally to the requirements of the service.

ADVICE TO BREEDERS.

Breeders on the western ranges will no doubt find it profitable from this time forward to devote considerable attention to the production of horses especially adapted for military use.

In the other portions of the Dominion the supply of such horses can be enormously increased with but little extra effort or expense on the part of the breeder.

Immense numbers of light horses and ponies are annually bred in Canada, of which many when grown are, owing to their nondescript character, of but little value. If the breeders of these animals would send their lighter mares to pure-bred stallions, of the British breeds, intelligently selected with a view to the production of a definite type of military horse, a vast improvement in our clean-legged stock would speedily manifest itself.

High prices would then, as now, be easily obtainable for really superior animals; most of the others would find ready sale for army use, as well as for other purposes, while the misfits and object lessons would be less numerous, and, except by comparison, not less valuable than they are at present.

LIBRARY OF THE UNITED STATES MILITARY ACADEMY, WEST POINT, NEW YORK.

[From a letter by the Superintendent of the Military Academy to the Adjutant General of the Army, descriptive of the present work of the Library, the following is an extract.]

1. A scheme for a logical arrangement of all military books has been worked out and a table of contents of such books, on about 2,000 cards, has been made.
2. The same work has been done, on about 600 cards, for all military maps.
3. A bibliography of the writings of all graduates of the United States Military Academy for a hundred years (1802-1902), has been nearly completed. It will contain about 10,000 cards.
4. Complete author indexes have been made to:
 - (a) *The Journal of the Military Service Institution of the United States*, all the volumes, (First Lieutenant, T. A. ROBERTS, Cavalry).
 - (b) *THE JOURNAL OF THE UNITED STATES CAVALRY ASSOCIATION*, all the volumes, (Lieutenant ROBERTS, Cavalry).
 - (c) *The Journal of the United States Artillery*, (Captain WILCOX, Artillery Corps).

(d) The publications of the Infantry Society (Lieutenant R. C. DAVIS, Seventeenth Infantry).

This work has been done or is now nearly completed by Army officers who volunteered to assist Dr. HOLDEN in this way.

5. The card catalogue of the library has been improved by adding some 2,000 subject cards containing the bibliography regularly printed in the *Journal of the United States Artillery*, 1895 to date. The actual work was done by an Army officer who volunteered to work under Dr. HOLDEN's direction (Captain BOWLEY, Artillery Corps).

6. The library has begun the collection of material for a history of each and every regiment of the United States Army, and especially desires to be in communication with the historians of the various regiments.

7. Manuscript and other material relating to the history of each of the wars of the United States has been collected, and much of this material is unique. For instance, the library has received manuscript diaries of a soldier of the Revolutionary Army (1781), of soldiers of 1861-65 and of 1898-1900 in Cuba and in the Philippines, and has the promise of the diary of at least one general officer of 1898-99 and of 1861-65. It has acquired the original manifold order-books² of the general commanding the Army of Virginia for August and September, 1862, original military manuscripts of General WINFIELD SCOTT (1820), etc., etc. In respect to the collection of manuscript material, it is certain that the usefulness of the library to the Army and to the Academy will be much increased in the near future. A fire-proof safe has been provided, in which manuscripts can be preserved.

8. Material much of which was forgotten, and some of which was entirely unknown, relating to the history of the United States Military Academy, has been collected, and a complete bibliography of books, manuscripts, articles, pictures, maps, engravings, of West Point (1774-1902), is now nearly complete on some 700 cards.

9. With the assistance of the head of the Military Information Division, Adjutant-General's Office, a complete account of the present state of all the military schools of the world is being gathered.

All this and other such military information is made immediately available as soon as received, and this activity contributes to stimulate both officers and cadets to research and study.

A second use of the library is to supplement each course of study in the United States Military Academy. To this end the heads of departments have, at the request of the librarian, furnished lists of

books treating subjects studied in the Academy. These books are laid out on four tables—one for each class of cadets—where they may be consulted at any time, and they serve to give cadets a larger view of the topics they are studying. During the next academic year, it is proposed that the librarian shall instruct cadets of the fourth class on the methods of using books as tools, of card cataloguing, etc., etc.

10. The library has also an important function in adding to the general liberal culture of the cadets, and arrangements have been made—

(a) By which they see and handle about 1,500 new volumes of the Booklover's Library each year.

(b) By which additions to the books owned by the library are systematically made, so as to fill notable lacunæ now existing.

The library is now the most attractive building on the post, and it has already become one of the most useful departments of the institution.

HORSE-MANAGEMENT IN SOUTH AFRICA.*

BY MAJOR HECTOR CORBYN, R. F. A.

HAVING closely studied the subject of horse-management in South Africa for the last two years under all sorts of conditions and over much of its vast area, I venture to offer these notes, which I hope may be of some use to my younger brother officers who may find themselves responsible for the care and management of artillery horses in this portion of our empire, which is likely to become one of the most important training-grounds for the British Army.

The present breed of colonial horse is not fitted for artillery purposes, so my remarks will apply to the English 'bus horse type and the Waler. Of these, I prefer the English 'bus horse, although some of the best horses I possess at present are Walers who left India with the battery in September, 1899, went through the siege of Ladysmith and have never been sick or sorry during two years of heavy campaigning. But these are horses of exceptional constitution; they have had the advantage of never spending a night without the comfort of a heavy rug, and, being old friends, have had extra care and attention bestowed on them.

*Proceedings of the Royal Artillery Association.

My remarks will also be confined to camp life, and will not deal with the stabled animal.

Climate.—The seasons and climate play such an important part in this subject, that it may be well to state them here. The sun rises at 5 A. M. from the middle of November to the middle of December (mid-summer), and at 6:50 A. M. from the middle of June to the middle of July (mid-winter). It sets at 6 P. M. on the 15th of January, and at 5:10 P. M. on the 15th of June. The rainy season in the western provinces of Cape Colony is the exact converse of that of the eastern provinces, Natal, Orange River Colony and Transvaal. In the former the rainfall is greatest from May to October, in the latter from October to March. In the winter on the high *reldt* the extremes of heat and cold are very great, varying from 80° in the day to 10° at night.

Horse Sickness.—The greatest scourge in South Africa to the horse-owner is "horse sickness," the most prevalent time for which seems to be towards the latter end of the rainy season, when the flowering grass is almost at its full growth, and the conditions vary with the height of the district above the surrounding water (and not with the altitude above sea-level alone) and whether the conformation of the locality favors or otherwise the collection of fog and miasma.

Up to the present, the cause and treatment of horse sickness (which equally affects mules) have baffled veterinary science, but experience proves that it is wise to adopt the following precautions when circumstances permit:

Grazing, watering and exercise must be avoided between 5 P. M. and 9 A. M. the following morning. If horses have to work between these hours, give each 4 grains of arsenic daily, but this must not be continued for long. Special canvas muzzles (to allow of more ventilation than the ordinary nose-bag) have been issued to put on between these hours. I always soak these muzzles during the day in a weak solution of carbolic acid and water, and put them on damp at night. A rag dipped in Stockholm tar and smeared on the nostrils night and morning is a good preventive. One large horse-owner in Natal assures me he has successfully warded off horse sickness for many years by giving his horses twice a week a dessertspoonful of powder composed of one part COOPER'S sheep dip powder to ten parts of salt. No doubt the arsenic in the sheep dip is the preventive.

Grazing must only be allowed after all the dew or fog is off the ground, and then only on the highest ground, and never near a stream or pan or in a hollow.

I think horses in gross condition are more readily attacked. I have had eleven cases in the last fifteen months, of which four have

been officers' horses. I think this is due to the latter not getting perhaps quite as much regular exercise in camp as the battery horses, and the grooms being over-anxious to get more than their fair share of the forage. The disease may be looked on as fatal. There are three kinds of symptoms. With "dikkop" there is much swelling on the sides of the neck near the jaw, above the eyes and around the lips. The inner membranes of the eyelids assume a livid hue. With "blue tongue" the tongue becomes furred and of a purplish red. In the other case I have noticed no swelling about the head, but the temperature rises rapidly, and the patient generally dies in twenty-four hours, frothing and discharging a yellow fluid from the nostrils.

Strict cleanliness in the horse lines is a great preventive to horse sickness.

Enteric Fever.—Horses also suffer from a peculiar form of enteric fever in this country, which one does not meet elsewhere. The symptoms are: loss of appetite; a rapid rise in temperature to 104° or 106°; the inner membrane of the eyelid is very yellow with one or two small red spots. The post-mortem generally shows ulcers in the large intestine and enlarged liver. The most successful treatment has been 6 ounces Epsom salts, 1 drachm carbolic acid, 2 drachms chloride of ammonia; $\frac{1}{4}$ ounce nitrate of potash, all mixed in a winebottleful of water. This drench should be given three times a day. After about three days the yellow disappears from the eyelids and the small red spots turn to large blackish ones. That is the most dangerous part of the illness. As soon as the spots begin to fade away, stop the carbolic acid and nitrate of potash, and give $\frac{1}{4}$ drachm carbonate of ammonia, 3 ounces Epsom salts, 2 drachms chloride of ammonia, in a winebottleful of water, three times a day till the temperature is down to normal. The fever and the treatment leave the animal very weak, and vegetable (not mineral) tonics must be given to pick him up. Before trying this treatment we lost 70 per cent of the cases. During the last fifteen months, out of fifty cases, only one was fatal.

Tulip Poison.—Tulip-poisoning is most prevalent during the early part of the summer. The wild tulip is a bulb which grows in marshy soil and near the banks of streams and pans; it has long, thin tapering green leaves, which grow from nine to twelve inches in length and of a yellowish tinge towards the base. The plant is only poisonous during its young stage, before the flower appears, and when it is naturally difficult for a horse to recognize it. When the flower appears, horses will nearly always avoid the plant.

The first symptoms of tulip-poisoning are: violent colic; loss of appetite; injected membranes and tympanitis; in bad cases the symp-

toms last about five hours and the patient dies. The best treatment is to remove the poison by giving a pint of linseed oil and mild purgatives, followed by 4-ounce doses of Epsom salts. A good preventive to tulip-poison (when it can be carried out) is to give the ashes of the charred bulb as a powder; but this is not a cure.

Skin Disease.—Isolated cases of skin disease are sure to appear in every unit, no matter what precautions are taken; and when an animal is attacked, the best treatment is a pint of linseed oil followed by 2-ounce doses of sulphur twice a day. The skin must be washed with soap and warm water and dressed with any disinfectant. One gallon creosote, sheep dip, perchloride of mercury, can be procured from sick-horse depots; but a strong solution of tobacco juice has an equally beneficial effect.

Teeth.—Horses' teeth appear to be particularly liable to get sharp and uneven in this country, and they must be closely watched, and the sharp edges kept down with the rasp.

The Membrane.—A doctor called in to a patient generally begins by looking at the tongue. With a horse we generally first examine the membrane of the eyelid to tell us what is wrong. There is a great knack in doing this so as to expose the whole surface of the membrane. To look at the near eye, stand on the near side, put the forefinger of the right hand on the top eyelid near the front, and push the finger boldly forwards and upwards between the eyeball and socket, then press down the lower eyelid with the thumb of the same hand, and the whole surface of the membrane will stand out clear. To look at the off eye, stand on the off side and use the left hand.

Rations.—The usual ration for English horses is 12 lbs. of oats and (when obtainable) 10 to 12 lbs. of hay. For mules 8 lbs. oats and 8 lbs. hay, or more generally mealies in lieu of oats. One can always exchange bran and compressed forage for oats. I have often been able to get mealie meal, Kaffir corn, green mealies and linseed cake, and I believe greatly in a change of diet occasionally. The best feed is 8 lbs. oats, 2 lbs. bran, 2 lbs. compressed forage, 4 ounces salt, all mixed together (occasionally substituting 2 lbs. crushed mealies for oats). The Government ration of half an ounce salt is not nearly sufficient. Once a week give a hot bran mash of 3 lbs. with $\frac{1}{4}$ oz. of nitre. The compressed forage is full of good nourishment and makes the horses masticate their oats; and often when a horse is off his feed and will not look at oats or bran, he will make quite a good meal off this forage. If mealies have to be given whole, they should be given as a separate feed (at night for preference) and not mixed with oats, because in mas-

ticating the large mealies the oats are apt to slip through the teeth into the stomach in their whole state. Linseed oil can be obtained in 5-gallon tins from any sick-horse depot, and should be given to any horse that is poor or wrong in his coat. He should first be given a pint in a drench, then after two days an ounce in each morning and evening feed until his appearance alters.

Digestion.—Before laying down a routine for stable management it is well to consider a horse's digestion and make it one's object to get the greatest amount of nutritious value out of the grain ration. The grain, after being fairly well masticated and mixed with saliva, is carried into the stomach, where it remains for about an hour before being passed into the smaller gut. It is during the passage of the food through this smaller gut that the greatest amount of nutriment is taken up by the absorbents and blood-vessels and passed into the system. Once the food passes into the larger gut only about one-sixth of the nutritive properties are taken into the system. Our object, therefore, is to keep the food as long as possible in the smaller gut and let digestion go on as slowly as Nature intends it to, and not to hurry this process by filling the stomach with hay, grass or water too soon after the grain ration; for the latter will be forced through the smaller gut too quickly by the bulk of less useful food behind it and most of its nutritious properties will be wasted.

For this reason I don't think the system we so often adopt at home, of filling up the hay-racks at the same time that we give the oats, is a sound one. Violent exercise too soon after the grain ration will have the same evil effect of forcing the food too quickly through the smaller gut.

Routine in Camp.—In standing camp and during the healthy part of the hot weather I find the following the best hours for routine: reveille, 5:45; half feed ($1\frac{1}{2}$ lbs.) at 5:50; exercise (and twice a week drill order) at 6:45; water and feed (3 lbs.) 8:15; men's breakfast 8:30; stables 9:15; grazing 10:15 to 12; water 12:15; feed (3 lbs.) 12:30; grazing 2:15 to 4; water 4:15; stables 4:30; feed (3 lbs.) 5 P. M.; half feed ($1\frac{1}{2}$ lbs.) at 8 P. M. If there is a hay ration, it is all given at 9:15 P. M. The above is assuming that the water and grazing are about half a mile from camp. In winter and during the unhealthy or horse sickness season: reveille 6 A. M.; feed 6:15; short stable hour 7; men's breakfasts 7:30; exercise 8:30; water and about one-third of the hay at 10:15; stables 10:45. The remainder as before, except that a full feed of 3 lbs. is given at 8 P. M. If grazing is available, it can be carried out from 2:15 to 4 P. M.

Where grazing is far from camp, in the hot weather routine the horses can remain out from 10:15 to 3; but they should be watered again on their way to graze, and the feed which they miss at mid-day should be divided up and added to the remaining feeds.

By carrying out the above routines I have not had one single case of severe colic during the last twelve months.

Exercise.—The horses should get at least five minutes' trotting during each half-hour that they are out, and no exercise should be allowed without saddles. An hour and a half a day is sufficient in addition to the exercise they get going to and fro for watering and grazing.

Watering.—Never allow horses to be watered without first taking out the big bits and slackening the girths. They should also be watered in batches, and no horse allowed to leave the watering-place till the last of his batch has finished drinking. An officer should invariably accompany the horses to water and personally superintend this most important duty.

The marked attention which gunners have always paid to the "watering order" has been a constant subject of comment and approval during the war.

A wretched thirsty Argentine, ridden into a stream, in his anxiety to drink hits his big bit against the stones at the bottom and flings up his head, only to be kicked in the ribs and driven on (still thirsty) with the remark: "Oh, yer won't drink, won't yer?" This sight has been, and is, alas! one of nearly everyday occurrence, and yet some corps wonder why their horses are unfit.

Marching.—On the line of march, the current day's ration is carried on the horse. In order to lighten the nose-bags, one sack of corn per subdivision is strapped on to the perch of each ammunition wagon. Two days' supplies are carried in the battery transport wagons, and the remainder by the supply column. I have so often been unable to get bran on the march that I always make it a rule to start with one complete day of bran per horse in lieu of oats as part of the two days' battery reserve. A good sack of salt and some bales of compressed forage should also be carried in the battery transport wagons, and the supply officer should be asked to carry a large supply of compressed forage for the use of the battery. When salt is scarce, I have often obtained quite large quantities of it from the supply officer from the boxes in which the bacon is packed.

The system one adopts in India of having a line orderly, who is responsible for all forage, and makes out all the feeds into the nose-bags, gives the best results.

Routine on the March.—Circumstances vary so much according to the length of march, the amount of fighting one has to do, the scarcity or otherwise of water, etc., that it is impossible to lay down a fixed routine; but the following points may be studied. Water whenever you can, only remember that if you do so too soon after a feed of grain, the latter will not properly nourish the system. It is better to reserve a good big feed of oats for the last thing at night, when all is quiet and digestion takes place under the most favorable conditions. Never miss an opportunity of taking out the bits to graze, even during the shortest halts, and draw up your carriages on the best grass.

With a little practice, when the horses are grazing, you can guarantee to have your battery on the move in little over a minute from the order to "bit up." You may safely graze in wet grass during the healthy season, even if it rains all day; but choose the highest ground.

The most suitable hour to march for mounted troops is at sunrise. Assuming this to be 6 A. M., have reveille at 4:45; feed 4:50; breakfast 5; "boot and saddle" (before which no horse rugs are removed) at 5:30. On arrival in camp (having watered) take off all the harness at once and do sufficient grooming to dry the horses thoroughly, especially the backs; then turn out to graze. Have "evening stables" after watering, about an hour before sunset.

The orderly officer should always go round at each feed when the nose-bags are on and report any horses not feeling. Any horse that is done up after his march and refuses his feed should get a carbide of ammonia ball—this is a 2-drachm dose done up in a capsule. A good supply of these is carried in the veterinary chest.

Shoeing.—Mail-cart drivers in this country have told me that when their horses' time is up for shoeing, they remove the shoes and let them run unshod (doing their usual work) until Nature takes down what the rasp would otherwise do. Then the shoes are put on. I have tried this with great success. The majority of horses run unshod from two to three weeks, others (about 3 per cent.) run only a few days; one mare (a wheeler) never requires shoeing, and the hoof is unchipped, being like iron. We found the English remounts used to suffer a good deal from corns. Since adopting the above system, all tendency to corns has disappeared, all sand-cracks have vanished, and by this short period of frog pressure and natural expansion the feet have become altogether more healthy. Of course the feet must be watched and rough edges and splinters of hoof removed. I don't know how this would work in England, but it is worth a trial. The economy alone (if it answers) is obvious.

Clipping.—I consider clipping is most important—but no hair is removed below the stifle and elbow, and the heels are left untrimmed. The latter is a sure preventive to cracked heels. If all the hair is left on the heels and fetlocks, horses may safely be taken into streams to water without subsequently drying the heels.

Rugs.—Heavy horse rugs are of the greatest importance, and their use adds most materially to the conditioning and health of the horses. I hold that about a quarter of the grain ration for horses without rugs in cold weather is consumed entirely in keeping out the cold which the heavy blanket would otherwise do; and if I had to choose between carrying a heavy rug or cutting my horses two pounds of oats daily, I would unhesitatingly give up that amount of food for the comfort of the rug in cold weather.

Mules.—There is no animal which repays one more for a little trouble and care, or who will pile on condition quicker than a mule; and as so much of one's comfort on the march depends on the transport keeping well up and getting in early, a few remarks on mule-management may not be out of place to conclude this paper.

Each team is fed in a canvas trough fixed to the pole of the wagon. I have found that the mule-drivers can be trusted to feed their own teams, and it is best to hand the daily allowance of grain over to them. They divide this into three portions, giving a third at sundown, a third at midnight, and a third at daylight. They graze all day when they are not at work. A mule will not drink until the sun is well up, and he is more particular about his water than a horse. During a long *trek* he must always "outspan" for a couple of hours in the middle of the day to water and graze. They should not be tied together while grazing. Each wagon has a team of ten mules, and is in charge of two Cape boys or Kaffirs, termed "the driver" and "the leader." A good driver never touches his mules with the whip, and you should never allow irresponsible persons to flog the mules going over a difficult drift. This is a most prevailing custom in South Africa amongst men composing the baggage guard.

Grooming has a most beneficial effect on a mule's condition, and should be insisted on once a day. A non-commissioned officer of the battery should be told off to superintend the transport, and I find the natives work better for him than they do for a civilian conductor.

Dundee, Natal.

REVOLVER PRACTICE IN SWEDEN.*

REPORTED BY LIEUTENANT-COLONEL WILLIAM R. LIVERMORE, CORPS OF ENGINEERS,
UNITED STATES MILITARY ATTACHE, COPENHAGEN AND STOCKHOLM.

CAVALRY.

THE practice in shooting for the cavalry is essentially the same as that for the infantry, excepting that the cavalry do not carry their knapsacks.

They are practiced in estimating distances when mounted, as well as dismounted.

APPORTIONMENT OF THE DRILLS.

RECRUIT SHOOTING.

Gallery shooting is conducted according to a prescribed table, but the requirements of this table may be increased by order of the commanding officer. One hundred cartridges per man are allowed for these drills.

The school shooting for the *cadre* recruits comprises seven scores of 5 shots each, at ranges from 100 to 300 meters, firing at the school target; requirements, all shots to be hits, and 3 of the hits in each score to be in the bull's-eye or in ring 4.

Five scores of individual and detachment applied practice, at the one-third and half figures, at 100, 200 and 300 meters, and at target 6, at 400 and 600 meters. The first two shots in each of the first four scores are delivered individually, and the last three by the squad in line, each man firing at his own target. In the fifth score the men of the squad all fire at the same target.

Twelve shots, 5 lying, 5 kneeling and 2 standing, are fired in competitive shooting at the school target. Requirements, 25 points. One hundred and twenty cartridges are allowed each man.

REVOLVER PRACTICE.

The course of instruction consists of preparatory drills, and firing with loaded ammunition.

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The preparatory drills are divided into: handling the revolver positions, etc., loading and unloading, pointing, aiming, pulling the trigger, and firing with blank cartridges.

*From "Target Practice Systems Abroad," published by the Military Information Division, War Department.

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Marching. On the line of march, the current day's ration is carried on the horse. In order to lighten the nose-bags, our work of carrying subdivision is strapped on to the perch of each ammunition wagon. Two days' supplies are carried in the battery transport wagon, and the remainder by the supply column. I have so often been unable to get horses on the march that I always make it a rule to start with one complete day of horse pay horse in hand, and as part of the two days' battery reserve. A good sack of salt and some tubs of compressed lumps should also be carried in the battery transport wagon, and the supply officer should be asked to carry a large supply of compressed lumps for the use of the battery. When salt is scarce I have often obtained quite large quantities of it from the supply officer from the house in which the horses are parked.

The system we adopt in India of having a line orderly, who is responsible for all forage, and makes out all the feeds into the nose-bags, gives the best results.

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Shoeing. Mail-cart drivers in this country have told me that when their horses' time is up for shoeing they remove the shoes and let them run unschoed doing their usual work up to Nature takes them, what the shoe would otherwise do. Thus the shoes get worn out, and have to be changed with great success. The majority of horses in this country run two to three weeks without shoeing, and some for longer periods. I have seen a wheelbarrow require shoeing, and the horse independent being like mine. We found the English horses to be much more healthy than the Indian ones. Since adopting the Indian system of shoeing, the tendency to corns has disappeared, all sand-cracks have vanished, and by this short period of frog pressure and natural expansion the feet have become altogether more healthy. Of course the feet must be watched and rough edges and splinters of hoof removed. I don't know how this would work in England, but it is worth a trial. The economy alone (if it answers) is obvious.

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*From "Target Practice Systems Abroad," published by the Military Information Division, War Department.

Handling.—After the recruit has been taught the mechanism of the revolver and the use of its several parts, he is taught to take the positions "revolver in" and "revolver out." In the former the pistol is in its holster; in the latter, as shown in Figure 10.

Loading and Unloading are then practiced from the position of "revolver out."

Pointing.—The recruit is taught to take the position with his revolver cocked, the arm extended, and the line of sight horizontal, etc.

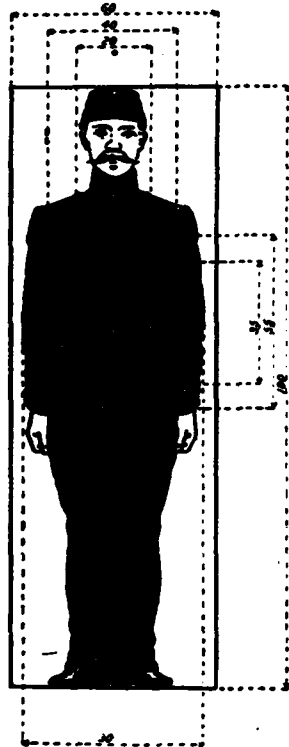


FIG. 7.

Aiming.—The line of sight, etc., is explained to the recruit. As the revolver is, in general, used only for short ranges, not over 40 meters, the point of aim is for all distances taken at the upper part of the enemy's body. This point is marked on the target (Fig. 7) by an ordinary patch or paster used to cover the bullet holes.

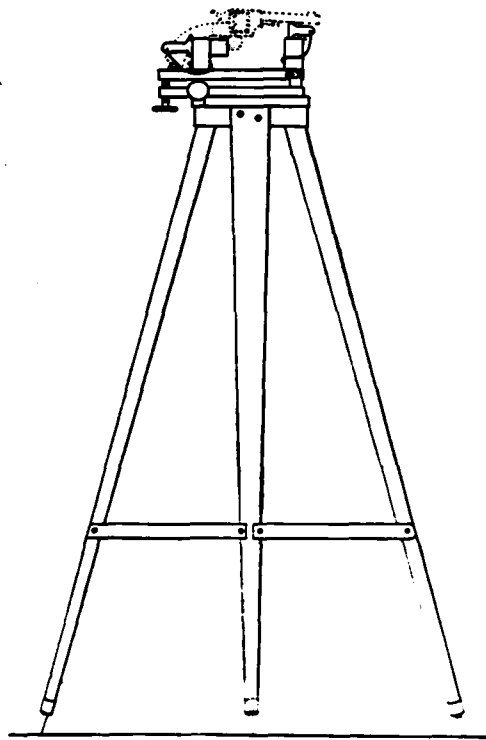


FIG. 8.

The revolver is then set on its stand (Fig. 8), the line of sight directed upon the bottom of the patch at a distance of 10 meters, and each man is called in turn to see how it is pointed.

Each man is then taught to place the revolver himself, and criticise the position taken by the others.

They are then taught to aim with support. The man first takes the position of "aim," and then the support is brought under his hand

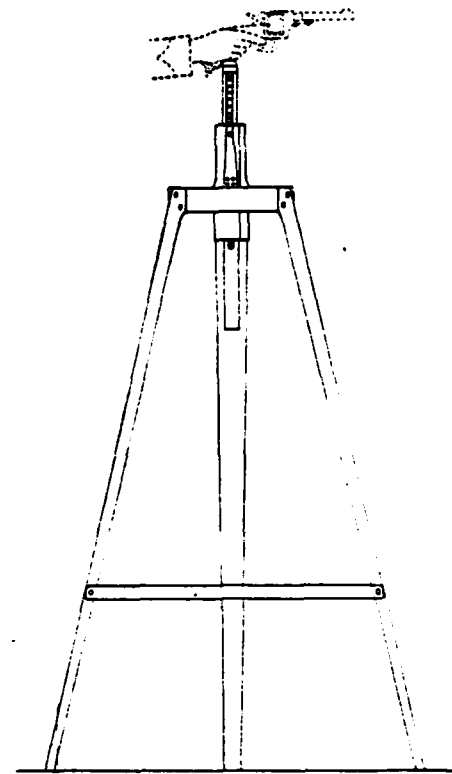


FIG. 9.

(Fig. 9). He is then told to retain the aim as long as possible, and when either his arm or eye is tired, or when so commanded, to take position of "revolver out."

The same exercise is then repeated without the rest.

The instructor must not allow the pistol to be pointed at his own eye, in order to test accuracy of the aim; but it may be pointed against the image of his eye in a mirror.

Pulling the Trigger.—So much depends upon skill in pulling the trigger without disturbing the aim that these exercises should be repeated frequently at unexpected moments, as well as at the time expressly set apart for the purpose.

The instructor first explains how to pull steadily with the finger without disturbing the aim or moving any other part of the body; first with support (Fig. 9), and then without. If he can not keep the sight on the target long enough to pull the trigger gradually, he is taught to come to the position of "revolver out" and rest.

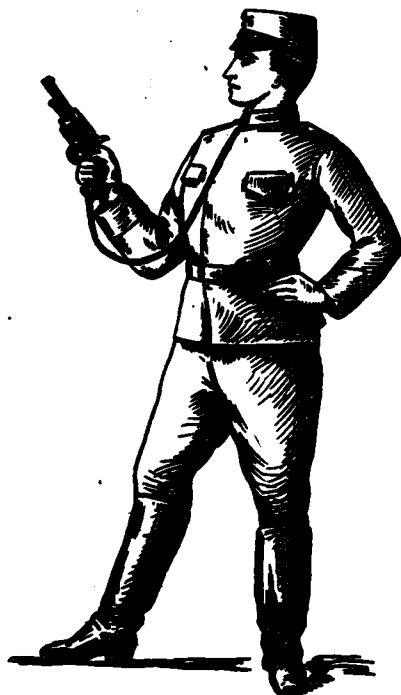


FIG. 10.

The recruit is then instructed to combine the movements of pointing, aiming, etc., by command, and then go through the motions of firing one, two, three, etc., shots by command; finally, at the command "Fire," to go through the motions of firing six shots.

FIRING WITH BLANK CARTRIDGES.

This is practiced to accustom the recruit to the report of the piece. Sometimes, without the knowledge of the recruit, the cart-

ridges are not all loaded, so that his unsteadiness will be more evident.

Each man fires 3 blank cartridges with support, and 3 without.

FIRING WITH LOADED AMMUNITION.

These exercises are at first conducted under the most favorable circumstances of weather, light, etc., and nothing is permitted to disturb the recruit in his first effort.

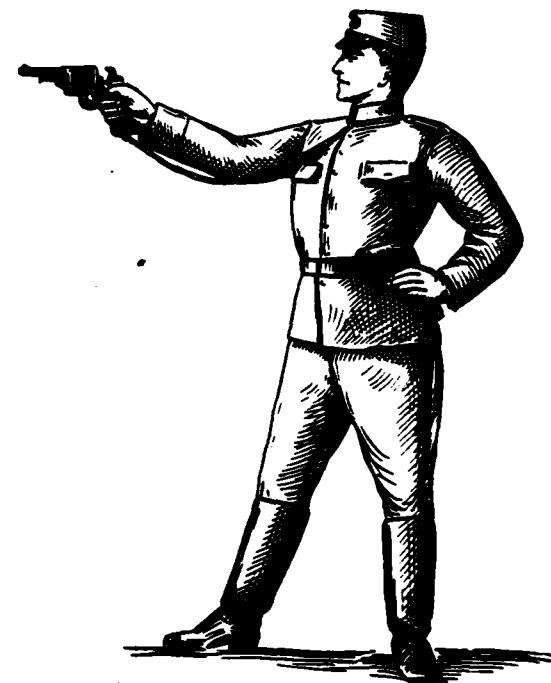


FIG. 11.

The target is a colored figure of a soldier (Fig. 7). A hit within the inner oval line (bull's-eye) counts 3; the next, 2; on the figure, 1.

The men come up in turn and fire after the instructor has given the command, "Point; aim; fire 1 (2, 3, etc.) shots," or simply "Fire." If not otherwise specified, 6 shots are fired in succession. After all are fired and the man comes back to the position of "revolver in," the instructor commands "Forward." They go to the target and the shots are marked and covered (see figures).

APPORTIONMENT OF THE EXERCISES.

Officers and Underofficers.—Captains and older underofficers can be excused from the school-shooting drills.

PRIZE SHOOTING AND PRIZES.

General Rules.—Prize shooting is held by each regiment and corps or battalion.

The right to take part in the regimental competitions is limited to 40, in the "corps" or battalion to 20, of the men who have fulfilled the requirements of the school shooting at the regimental meetings, and made the highest number of points in precision drills. If necessary for the selection, preliminary competitions may be held.

Prize Shooting.—Prize shooting takes place during the regimental meeting on a day when the conditions of air, weather, etc., are as favorable as possible, and when those who take part have not recently been fatigued by long field maneuvers, etc.

The prize shooting is arranged and conducted like a precision drill "with point calculation," excepting that no pack is carried; that officers are detailed for detachment commanders and as chiefs for the markers, and that to each target an underofficer is detailed to watch the markers.

Prizes.—The prizes are:

Shooting medals of silver to wear on the breast;

Shooting marks, two crossed rifles of red cloth, to wear on the right forearm; and

Money prizes, and, as a distinction and reward for good distance judges, a five-pointed star on red cloth, to wear on the right forearm.

For distribution as money prizes each regiment receives annually 300 kronor, for four prizes of 20 kronor, eight prizes of 10 kronor and twenty-eight prizes of 5 kronor.

Each corps or battalion receives annually 150 kronor, for two prizes of 20 kronor, four prizes of 10 kronor and fourteen prizes of 5 kronor.

A "shooting medal" is given to the one who at the prize shooting makes 45 points, or who in two succeeding years gets 43 points, if he has not already a medal.

Shooting badges are also given to those who receive shooting medals and to those who in two successive years have fulfilled the requirements of the school shooting at the regimental meetings, and received at least 40 points in precision shooting.

Those who receive this mark of distinction are called marksmen.

Money prizes are given to all who, at a prize shooting, make at least 30 points.

Money prizes not distributed may, by order of the regimental commander, be divided between the "distance judges."

The distribution of prizes takes place in the presence of the whole regiment, corps, or battalion.

Records and reports are required of all kinds of shooting.

REVOLVER PRACTICE FOR OFFICERS AND UNDEROFFICERS.

No.	Distance in Meters.	Number of Shots.	Manner of Shooting.	Requirements.
1	10	3	With support, point of aim marked...	All in the figure.
2	10	3	Without support, point of aim marked...	All in the figure.
3	20	3	With support, point of aim marked...	All in the figure.
4	20	3	Without support, point of aim marked...	All in the figure.
5	30	3	With support, point of aim marked...	All in the figure.
6	30	3	Without support, point of aim marked...	All in the figure.
7	15	3	With support, point of aim marked...	All in the figure.
8	15	3	Without support, point of aim marked...	All in the figure.

In exercises 7 and 8 the weapon is used as a self-cocker, and the time for each exercise is limited to 10 seconds at the most.

Anyone who does not qualify must, in a subsequent year, repeat the preparatory exercises as well as those in this table. Any one who has qualified is excused from preparatory exercises and practices according to a program drawn up by the chief of the regiment, with the restriction that the target shall be the figure of a soldier, and that 6 shots shall be fired with the revolver used as a self-cocker and within the specified time.

MISCELLANEOUS TROOPS.

Special tables are prepared for cavalry sergeants and musicians, men of field artillery, the field telegraph companies, for the train and for the hospital troops.

In all cases, except for the officers and underofficers, those men who do not qualify shall, whenever there may be an opportunity, repeat the exercises preceded by the preparatory exercises.

PRIZE SHOOTING.

Prize competitions are held annually for each field telegraph company, and each company of hospital troops.

Prizes.—For each field telegraph company one of 20 kronor, one of 10 kronor and three of 5 kronor.

For each hospital company one of 10 kronor and one of 5 kronor.

IN DEFENSE OF THE ARMY.

IN the course of an address in Springfield, Mass., September 2, 1902. President ROOSEVELT said:

"Ladies and Gentlemen: The men who went to Cuba were your brothers, sons, kindred, neighbors. The men who served in the Philippines in the uniform of the American Army have been again your brothers, sons and neighbors. Last night I spent at Northfield. Two centuries and over ago Northfield was the frontier, and we have Massachusetts now because we were not afraid to expand then, and we are not afraid to expand now. Our destiny unexpectedly took us to the Philippines. I don't suppose any of us, when you and I, my comrades, went down to Cuba, thought much of the Philippines, and did not know much about them. I did not. We got there. We found that we had a job to do, and we did it. (A voice: "That's right; and did it well.") And did it well? Yes. That's good, and much more. We have no apologies to make for it. Our soldiers in the Philippines have been attacked because occasionally one of them did something wrong. Wherever it has been possible to find him out, the offender has been punished. And I ask you, when they blame overmuch Uncle Sam's men in blue fighting for their lives against a treacherous foe in the heart-breaking work of jungle warfare, if our critics remembered, in speaking of the occasional shortcomings of the men who did wrong under the stress of such terrible temptation, that we are not altogether immaculate at home? I would be sorry to have any one of our cities, even the best, even Springfield, judged by the record of its police courts. If you paid attention purely to that, you could make it a pretty bad showing for any city in the land. Occasionally soldiers in the Philippines did wrong, but on the whole the men who for three years in those islands have followed the flag of the United States have added a new page to the honor-roll of the nation. I think, however, that troops of ours never warred under greater difficulties than those in the Philippines. Troops of ours have warred against more dangerous foes, but never in a climate under conditions which called for such resolute perseverance on the part of the men. In the steaming heat of the tropic jungles, starving, footsore, so weary that they dropped to sleep in the mud wherever they happened to fall down; at every step fearing ambush from a foe who was felt before he was seen, and among a population that greeted with friendliness the oncoming troops and seized the stragglers and put them to death by treachery—those men had, indeed, a heavy burden to bear, and I think that the men who sat at home could have afforded to be more lenient in bearing judgment against them."

General Service and Staff College, Fort Leavenworth, Kansas.

SPECIAL ORDERS.
No. 166.

HEADQUARTERS OF THE ARMY.
ADJUTANT-GENERAL'S OFFICE.
Washington, July 16, 1902.

Extract.

30. By direction of the Secretary of War, a board of officers, to consist of—

Major SMITH S. LEACH, Corps of Engineers;
Major HENRY A. GREENE, U. S. Infantry, Assistant Adjutant-General;

Major HENRY M. ANDREWS, Artillery Corps;

Major WILLIAM D. BEACH, Tenth Cavalry;

Captain JOSEPH T. DICKMAN, Eighth Cavalry;

is appointed to meet at Fort Leavenworth, Kansas, on Monday, July 21, 1902, to prepare a course of instruction for the General Service and Staff College adapted to the period of one year.

It having been impracticable to develop the instruction contemplated in the officers' schools at posts in the brief time which has elapsed since the publication of General Orders, No. 155, November 27, 1901, from this office, the selection of officers as contemplated in that order can not now be made.

Two buildings, containing forty-eight sets of quarters of two rooms and a bath each, will be allotted for the use of the class, each officer being assigned to one room. It is impracticable to make any provision for families of student-officers at this time.

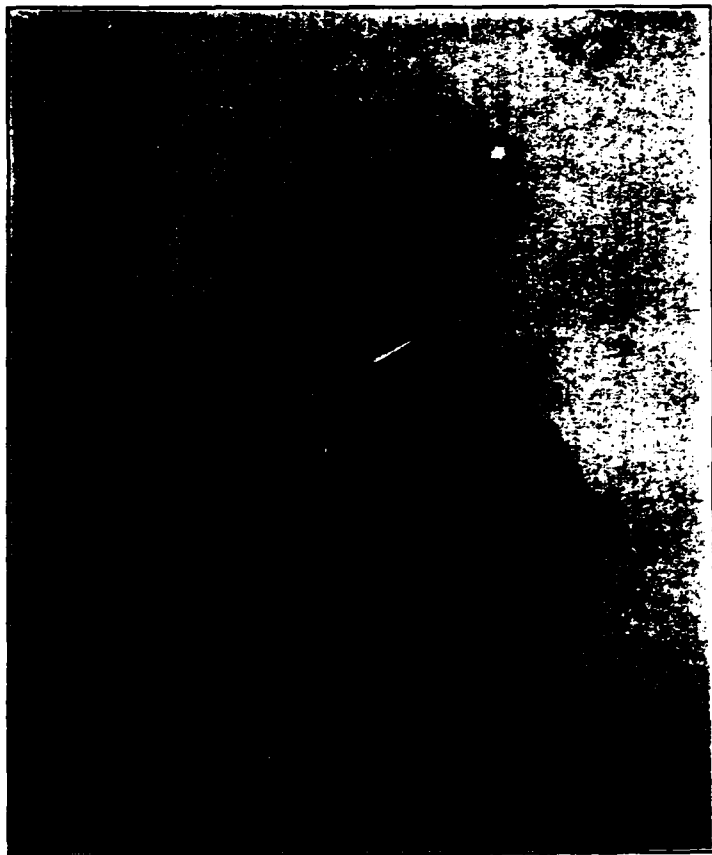
By Command of Lieutenant-General MILES.

H. C. CORBIN,
Adjutant-General,
Major-General, U. S. Army.

May 7, 1881, is the date of a General Order issued by the late General WILLIAM T. SHERMAN, commanding the Army of the United States, directing the establishment, at Fort Leavenworth, Kansas, of a school for a more thorough and practical education of the junior officers of the Army. Owing to many preliminaries required for an undertaking of this character, final organization was not effected until December of that year. The school was given the official designation of "The School of Application for Infantry and Cavalry."

The institution grew in importance to the Army, and benefi-

cial to those attending its course of instruction. Its operation continued without interruption until the declaration of war with Spain. The War Department closed the school, and was not enabled to reopen it until September 1, 1902. In the meantime the name of the school had been changed from the original designation



COL. J. A. AUGUR, TENTH U. S. CAVALRY.

to "The United States Infantry and Cavalry School," and it is now known as "The General Service and Staff College."

The formal re-opening was the occasion of some ceremony. This consisted of reading the War Department's Order, by Colonel

JACOB A. AUGUR, Tenth U. S. Cavalry, Commandant,* and an address by Major SMITH S. LEACH, Corps of Engineers, U. S. Army, Assistant Commandant, to the instructors and student officers, who were assembled for the purpose in Pope Hall.

ADDRESS BY MAJOR S. S. LEACH, C. E.

The College Staff have thought it fitting that our new relationship of instructors and instructed should begin with a brief general statement of the object and aims of the General Service and Staff College, of means it is proposed to employ and the results we hope to reach: a candid statement, in short, of what you are to expect of us and what we shall expect of you.

The importance of the technical education of Army officers has not been unreservedly admitted until now. It is true that the country has for a hundred years supported a Military Academy, nor have there ever been wanting soldiers and statesmen who appreciated the necessity of military education and who voiced their convictions in emphatic terms. The several States have expended considerable sums in maintaining militia, in a few cases with good results, never with the best results, and usually with no results at all, because the real object has not been military education and the actual influences working on the legislatures have had no connection with or desire for such education.

These indications of interest in military education have been superficial only, and in spite of them the fundamental belief of the people has been that any man who wants to fight can do it; that the disposition to fight is adequate preparation for it; that a desire to become an officer of the Army qualifies any citizen to pursue that career.

From this fallacy an awakening has come. Its causes are too obvious to require detailed statement. It has been borne in upon our people that something unpleasant might have happened to us recently had we met a trained enemy instead of one more untrained than ourselves. Public sentiment instead of tolerating military education, now demands it. Supported by this demand, the Secretary of War has been prompt to formulate a plan for the systematic education and training of officers, of which the General Service and Staff College is an important part.

You are acquainted with the General Order which establishes the instructional scheme for the Army, and have noted that it embodies three principal elements: First, instruction at posts in what may be

*Colonel AUGUR was relieved from duty as Commandant September 11, 1902, and Colonel C. W. MINER, Sixth Infantry, is Commandant at present.

called the primary branches of military education; second, the General Service and Staff College, to which those who show themselves most receptive at posts will be sent for advancement through what may be called a secondary stage; and finally, the War College, to which those who distinguish themselves here will be sent for that higher training which is requisite to fit officers for high commands and for the most important staff duties.

You observe the selective principle which is the basis of the system. Only those who, in each stage, give evidence of zeal and capacity are advanced to the next. The work in the first and second grades must be conducted with a double objective; the instruction given and the methods of giving it must be adapted not only to the student-officer's immediate advancement, but to the determination as well of the probability of his future success. We are equally concerned with your present achievement and your future promise. We cannot judge you wholly by what you know at the end of the course, but must take into consideration the amount that you knew at the beginning and the difference between the two, for that is the best index of what you are likely to do in the future. It is our duty to send forward to the War College the men who will probably be best equipped when they leave that institution, rather than those who will know the most when they arrive there. It will be necessary for each of you to do his best. If you do less than your best here and now, we shall be obliged to assume that you will do less than your best hereafter and elsewhere.

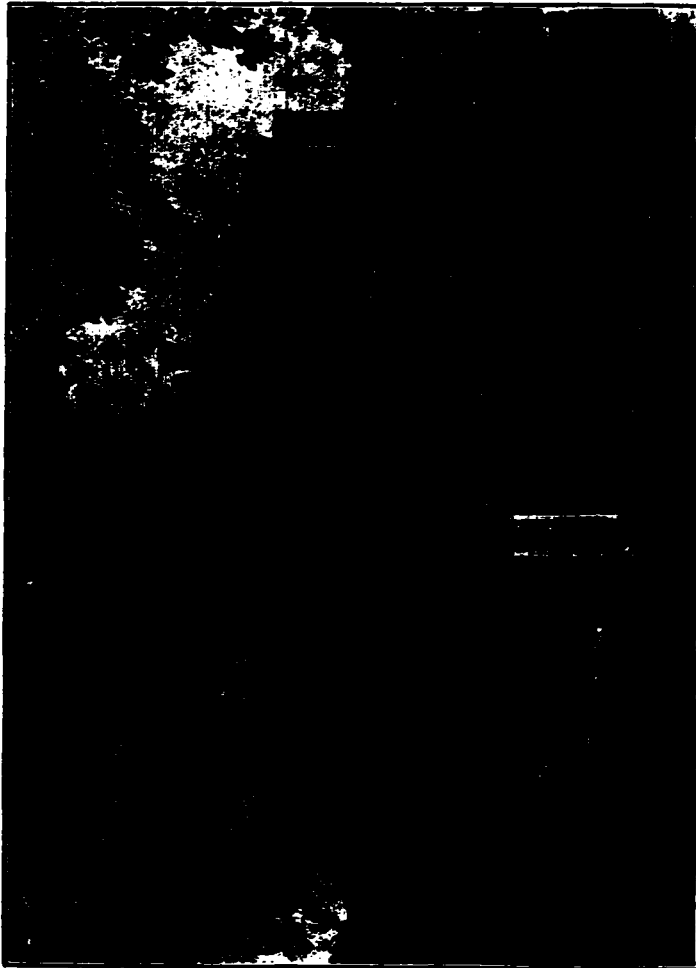
In the field assigned to the General Service and Staff College lies the preparation for a wide range of duties which any officer may be called upon to perform, and which every competent officer must be qualified to perform. Each student-officer will derive immediate and practical benefit from the course here. At the same time he will have an opportunity to present his claims to further advancement and to disclose what he can do in the future if the greater advantages of the War College be given him. It will be our duty to estimate your performance here considered in both these aspects. It is the business of this College to fit all of its student-officers for the performance of the duties which may devolve upon them in their present grades, and also to designate those who are likely to make the best officers in higher grades and for the most important duties. We cannot ignore any trait, habit or characteristic, moral, mental, physical or social, which militates against the future usefulness or efficiency of an officer. We shall be obliged to take cognizance, not only of success in lectures, recitations and practical exercises, but of all mat-

ters of bearing and behavior which go to make up the officer and gentleman. No restraint will be imposed other than that imposed upon all officers of all garrisons. An officer is expected to exercise restraint over others, not to require it himself. We prefer to observe you under the conditions of your future service.

The General Service and Staff College is new in name only. At the outbreak of the Spanish War the Infantry and Cavalry School, located at this post, had reached a high stage of development and success. The College is nothing more than the Infantry and Cavalry School enlarged in scope and co-ordinated with the post schools below, and the War College above it. The plant of the school is here, its records of methods pursued are here, its traditions are implanted here. A former Assistant Commandant is here to direct the opening of the College. One of its last heads of department is a member of the College Staff. Two other former heads of department assisted in framing the course you are to pursue this year. Several of the graduates of its best period are on the list of Assistant Instructors of the College. It is no crude experiment, this first year's course at the General Service and Staff College. It offers you the ripe product of study and experience. You may be assured that what you are asked to do can be done if you try. Others have done the same things before you. Nothing in the course is guess-work. Every part of it has been thoroughly tested in practice and is known to be a good way, and believed to be the best way of imparting to you some knowledge which you ought to possess or some skill which you need to acquire.

The course adopted for this year is not the one which will be permanently taught. To avoid the loss of a year's time, the Secretary of War has seen fit to depart from his plan, so far as the composition of this class is concerned. Instead of having been selected from the post schools, which is impossible at this time, you have been taken *en bloc* from the lineal list in two arms and two grades. These conditions have been given due weight in framing the course you are to pursue, which includes much that will hereafter be taught at posts and omits some things that are very desirable to be taught here, and will be taught later, but for which there is not time this year.

The material of the class is less homogeneous than is usual in a group assembled for concurrent instruction. Its members differ more in age, experience and preparation than would be permissible in any well-organized institution of learning. It is not possible to offer a separate course for each man or for a group of men. All must traverse the same ground, even though attainments and capacity widely differ. What is new to some may be familiar to others. What is



SHERMAN HALL, IN WHICH CLASSES OF THE GENERAL SERVICE AND STAFF COLLEGE MEET FOR STUDY AND INSTRUCTION.

easy for one may be difficult for another. This condition will be met so far as possible, and we hope adequately, by the methods of instruction adopted, which should enable each student-officer to make a record commensurate with his natural ability and with the time and efforts he gives to his work. It will be the aim of the College to make it possible for each student-officer to use his whole time and use it profitably. Those who are doing their best and ask for help will never ask in vain. Those who are able and anxious to go beyond the minimum requirements of the course will receive every encouragement and assistance in doing so. The idle, whatever their ability or whatever their proficiency, will be regarded with disfavor. There is no officer eligible to detail to this College who is so brilliant or so learned that he can come here and waste his time without failing in his duty to himself and to the country.

No more need be said, I think, of our relations to each other. I hope they may prove profitable to you and pleasant to us all. Something may properly be added as to our common relation to the service at large and to the country.

In a recent General Order—No. 85, c. s.—the Secretary of War has given most emphatic expression to the great importance of the new scheme of military instruction and training, and of his keen solicitude for its success. This stirring appeal addressed to the officers of the Army we may safely interpret as a peremptory order. No explanation will be accepted from any of us for failure to do all that is in his power to make his allotted part in the scheme a success. Those who are appointed to teach and those who are selected to learn will each and equally be held to a strict accountability. We are not called upon to do a certain specified amount. We are ordered to do all that is possible, and any one of us who may become conscious that he might have done more must stand self-convicted of not having done enough, and having by so much neglected his duty.

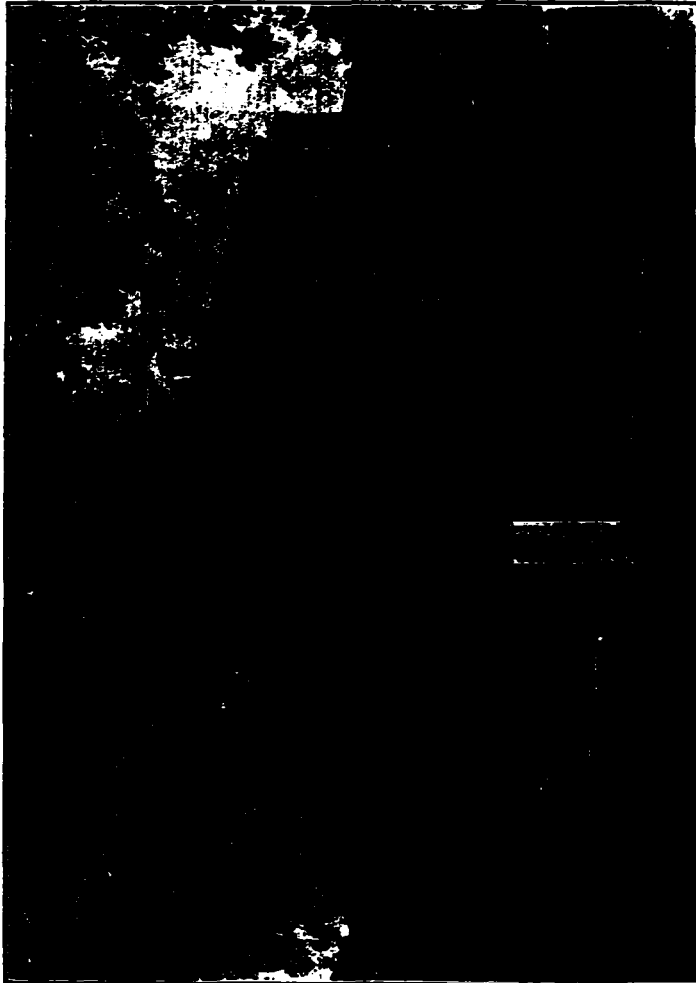
A wave of popular support has made possible the inception of this scheme. Only a continuance of that support can give it permanent life. The people must know of our work, and know it favorably, or they will not provide the means to make it effective. The post schools require no appropriation, and may be left out of the account. The War College is not yet organized, and cannot demonstrate its usefulness until it is ready to work and has material to work upon. For the present, the task of exhibiting the advantages of the system, of attracting attention and creating a favorable impression, rests mainly upon this College.

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SHERMAN HALL, IN WHICH CLASSES OF THE GENERAL SERVICE AND STAFF COLLEGE MEET FOR STUDY AND INSTRUCTION.

The characteristics which most attract and please the American people are summed up in the one word "enthusiasm." If we look upon our duties as privileges and go about them in a joyous spirit, the College will be successful within and will be known and appreciated without, and the people will conclude that it is worthy to be continued.

I sincerely hope that we may rise to the responsibility imposed upon us in connection with the future of the General Service and Staff College. The sympathy and support of the War Department are assured. I pledge you the utmost effort of the officers, staff and instructors of the College. The rest must come from you and your successors in future classes, and I have the fullest faith that you will not be found wanting.

Orders
No. 1.

FORT LEAVENWORTH, KANSAS.

August 28, 1902.

1. The following named officers ordered to report in compliance with paragraph 30, S. O. No. 166, Headquarters of the Army, A. G. O., c. s., are announced as the student class for the One Year's Course, commencing September 1, 1902.

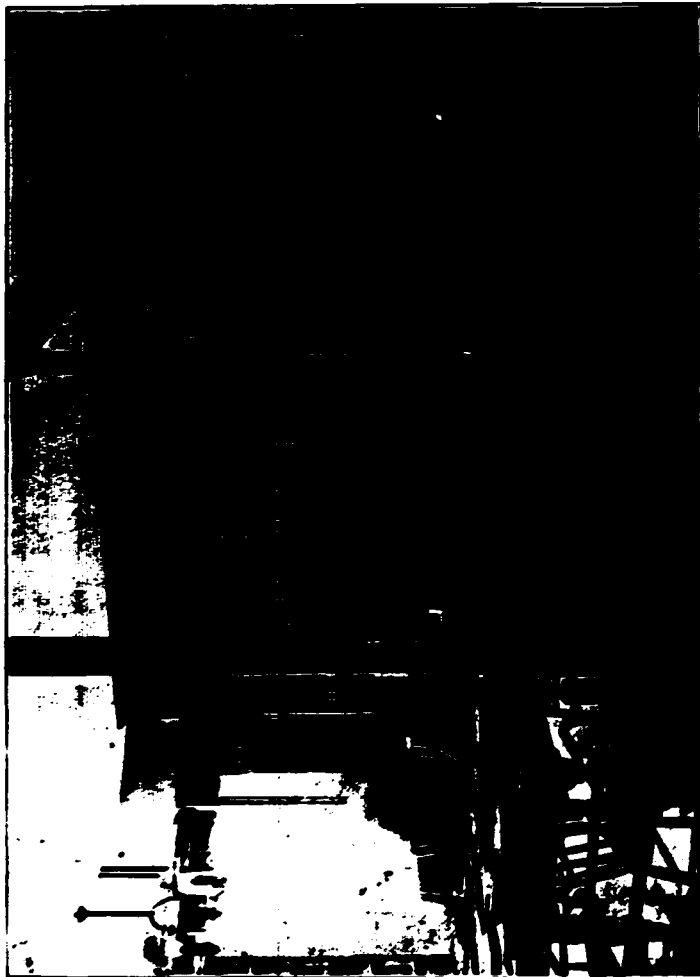
The class will be divided into sections, as follows:

FIRST SECTION.

Second Lieut.	JAMES E. AMBOTT, 12th Cavalry.
Second Lieut.	CHARLES F. ANDREWS, 7th Infantry.
First Lieut.	PERCY W. ARNOLD, 1st Cavalry.
Second Lieut.	WILLIAM A. AUSTIN, 7th Cavalry.
Second Lieut.	LEONARD T. BAKER, 19th Infantry.
First Lieut.	WALTER T. BATES, 17th Infantry.
First Lieut.	GEORGE N. BOMFORD, 5th Infantry.
First Lieut.	EWING E. BOOTH, 7th Infantry.
First Lieut.	HERBERT J. BIKES, 12th Cavalry.
Second Lieut.	ALLAN L. BRIGGS, 7th Infantry.
Second Lieut.	FRED W. BUCKELL, 1st Infantry.
Second Lieut.	FRED BERRY, 1st Infantry.

SECOND SECTION.

Second Lieut.	JAMES S. BUTLER, 12th Cavalry.
Second Lieut.	JOSEPH B. CAGNEY, 20th Infantry.
First Lieut.	WILLIAM A. CAVENAGH, 20th Infantry.
Second Lieut.	DE WITT W. CHAMBERLAIN, 2d Infantry.
First Lieut.	PERCY M. COCHRAN, 7th Infantry.
Second Lieut.	EDGAR N. COFFEY, 12th Cavalry.
First Lieut.	PATRICK A. CONNOLLY, 21st Infantry.
First Lieut.	BRYAN CONRAD, 18th Infantry.
Second Lieut.	MILF C. COREY, 30th Infantry.



VIEW IN LIBRARY OF GENERAL SERVICE AND STAFF COLLEGE.

Second Lieut. GEORGE R. CRAWFORD, 11th Infantry.
 Second Lieut. THOMAS B. CROCKETT, 24th Infantry.
 Second Lieut. EUGENE P. CROWNE, 4th Infantry.

THIRD SECTION.

Second Lieut. FRANK R. CURTIS, 6th Infantry.
 Second Lieut. CHARLES H. DANFORTH, 10th Infantry.
 Second Lieut. FRED L. DAVIDSON, 4th Infantry.
 Second Lieut. JOHN A. DEGEN, 4th Cavalry.
 Second Lieut. AUSWEL E. DEITSCH, 5th Infantry.
 Second Lieut. JOHN T. DUNN, 11th Infantry.
 Second Lieut. HENRY M. FALES, 21st Infantry.
 Second Lieut. ARTHUR M. FERGUSON, 14th Infantry.
 Second Lieut. WILLIAM C. FITZPATRICK, 7th Infantry.
 First Lieut. WILLIAM B. FOLWELL, 1st Infantry.
 Second Lieut. GRANVILLE R. FORTESCUE, 4th Cavalry.
 Second Lieut. CHARLES S. FRANK, 21st Infantry.

FOURTH SECTION.

First Lieut. JOHN W. FRENCH, 19th Infantry.
 Second Lieut. WILLIAM GOODALE, 16th Infantry. X
 Second Lieut. WILLIAM B. GRAHAM, 15th Infantry. X
 First Lieut. GEORGE M. GRIMES, 20th Infantry.
 Second Lieut. ROBERT E. GRINSTEAD, 28th Infantry.
 First Lieut. CHARLES S. HAIGHT, 4th Cavalry.
 First Lieut. THOMAS R. HARKER, 15th Infantry.
 Second Lieut. JOHN P. HASSON, 6th Cavalry. X
 Second Lieut. WILLIAM A. HAYCRAFT, 22d Infantry.
 Second Lieut. JOHN E. HEMPHILL, 3d Cavalry. X
 Second Lieut. FRANKLIN P. JACKSON, 29th Infantry.
 Second Lieut. DOUGLAS H. JACOBS, 5th Cavalry.

FIFTH SECTION.

Second Lieut. SOLOMON L. JEFFERS, 12th Cavalry.
 Second Lieut. E. ALEXIS JEUNET, 1st Infantry. X
 Second Lieut. WALTER H. JOHNSON, 8th Infantry.
 Second Lieut. GORDON JOHNSTON, 10th Cavalry.
 Second Lieut. C. RODMAN JONES, 1st Cavalry.
 Second Lieut. MORRIS M. KECK, 12th Infantry.
 Second Lieut. JOHN M. KELSO, JR., 13th Infantry.
 Second Lieut. THOMAS M. KNOX, 2d Cavalry. X
 Second Lieut. GEORGE E. KUMPE, 28th Infantry. X
 Second Lieut. FRANKLIN S. LEISENRING, 11th Infantry.
 Second Lieut. DE WITT C. LYLES, 12th Infantry.
 Second Lieut. JOHN F. MCCARTHY, 19th Infantry.

SIXTH SECTION.

Second Lieut. DONALD C. McCLELLAND, 18th Infantry.
 Second Lieut. FRANK T. McNARNEY, 9th Cavalry.
 Second Lieut. GEORGE R. D. MacGREGOR, 18th Infantry.
 Second Lieut. FREDERICK W. MILLS, JR., 12th Infantry.

Second Lieut. HARRY D. MITCHELL, 16th Infantry.
 Second Lieut. CHARLES R. W. MORRISON, 5th Infantry.
 Second Lieut. JOHN C. MURPHY, 8th Infantry.
 First Lieut. BENJAMIN P. NICKLIN, 9th Infantry.
 First Lieut. ENGLEBERT G. OVENSHEINE, 16th Infantry.
 First Lieut. WARD B. PERSHING, 4th Cavalry.
 Second Lieut. JAMES M. PETTY, 20th Infantry.
 Second Lieut. ALBERT E. PHILLIPS, 8th Cavalry.

SEVENTH SECTION.

Second Lieut. ARTHUR N. PICKEL, 12th Cavalry.
 Second Lieut. ROWLAND S. PIKE, 20th Infantry.
 Second Lieut. JOSEPH C. RIGHTER, JR., 8th Cavalry.
 Second Lieut. BASIL N. RITTENHOUSE, 11th Cavalry.
 First Lieut. JOHN B. SCHOEFFEL, 9th Infantry.
 Second Lieut. CONSUELO A. SEOANE, 3d Cavalry.
 Second Lieut. RUDOLPH C. SMYSER, 14th Cavalry. X
 Second Lieut. DAVID A. SNYDER, 6th Infantry.
 First Lieut. CROMWELL STACEY, 19th Infantry.
 Second Lieut. JENS E. STEDJE, 15th Cavalry.
 Second Lieut. WILLIAM R. TAYLOR, 3d Cavalry.
 Second Lieut. HENRY S. TERRELL, 5th Cavalry.

EIGHTH SECTION.

Second Lieut. WILLIAM M. TRUE, 16th Infantry.
 Second Lieut. ALVIN C. VORIS, 2d Infantry.
 First Lieut. ROBERT R. WALLACH, 3d Cavalry. X
 First Lieut. RUSH S. WELLS, 8th Cavalry. X
 Second Lieut. SOLOMON B. WEST, 22d Infantry.
 Second Lieut. KAOLIN L. WHITSON, 27th Infantry.
 First Lieut. FRANK D. WICKHAM, 12th Infantry.
 First Lieut. JOHN F. WILKINSON, 15th Infantry.
 Second Lieut. ALBERT S. WILLIAMS, 26th Infantry.
 First Lieut. GEORGE WILLIAMS, 8th Cavalry.
 Second Lieut. GIDEON H. WILLIAMS, 11th Infantry.
 Second Lieut. JOSEPH C. WILSON, 6th Infantry.

II. Commencing Monday, the 1st proximo, recitations will be held as shown in the following schedule:

SEPTEMBER, 1902.

MONDAY.	TUESDAY.	WEDNES'DAY.	THURSDAY.	FRIDAY.	SATURDAY.
Lecture. 1 Eng.	Tactics. 2 Eng.	Tactics. 3 Eng.	Tactics. 4 Eng.	Tactics. 5 Eng.	6
Tactics. 8 Eng.	Tactics. 9 Eng.	Tactics. 10 Eng.	Tactics. 11 Eng.	Tactics. 12 Eng.	13
Tactics. 15 Eng.	Tactics. 16 Eng.	Tactics. 17 Eng.	Tactics. 18 Eng.	Tactics. 19 Eng.	20
Tactics. 22 Eng.	Tactics. 23 Eng.	Tactics. 24 Eng.	Tactics. 25 Eng.	Tactics. 26 Eng.	27
Tactics. 29 Eng.	Tactics. 30 Eng.				

Entries above and below the date represent morning and afternoon hours respectively.

III. The First, Second, Third and Fourth Sections will attend from 10:00 o'clock to 11 o'clock A. M., and from 2:00 o'clock to 3:00 o'clock P. M.

The Fifth, Sixth, Seventh and Eighth Sections will attend from 11:00 o'clock A. M. to 12:00 o'clock M., and from 3:00 o'clock to 4:00 o'clock P. M.

IV. The First and Fifth Sections will recite in Section-room "A"; the Second and Sixth Sections in Section-room "B"; the Third and Seventh Sections in Section-room "C"; the Fourth and Eighth Sections in section-room "D."

By order of Colonel AUGUR, Commandant.

L. M. KOEHLER,
Captain 4th Cavalry,
Secretary.

THE COURSES OF THE FIRST TERM.

DEPARTMENT OF ENGINEERING.

Text Book—Root's Military Topography and Sketching
Lessons.

1. To bottom page 26.
2. To "Construction of Scales," page 42.

3. To Chapter IV., page 58.
4. To Chapter V., page 66 (Chapter III. will form part of this and all following lessons).
5. To Chapter VI., page 81; omit from "Laying off a standard," page 71, to "All measurements," page 72, and Table, page 75, and foot-notes.
6. To "Adjustments," page 97; omit "The Solar Attachment," page 90, and Propositions I., II. and III., pages 96 and 97.
7. To middle of page 114; omit from "In Figure 106," bottom page 101, to "The importance of this," page 102, "1st method," page 103, and from "To center the objectslide," page 106, to "To determine," page 108, and "Curvature of the earth," page 118.
8. To middle of page 127; omit "To run a true east-and-west line," page 115.
9. To "Locations by Intersection," page 140.
10. To bottom of page 158; omit from "3d method," page 147, to "A mechanical solution," page 150.
11. To "There are two general methods," page 171.
12. To "Field Work," page 189; omit from "Measuring distance with the gradiometer," page 176, to "To measure distance with the Stadia," page 181, and from "In the gradiometer," middle of page 181, to "Thus with adjustable," page 182.
13. To bottom of page 229; omit Chapter XII.
14. To Part II., page 241; omit "Resection with the sextant," page 234.
15. To Chapter XVI., page 262; omit from "The Pratt," page 224, to "The Watkin," page 250.
16. To Chapter XVIII., page 272.
- 17, 18, 19, 20. Chapters XVIII. and XIX. applied in draughting-room.
21. To Chapter XXI., page 290.
22. To middle of page 302.
23. To "Contour Working Table," page 312.
24. To middle of page 326.
25. To bottom of page 338.
26. To bottom of page 347.
27. To Chapter XXV., page 358.

One partial review lesson equals two advance lessons.
One general review lesson equals three advance lessons.
Yesterday's lesson is always part of to-day's lesson.

DEPARTMENT OF TACTICS.

Lessons in Security and Information.

[Third Edition.]

- I. Pages (17—42).
- II. Pages (43—55).
- III. Pages (56—78).
- IV. Pages (79—99).
- V. Pages (100—117).
- VI. Pages (118—140).
- VII. Pages (141—164).
- VIII. Pages (165—189).
- IX. Pages (190—212).
- X. Pages (213—232).
- XI. Pages (233—256).

Review (by questions).

- XII. Pages (17—55).
- XIII. Pages (56—106).
- XIV. Pages (107—149).
- XV. Pages (150—196).
- XVI. Pages (197—256).

Lessons in Small Arms Firing Regulations.

- I. Pages (9—33).
- II. Pages (34—58).
- III. To Chapter IV., page 89.
- IV. To Part IV.
- V. Pages (184—202).
- VI. Pages (203—219).
- VII. Pages (220—249).
- VIII. Lecture.

Review.

- IX. Pages (9—89).
- X. From page 89 to Part IV., and pages (184—249).
- XI. Pages (220—249), and lecture.

NOTE.—Recitations on review will be by answers to questions.

REGULATIONS FOR GUIDANCE OF STUDENT OFFICERS IN SECTION-ROOMS.

(1) When an officer senior to the assistant instructor enters the section-room, student officers will stand at attention, and remain in that attitude until said officer takes a seat, or otherwise indicates his pleasure. When the officer leaves the section-room, the same compliment will be extended.

(2) Conversation in the section-rooms is not permissible, since strict attention is at all times required to the work in hand, or to the recitations and explanations in progress.

(3) Each member of the class will provide himself with a scratch-pad (letter paper size) and a pencil, and always bring them to the section-room. He should always carry with him a pocket note-book, in which to enter notes of explanations given in section-rooms, and memoranda of instructions concerning work in the section-rooms or in the field.

(4) In all work at the blackboard, the name of the student officer will be placed at the upper right-hand corner of his board. All work

submitted on paper will be dated, and will be signed at the lower right-hand corner with name and rank.

(5) At the beginning of each session of a section, opportunity will be given for members of the section to ask questions with reference to points of the day's lesson not thoroughly understood, and the necessary explanations will be given by the instructor. Such explanations will not extend, however, to matter which is fully explained in the text, and which requires only careful study for its comprehension.

(6) The preparation at the blackboard for the discussion of a subject should consist of writing down a synopsis or outline of headings, with sufficient notes to fix the attention and serve as a guide during the recitation. For problems, all of the work involved, including computations and constructions, will be placed on the board, or paper. Results alone are not sufficient.

(7) When called upon to recite, the officer will hand in his enunciation slip, if he has received one, and will then stand near his board, and during his recitation will face his instructor, except when it is necessary to glance at the board and indicate with the pointer the matter under discussion. When called upon to recite, not at the blackboard, but by "questions," the officer will stand in front of the desk of the instructor and facing him.

(8) Pronunciation, spelling and the correct use of language are considered in estimating the value of a recitation or an examination, and so also is the manner of delivery. Clear and concise statements indicate well-formed and positive ideas, while indefinite and general statements indicate hazy ideas, and will be valued accordingly.

By order of Colonel MINER, Commandant.

J. T. DICKMAN,
Captain 8th Cavalry,
Acting Secretary.

STATIONS OF CAVALRY REGIMENTS FROM APRIL 1, 1898. TO MAY 1, 1902.*

FIRST CAVALRY.

Headquarters.—At Fort Riley, Kansas, to April 19, 1898; Camp Thomas, Georgia, to May 14, 1898; Lakeland, Florida, to June 14, 1898; Cuba, to August 7, 1898; Montauk Point, New York, to September 28, 1898; Fort Riley, Kansas, to January 2, 1899; Fort Robinson, Nebraska, to May 11, 1899; Fort Meade, South Dakota, to July 22, 1900; *en route* to and at Seattle, Washington, to August 7, 1900; at sea to September 7, 1900; in Philippine Islands to date.

"A."—At Fort Riley, Kansas, to April 21, 1898; at Camp Thomas, Georgia, to May 14, 1898; at Lakeland, Florida, to June 7, 1898; *en route* to and in Cuba to August 7, 1898; at Montauk Point, New York, to September 28, 1898; at Fort Riley, Kansas, to January 2, 1899; at Fort Robinson, Nebraska, to May 21, 1899; in Idaho during labor strikes to November 21, 1899; at Fort Robinson, Nebraska, to July 21, 1900; *en route* and at sea to September 20, 1900; in Philippine Islands to date.

"B."—At Fort Reno, Oklahoma, to April 21, 1898; at Camp Thomas, Georgia, to May 14, 1898; at Lakeland, Florida, to June 7, 1898; *en route* to and in Cuba to August 7, 1898; at Montauk Point, New York, to September 28, 1898; at Fort Riley, Kansas, to January 2, 1899; at Fort Robinson, Nebraska, to June 19, 1899; at Fort D. A. Russell, Wyoming, to July 21, 1900; *en route* and at sea to September 27, 1900; in Philippine Islands to date.

"C."—At Fort Sheridan, Illinois, to April 20, 1898; at Camp Thomas, Georgia, to May 14, 1898; at Lakeland, Florida, to June 7, 1898; *en route* to and in Cuba to August 7, 1898; at Montauk Point, New York, to September 28, 1898; at Fort Robinson, Nebraska, to July 21, 1900; *en route* and at sea to September 20, 1900; in Philippine Islands to date.

"D."—At Fort Reno, Oklahoma, to April 21, 1898; at Camp Thomas, Georgia, to May 14, 1898; at Lakeland, Florida, to June 7, 1898; *en route* to and in Cuba to August 7, 1898; at Montauk Point, New York, to September 28, 1898; at Fort Yates, North Dakota,

to July 21, 1900; *en route* and at sea to September 20, 1900; in Philippine Islands to date.

"E."—At Fort Sill, Oklahoma, to April 18, 1898; at Camp Thomas, Georgia, to May 14, 1898; at Lakeland, Florida, to June 7, 1898; *en route* to and in Cuba to August 7, 1898; at Montauk Point, New York, to September 28, 1898; at Fort Washakie, Wyoming, to date.

"F."—At Fort Riley, Kansas, to April 19, 1898; at Camp Thomas, Georgia, to May 14, 1898; at Lakeland, Florida, to August 24, 1898; at Montauk Point, New York, to September 28, 1898; at Fort Keogh, Montana, to August 2, 1901; at Fort Yellowstone, Wyoming, to date.

"G."—At Fort Sheridan, Illinois, to April 20, 1898; at Camp Thomas, Georgia, to May 14, 1898; at Lakeland, Florida, to June 7, 1898; *en route* to and in Cuba to August 7, 1898; at Montauk Point, New York, to September 28, 1898; at Fort Meade, South Dakota, to July 16, 1900; at Fort Yellowstone, Wyoming, to date.

"H."—At Fort Sill, Oklahoma, to April 21, 1898; at Camp Thomas, Georgia, to May 14, 1898; at Lakeland, Florida, to August 24, 1898; at Montauk Point, New York, to September 28, 1898; at Fort Sill, Oklahoma, to December 31, 1898; at Fort Meade, South Dakota, to November 5, 1901; at Fort Keogh, Montana, to date.

"I."—At Fort Huachuca, Arizona, to April 21, 1898; at Camp Thomas, Georgia, to May 14, 1898; at Lakeland, Florida, to June 7, 1898; *en route* to and in Cuba to August 7, 1898; at Montauk Point, New York, to September 28, 1898; at Fort Riley, Kansas, to January 2, 1899; at Fort Meade, South Dakota, to July 22, 1900; *en route* and at sea to September 7, 1900; in Philippine Islands to date.

"K."—At Fort Riley, Kansas, to April 19, 1898; at Camp Thomas, Georgia, to May 14, 1898; at Lakeland, Florida, to June 7, 1898; *en route* to and in Cuba to August 7, 1898; at Montauk Point, New York, to September 28, 1898; at Fort Niobrara, Nebraska, to July 19, 1900; *en route* and at sea to September 7, 1900; in Philippine Islands to date.

"L."—Troop reorganized at Lakeland, Florida, in July, 1898, and served there to August 24, 1898; at Montauk Point, New York, to September 28, 1898; at Fort Riley, Kansas, to January 2, 1899; at Fort Robinson, Nebraska, to May 21, 1899; in Idaho during labor strikes, to June 9, 1900; at Fort Logan, Colorado, to July 21, 1900; *en route* and at sea to September 7, 1900; in Philippine Islands to date.

*Any error in this list should be reported to the Adjutant-General of the Army or to the editor of the JOURNAL.

"M."—Troop reorganized at Lakeland, Florida, in July, 1898, and served there to August 24, 1898; at Montauk Point, New York, to September 28, 1898; at Fort Meade, South Dakota, to June 2, 1899; at Fort Yellowstone, Wyoming, to July 24, 1900; *en route* and at sea to September 7, 1900; in Philippine Islands to date.

SECOND CAVALRY.

Headquarters.—At Fort Wingate, New Mexico, to April 22, 1898; Camp Thomas, Georgia, to May 11, 1898; Mobile, Alabama, to June 3, 1898; Tampa, Florida, to August 3, 1898; Fernandina, Florida, to August 11, 1898; Montauk Point, New York, to October 3, 1898; Huntsville, Alabama, to February 12, 1899; Cienfuegos, Cuba, to April 24, 1899; Santa Clara, Cuba, to July —, 1900; Matanzas, Cuba, to April 24, 1901; Fort Myer, Virginia, to date.

"A."—At Fort Riley, Kansas, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Mobile, Alabama, to June 3, 1898; Tampa, Florida, to June 13, 1898; Santiago Campaign, to August 22, 1898; Montauk Point to September 30, 1898; Huntsville, Alabama, to January 31, 1899; Matanzas, Cuba, to April 24, 1902; Fort Ethan Allen, Vermont, to date.

"B."—At Fort Logan, Colorado, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Mobile, Alabama, to June 3, 1898; Tampa, Florida, to July 22, 1898; in Porto Rico to November 26, 1898; Huntsville, Alabama, to February 12, 1899; Cienfuegos, Cuba, to April 24, 1899; Santa Clara, Cuba, to July 6, 1900; Cardenas, Cuba, to August 12, 1900; Matanzas, Cuba, to April 24, 1902; Fort Ethan Allen, Vermont, to date.

"C."—At Fort Riley, Kansas, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Mobile, Alabama, to June 3, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign, to August 22, 1898; Montauk Point, New York, to October 1, 1898; Huntsville, Alabama, to January 31, 1899; Matanzas, Cuba, to April 24, 1902; Fort Ethan Allen, Vermont, to date.

"D."—At Fort Riley, Kansas, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago, Cuba, to August 22, 1898; Montauk Point, New York, to October 1, 1898; Huntsville, Alabama, to January 31, 1899; Matanzas, Cuba, to April 24, 1902; Fort Ethan Allen, Vermont, to date.

"E."—Fort Wingate, New Mexico, to April 22, 1898; Camp Thomas, Georgia, to May 11, 1898; Mobile, Alabama, to June 3, 1898; Tampa, Florida, to August 3, 1898; Fernandina, Florida, to August 11, 1898; Montauk Point, New York, to October 3, 1898; Hunts-

ville, Alabama, to February 12, 1899; Cienfuegos, Cuba, to April 23, 1899; Santa Clara, Cuba, to July —, 1900; Placetas, Cuba, to September 1, 1900; Matanzas, Cuba, to January 18, 1902; Fort Ethan Allen, Vermont, to April 15, 1902; Fort Myer, Virginia, to date.

"F."—Fort Riley, Kansas, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Mobile, Alabama, to June 3, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign, to August 22, 1898; Montauk Point, New York, to September 30, 1898; Huntsville, Alabama, to January 31, 1899; Matanzas, Cuba, to January 18, 1902; Fort Myer, Virginia, to date.

"G."—Fort Riley, Kansas, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Mobile, Alabama, to June 3, 1898; Tampa, Florida, to August 12, 1898; Huntsville, Alabama, to January 31, 1899; Matanzas, Cuba, to January 18, 1902; Fort Myer, Virginia, to date.

"H."—At Fort Riley, Kansas, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Mobile, Alabama, to June 3, 1898; Tampa, Florida, to August 3, 1898; Fernandina, Florida, to August 11, 1898; Montauk Point, New York, to October 3, 1898; Huntsville, Alabama, to February 12, 1899; Cienfuegos, Cuba, to April 24, 1899; Santa Clara, Cuba, to July 13, 1900; Cardenas, Cuba, to August 12, 1900; Matanzas, Cuba, to January 18, 1902; Fort Ethan Allen, Vermont, to April 15, 1902; Fort Myer, Virginia, to date.

"I."—At Fort Logan, Colorado, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Mobile, Alabama, to June 3, 1898; Tampa, Florida, to August 3, 1898; Fernandina, Florida, to August 11, 1898; Montauk Point, New York, to October 3, 1898; Huntsville, Alabama, to February 12, 1899; Cienfuegos, Cuba, to April 15, 1899; Placetas, Cuba, to July 19, 1900; Matanzas, Cuba, to February 7, 1901; Pasa Caballos, Cuba, to April 30, 1902; Fort Ethan Allen, Vermont, to date.

"K."—At Fort Wingate, New Mexico, to April 22, 1898; Camp Thomas, Georgia, to May 11, 1898; Mobile, Alabama, to June 3, 1898; Tampa, Florida, to August 3, 1898; Fernandina, Florida, to August 11, 1898; Montauk Point, New York, to October 3, 1898; Huntsville, Alabama, to February 12, 1899; Cienfuegos, Cuba, to April 23, 1899; Santa Clara, Cuba, to July —, 1900; Placetas, Cuba, to September 1, 1900; Matanzas, Cuba, to February 7, 1901; Pasa Caballos, Cuba, to April 30, 1902; Fort Ethan Allen, Vermont, to date.

"L."—Reorganized at Tampa, Florida, in June, 1898; at Tampa, Florida, to August 3, 1898; Fernandina, Florida, to August 11, 1898; Montauk Point, New York, to October 3, 1898; Huntsville, Alabama, to February 12, 1899; Cienfuegos, Cuba, to April 15, 1899; Placetas, Cuba, to July 19, 1900; Matanzas, Cuba, to February 7, 1901; Pasa Caballos, Cuba, to April 30, 1902; Fort Sheridan, Illinois, to date.

"M."—Reorganized at Tampa, Florida, in June, 1898; at Tampa, Florida, to August 3, 1898; Fernandina, Florida, to August 11, 1898; Montauk Point, New York, to October 3, 1898; Huntsville, Alabama, to January 31, 1899; Matanzas, Cuba, to February 2, 1901; Pasa Caballos, Cuba, to April 30, 1902; Fort Sheridan, Illinois, to date.

THIRD CAVALRY.

Headquarters.—Fort Ethan Allen, Vermont, to April 21, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 8, 1898; Montauk Point, New York, to September 22, 1898; Fort Ethan Allen, Vermont, to August 9, 1899; Philippine Islands to date.

"A."—Jefferson Barracks, Missouri, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to August 2, 1898; Fernandina, Florida, to August 10, 1898; Montauk Point, New York, to September 22, 1898; Fort Ethan Allen, Vermont, to October 24, 1898; Augusta, Georgia, to May 20, 1899; Fort Myer, Virginia, to August 7, 1899; Philippine Islands to date.

"B."—Jefferson Barracks, Missouri, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 7, 1898; Montauk Point, New York, to September 22, 1898; Fort Ethan Allen, Vermont, to October 24, 1898; Augusta, Georgia, to February 7, 1899; Fort Sheridan, Illinois, to October 11, 1899; Fort Myer, Virginia, to July 24, 1900; Philippine Islands to date.

"C."—Fort Ethan Allen, Vermont, to April 21, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 8, 1898; Montauk Point, New York, to September 22, 1898; Fort Ethan Allen, Vermont, to August 9, 1899; Philippine Islands to date.

"D."—Jefferson Barracks, Missouri, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to August 2, 1898; Fernandina, Florida, to August 10, 1898; Montauk Point, New York, to September 22, 1898; Fort Ethan Allen, Vermont, to October

24, 1898; Augusta, Georgia, to May 25, 1899; Fort Myer, Virginia, to August 7, 1899; Philippine Islands to date.

"E."—Fort Ethan Allen, Vermont, to April 21, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 8, 1898; Montauk Point, New York, to August 22, 1898; Fort Ethan Allen, Vermont, to August 9, 1899; Philippine Islands to date.

"F."—Fort Ethan Allen, Vermont, to April 21, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 8, 1898; Montauk Point, New York, to September 22, 1898; Fort Ethan Allen, Vermont, to August 9, 1898; Philippine Islands to date.

"G."—Fort Ethan Allen, Vermont, to April 21, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 7, 1898; Montauk Point, New York, to September 22, 1898; Fort Ethan Allen, Vermont, to April 19, 1899; Jefferson Barracks, Missouri, to August 11, 1899; Fort Myer, Virginia, to July 24, 1900; Philippine Islands to date.

"H."—Jefferson Barracks, Missouri, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 7, 1898; Montauk Point, New York, to September 22, 1898; Fort Ethan Allen, Vermont, to October 24, 1898; Augusta, Georgia, to March 24, 1899; Fort Myer, Virginia, to July 23, 1900; Philippine Islands to date.

"I."—Jefferson Barracks, Missouri, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 7, 1898; Montauk Point, New York, to September 22, 1898; Fort Ethan Allen, Vermont, to August 9, 1899; Fort Myer, Virginia, to July 23, 1900; Philippine Islands to date.

"K."—Jefferson Barracks, Missouri, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 8, 1898; Montauk Point, New York, to September 22, 1898; Fort Ethan Allen, Vermont, to April 19, 1899; Jefferson Barracks, Missouri, to August 8, 1899; Philippine Islands to date.

"L."—Reorganized at Tampa, Florida, June, 1898; at Tampa, Florida, to August 2, 1898; Fernandina, Florida, to August 10, 1898; Montauk Point, New York, to September 22, 1898; Fort Ethan Allen, Vermont, to October 24, 1898; Augusta, Georgia, to February 7, 1899; Fort Sheridan, Illinois, to August 9, 1899; Philippine Islands to date.

"M."—Reorganized at Tampa, Florida, in June, 1898; at Tampa Florida, to August 2, 1898; Fernandina, Florida, to August 10 1898; Montauk Point, New York, to September 22, 1898; Fort Ethan Allen, Vermont, to October 24, 1898; Augusta, Georgia, to May 20, 1899; Fort Myer, Virginia, to August 7, 1899; Philippine Islands to date.

FOURTH CAVALRY.

Headquarters.—Fort Walla Walla, Washington, to June 2, 1898; Presidio, San Francisco, California, to June 28, 1899; Philippine Islands to August 5, 1901; Fort Riley, Kansas, to date.

"A."—Fort Walla Walla, Washington, to May 24, 1899; Presidio, San Francisco, California, to June 24, 1899; Philippine Islands to August 5, 1901; Fort Riley, Kansas, to date.

"B."—Presidio, San Francisco, California, to June 28, 1899; Philippine Islands to August 25, 1901; Fort Riley, Kansas, to date.

"C."—Presidio, San Francisco, California, to July 15, 1898; Philippine Islands to August 5, 1901; Fort Riley, Kansas, to date.

"D."—Fort Yellowstone, Wyoming, to June 23, 1899; Presidio, San Francisco, California, to July 13, 1899; Philippine Islands to August 5, 1901; Fort Riley, Kansas, to date.

"E."—Vancouver Barracks, Washington, to June 4, 1898; Presidio, San Francisco, California, to July 15, 1898; Philippine Islands to August 5, 1901; Fort Leavenworth, Kansas, to date.

"F."—Boise Barracks, Idaho, to May 22, 1899; Presidio, San Francisco, California, to June 24, 1899; Philippine Islands to August 5, 1901; Fort Leavenworth, Kansas, to date.

"G."—Fort Walla Walla, Washington, to June 14, 1898; Presidio, San Francisco, California, to July 15, 1898; Philippine Islands to August 5, 1901; Fort Leavenworth, Kansas, to date.

"H."—Fort Yellowstone, Wyoming, to June 23, 1899; Presidio, San Francisco, California, to July 13, 1899; Philippine Islands to August 5, 1901; Fort Leavenworth, Kansas, to date.

"I."—Presidio, San Francisco, California, to July 15, 1898; Philippine Islands to August 5, 1901; Jefferson Barracks, Missouri, to date.

"K."—Presidio, San Francisco, California, to July 15, 1898; Philippine Islands to August 5, 1901; Jefferson Barracks, Missouri, to date.

"L."—Reorganized at Presidio, San Francisco, California, in June, 1898; serving at that post to July 15, 1898; Philippine Islands to August 5, 1901; Jefferson Barracks, Missouri, to date.

"M."—Reorganized at Presidio, San Francisco, California, June, 1898; serving at that post to June 28, 1899; Philippine Islands to August 5, 1901; Jefferson Barracks, Missouri, to date.

FIFTH CAVALRY.

Headquarters.—Fort Sam Houston, Texas, to May 14, 1898; New Orleans, Louisiana, to May 25, 1898; Mobile, Alabama, to June 4, 1898; Tampa, Florida, to August 15, 1898; Huntsville, Alabama, to November 4, 1898; Mayaguez, Porto Rico, to August 6, 1900; Fort Myer, Virginia, to March 10, 1901; Philippine Islands to date.

"A."—Fort Bliss, Texas, to May 15, 1898; New Orleans, Louisiana, to May 25, 1898; Mobile, Alabama, to June 4, 1898; Tampa, Florida, to July 24, 1898; near Mayaguez, Porto Rico, to October 14, 1898; Camuy, Porto Rico, to February 14, 1899; Arecibo, Porto Rico, to March 19, 1900; Jefferson Barracks, Missouri, to July 18, 1900; Fort Huachuca, Arizona, to March 8, 1901; Philippine Islands to date.

"B."—Fort McIntosh, Texas, to May 14, 1898; New Orleans, Louisiana, to May 25, 1898; Mobile, Alabama, to June 4, 1898; Tampa, Florida, to August 15, 1898; Huntsville, Alabama, to November 4, 1898; Santuree, Porto Rico, to December 26, 1898; Utuado, Porto Rico, to July 7, 1899; Adjuntas, Porto Rico, to March 15, 1900; Jefferson Barracks, Missouri, to July 18, 1900; Fort Grant, Arizona, to March 8, 1901; Philippine Islands to date.

"C."—Fort Sam Houston, Texas, to May 14, 1898; New Orleans, Louisiana, to May 24, 1898; Mobile, Alabama, to June 4, 1898; Tampa, Florida, to August 15, 1898; Huntsville, Alabama, to January 21, 1899; Humacao, Porto Rico, to February 12, 1900; San Juan, Porto Rico, to March 24, 1900; Jefferson Barracks, Missouri, to July 18, 1900; Fort Wingate, New Mexico, to March 4, 1901; Philippine Islands to date.

"D."—Fort Ringgold, Texas, to May 17, 1898; New Orleans, Louisiana, to May 24, 1898; Mobile, Alabama, to June 4, 1898; Tampa, Florida, to August 15, 1898; Huntsville, Alabama, to November 4, 1898; Mayaguez, Porto Rico, to March 22, 1900; Jefferson Barracks, Missouri, to July 18, 1900; Fort Grant, Arizona, to March 8, 1901; Philippine Islands to date.

"E."—Fort Sam Houston, Texas, to May 14, 1898; New Orleans, Louisiana, to May 25, 1898; Mobile, Alabama, to June 4, 1898; Tampa, Florida, to August 15, 1898; Huntsville, Alabama, to November 4, 1898; San German, Porto Rico, to July 1, 1899; Mayaguez, Porto Rico, to November 29, 1900; Fort Ethan Allen,

Vermont, to February 26, 1901; Fort Grant, Arizona, to August 7, 1901; Fort Apache, Arizona, to date.

"F."—Fort Brown, Texas, to May 28, 1898; Mobile, Alabama, to June 4, 1898; Tampa, Florida, to August 15, 1898; Huntsville, Alabama, to January 21, 1899; Bayamon, Porto Rico, to July 31, 1899; San Juan, Porto Rico, to February 9, 1900; Humacao, Porto Rico, to August 27, 1900; San Juan, Porto Rico, to December 15, 1900; Jefferson Barracks, Missouri, to February 27, 1901; Fort Huachuca, Arizona, to date.

"G."—Fort Sam Houston, Texas, to May 14, 1898; New Orleans, Louisiana, to May 25, 1898; Mobile, Alabama, to June 4, 1898; Tampa, Florida, to August 15, 1898; Huntsville, Alabama, to November 4, 1898; Caguas, Porto Rico, to December 8, 1898; Aibonito, Porto Rico, to November 24, 1900; Fort Ethan Allen, Vermont, to February 26, 1901; Fort Grant, Arizona, to March 23, 1901; Fort Apache, Arizona, to date.

"H."—Fort Clark, Texas, to May 14, 1898; New Orleans, Louisiana, to May 25, 1898; Mobile, Alabama, to June 4, 1898; Tampa, Florida, to August 15, 1898; Huntsville, Alabama, to January 21, 1899; Arecibo, Porto Rico, to June 15, 1899; Mayaguez, Porto Rico, to December 15, 1900; Jefferson Barracks, Missouri, to February 27, 1901; Fort Du Chesne, Utah, to date.

"I."—Fort Clark, Texas, to May 14, 1898; New Orleans, Louisiana, to May 25, 1898; Mobile, Alabama, to June 4, 1898; Huntsville, Alabama, to January 21, 1899; Ponce, Porto Rico, to March 14, 1900; Adjuntas, Porto Rico, to July 26, 1900; Fort Myer, Virginia, to March 10, 1901; Philippine Islands to date.

"K."—Fort Sam Houston, Texas, to May 14, 1898; New Orleans, Louisiana, to May 25, 1898; Mobile, Alabama, to June 4, 1898; Huntsville, Alabama, to November 4, 1898; Ciales, Porto Rico, to February 17, 1899; Manati, Porto Rico, to March 18, 1900; Mayaguez, Porto Rico, to August 3, 1900; Fort Myer, Virginia, to March 10, 1901; Philippine Islands to date.

"L."—Reorganized at Tampa, Florida, June 27, 1898; at Tampa, Florida, to August 15, 1898; Huntsville, Alabama, to November 4, 1898; Las Marias, Porto Rico, to May 24, 1899; Mayaguez, Porto Rico, to August 3, 1900; Fort Myer, Virginia, to March 10, 1901; Philippine Islands to date.

"M."—Troop reorganized at Tampa, Florida, June 22, 1898; at Tampa, Florida, to August 15, 1898; Huntsville, Alabama, to January

21, 1899; Cayey, Porto Rico, to March 12, 1900; Manati, Porto Rico, to July 29, 1900; Fort Myer, Virginia, to March 10, 1901; Philippine Islands to date.

SIXTH CAVALRY.

Headquarters.—Fort Myer, Virginia, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 7, 1898; Montauk Point, New York, to October 5, 1898; Huntsville, Alabama, to December 30, 1898; Fort Riley, Kansas, to June 21, 1900; China Relief Expedition to November 3, 1900; Philippine Islands to date.

"A."—Fort Myer, Virginia, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 7, 1898; Montauk Point, New York, to October 5, 1898; Huntsville, Alabama, to December 30, 1898; Fort Riley, Kansas, to June 21, 1900; China Relief Expedition to November 3, 1900; Philippine Islands to date.

"B."—Fort Leavenworth, Kansas, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 7, 1898; Montauk Point, New York, to October 5, 1898; Huntsville, Alabama, to December 27, 1898; Fort Leavenworth, Kansas, to June 21, 1900; China Relief Expedition to November 3, 1900; Philippine Islands to date.

"C."—Fort Leavenworth, Kansas, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 7, 1898; Montauk Point, New York, to October 5, 1898; Huntsville, Alabama, to December 27, 1898; Fort Leavenworth, Kansas, to June 19, 1899; Fort Logan, Colorado, to June 22, 1900; China Relief Expedition to November 3, 1900; Philippine Islands to date.

"D."—Fort Robinson, Nebraska, to April 20, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 7, 1898; Montauk Point, New York, to October 5, 1898; Huntsville, Alabama, to December 29, 1898; Fort Reno, Oklahoma, to June 22, 1900; China Relief Expedition to October 8, 1900; Philippine Islands to date.

"E."—Fort Myer, Virginia, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 7, 1898; Montauk Point, New York, to October 5, 1898; Huntsville, Alabama, to December 30, 1898; Fort Riley, Kansas, to July 2, 1899; Fort Walla Walla, Washington, to March 22, 1901; Philippine Islands to date.

- "F."—Fort Leavenworth, Kansas, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 7, 1898; Montauk Point, New York, to October 5, 1898; Huntsville, Alabama, to December 27, 1898; Fort Leavenworth, Kansas, to June 22, 1898; Presidio of San Francisco, California, to August 1, 1899; Yosemite National Park, California, to December 1, 1899; Presidio of San Francisco, California, to May 21, 1900; Yosemite National Park, California, to November 6, 1900; Presidio of San Francisco, California, to March 25, 1901; Philippine Islands to date.
- "G."—Fort Myer, Virginia, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 7, 1898; Montauk Point, New York, to October 5, 1898; Huntsville, Alabama, to December 30, 1898; Fort Riley, Kansas, to August 28, 1899; Presidio, San Francisco, California, to May 21, 1900; Sequoia National Park, California, to November —, 1900; Presidio, San Francisco, California, to March 25, 1901; Philippine Islands to date.
- "H."—Fort Myer, Virginia, to April 19, 1898; Camp Thomas, Georgia, to July 23, 1898; Guayama, Porto Rico, to September 3, 1898; Rio Pedros, Porto Rico, to October 20, 1898; Santuree, Porto Rico, to November 26, 1898; Huntsville, Alabama, to December 30, 1898; Fort Riley, Kansas, to July 2, 1899; Boise Barracks, Idaho, to March 22, 1901; Philippine Islands to date.
- "I."—Fort Robinson, Nebraska, to April 20, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to August 2, 1898; Montauk Point, New York, to October 5, 1898; Huntsville, Alabama, to December 29, 1898; Fort Sill, Oklahoma, to June 20, 1900; China Relief Expedition to May 27, 1901; Philippine Islands to date.
- "K."—Fort Leavenworth, Kansas, to April 19, 1898; Camp Thomas, Georgia, to May 11, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 7, 1898; Montauk Point, New York, to October 5, 1898; Huntsville, Alabama, to December 29, 1898; Fort Leavenworth, Kansas, to July 21, 1900; China Relief Expedition to May 27, 1901; Philippine Islands to date.
- "L."—Reorganized at Tampa, Florida, in May, 1898; at Tampa, Florida, to August 2, 1898; Montauk Point, New York, to October 5, 1898; Huntsville, Alabama, to December 29, 1898; Fort Sill, Oklahoma, to June 20, 1900; China Relief Expedition to May 27, 1901; Philippine Islands to date.

- "M."—Reorganized at Tampa, Florida, in May, 1898; at Tampa, Florida, to August 2, 1898; Montauk Point, New York, to October 5, 1898; Huntsville, Alabama, to December 29, 1898; Fort Reno, Oklahoma, to August 5, 1899; Jefferson Barracks, Missouri, to June 21, 1900; China-Relief Expedition to May 27, 1901; Philippine Islands to date.

SEVENTH CAVALRY.

- Headquarters.*—Fort Grant, Arizona, to October 4, 1898; Huntsville, Alabama, to December 8, 1898; Macon, Georgia, to January 10, 1899; Havana, Cuba, to May 20, 1902; Camp Thomas, Georgia, to date.
- "A."—Fort Bayard, New Mexico, to April 21, 1898; Fort Du Chesne, Utah, to September 29, 1898; Huntsville, Alabama, to December 8, 1898; Macon, Georgia, to January 10, 1899; Havana, Cuba, to April 19, 1902; Camp Thomas, Georgia, to date.
- "B."—Fort Grant, Arizona, to April 20, 1898; Fort Sill, Oklahoma, to April 26, 1898; Fort Reno, Oklahoma, to June 16, 1898; Fort Sill, Oklahoma, to October 5, 1898; Huntsville, Alabama, to December 8, 1898; Macon, Georgia, to January 21, 1899; Havana, Cuba, to April 19, 1902; Camp Thomas, Georgia, to date.
- "C."—Fort Grant, Arizona (at San Carlos, Arizona, April 3 to May 4 and July 2 to August 6, 1898), to October 4, 1898; Huntsville, Alabama, to December 8, 1898; Macon, Georgia, to January 10, 1899; Pinar del Rio, Cuba, to August 2, 1900; Havana, Cuba, to April 13, 1902; Camp Thomas, Georgia, to date.
- "D."—Fort Bayard, New Mexico, to April 21, 1898; Fort Du Chesne, Utah, to September 29, 1898; Huntsville, Alabama, to December 8, 1898; Macon, Georgia, to January 21, 1899; Havana, Cuba, to April 17, 1902; Camp Thomas, Georgia, to date.
- "E."—Fort Grant, Arizona, to August 3, 1898; San Carlos, Arizona, to October 4, 1898; Huntsville, Alabama, to December 8, 1898; Macon, Georgia, to January 10, 1899; Pinar del Rio, Cuba, to August 2, 1901; Havana, Cuba, to May 20, 1902; Camp Thomas, Georgia, to date.
- "F."—Fort Grant, Arizona, to May 13, 1898; Fort Huachuca, Arizona, to October 4, 1898; Huntsville, Alabama, to December 8, 1898; Mobile, Alabama, to January 21, 1899; Havana, Cuba, to May 20, 1902; Camp Thomas, Georgia, to date.
- "G."—Fort Apache, Arizona, to September 28, 1898; Huntsville, Alabama, to December 8, 1898; Macon, Georgia, to January 10,

- 1899; Pinar del Rio, Cuba, to August 2, 1900; Havana, Cuba, to May 20, 1902; Camp Thomas, Georgia, to date.
- "H."—Fort Huachuca, Arizona, to September 28, 1898; Huntsville, Alabama, to December 8, 1898; Macon, Georgia, to January 21, 1899; Havana, Cuba, to May 20, 1902; Camp Thomas, Georgia, to date.
- "I."—Fort Huachuca, Arizona, to October 4, 1898; Huntsville, Alabama, to December 8, 1898; Macon, Georgia, to January 10, 1899; Pinar del Rio, Cuba, to August 2, 1900; Havana, Cuba, to May 20, 1902; Camp Thomas, Georgia, to date.
- "K."—Fort Huachuca, Arizona, to October 4, 1898; Huntsville, Alabama, to December 8, 1898; Macon, Georgia, to January 21, 1899; Havana, Cuba, to May 20, 1902; Camp Thomas, Georgia, to date.
- "L."—Reorganized June 16, 1898, and at Fort Grant, Arizona, to October 4, 1898; Huntsville, Alabama, to December 8, 1898; Macon, Georgia, to January 10, 1899; Havana, Cuba, to May 20, 1902; Camp Thomas, Georgia, to date.
- "M."—Reorganized May 21, 1898, and at Fort Grant, Arizona, to October 4, 1898; Huntsville, Alabama, to December 8, 1898; Macon, Georgia, to January 21, 1899; Havana, Cuba, to May 20, 1902; Camp Thomas, Georgia, to date.

EIGHTH CAVALRY.

- Headquarters.*—Fort Meade, South Dakota, to October 6, 1898; Huntsville, Alabama, to November 9, 1898; Puerto Principe, Cuba, to February 25, 1902; Fort Reno, Oklahoma, to April 8, 1902; Jefferson Barracks, Missouri, to date.
- "A."—Fort Meade, South Dakota, to October 6, 1898; Huntsville, Alabama, to November 9, 1898; Puerto Principe, Cuba, to December 26, 1899; Fort Riley, Kansas, to June 14, 1900; Fort Reno, Oklahoma (Henryetta, Indian Territory, and Camp at Fort Gibson, Indian Territory, January 24, to September 21, 1901), to May 13, 1902; Fort Sill, Oklahoma, to date.
- "B."—Fort Meade, South Dakota, to May 12, 1898; Fort Washakie, Wyoming, to September 31, 1898; Huntsville, Alabama, to November 9, 1898; Puerto Principe, Cuba, to December 26, 1899; Fort Riley, Kansas, to July 8, 1901; Fort Reno, Oklahoma, to May 13, 1902; Fort Sill, Oklahoma, to date.
- "C."—Fort Yates, North Dakota, to October 3, 1898; Huntsville, Alabama, to November 9, 1898; Neuvas, Cuba, to December 12, 1898; Las Minas, Cuba, to January 28, 1899; Puerto Principe,

- Cuba, to December 26, 1899; Fort Riley, Kansas, to June 14, 1900; Fort Sill, Oklahoma, to date.
- "D."—Fort Meade, South Dakota, to October 6, 1898; Huntsville, Alabama, to January 31, 1899; Puerto Principe, Cuba, to December 26, 1899; Fort Riley, Kansas, to July 8, 1901.
- "E."—Fort Meade, South Dakota, to October 6, 1898; Huntsville, Alabama, to January 31, 1899; Puerto Principe, Cuba, to December 25, 1899; Neuvas, Cuba, to March —, 1900; Puerto Principe, Cuba, to July 10, 1900; San Luis, Cuba, to December 20, 1901; Santiago, Cuba, to May 20, 1902; Jefferson Barracks, Missouri, to date.
- "F."—Fort Meade, South Dakota, to April 23, 1898; Fort Sill, Oklahoma, to October 3, 1898; Huntsville, Alabama, to January 31, 1899; Puerto Principe, Cuba, to December 14, 1899; Ciego de Avila, Cuba, to February 3, 1901; Santiago, Cuba, to April 26, 1902; Jefferson Barracks, Missouri, to date.
- "G."—Fort Meade, South Dakota, to June 7, 1898; Fort Niobrara, Nebraska, to October 2, 1898; Huntsville, Alabama, to November 9, 1898; Puerto Principe, Cuba, to July 10, 1900; Guantanamo, Cuba, to April 16, 1902; Santiago, Cuba, to April 26, 1898; Jefferson Barracks, Missouri, to date.
- "H."—Fort Meade, South Dakota, to October 6, 1898; Huntsville, Alabama, to January 31, 1899; Puerto Principe, Cuba, to December 14, 1899; Ciego de Avila, Cuba, to February 5, 1901; Santiago, Cuba, to May 20, 1902; Jefferson Barracks, Missouri, to date.
- "I."—Fort Meade, South Dakota, to April 18, 1898; Fort Robinson, Nebraska, to October 3, 1898; Huntsville, Alabama, to October 9, 1898; Neuvas, Cuba, to December 12, 1898; Las Minas, Cuba, to January 28, 1899; Puerto Principe, Cuba, to February 25, 1902; Fort Riley, Kansas, to date.
- "K."—Fort Meade, South Dakota, to May 13, 1898; Camp Merritt, Montana, to July 3, 1898; Fort Keogh, Montana, to October 4, 1898; Huntsville, Alabama, to January 21, 1899; Puerto Principe, Cuba, to February 25, 1902; Fort Riley, Kansas, to date.
- "L."—Reorganized in July, 1898; and at Fort Meade, South Dakota, to October 6, 1898; Huntsville, Alabama, to January 31, 1899; Puerto Principe, Cuba, to February 25, 1902; Fort Riley, Kansas, to date.
- "M."—Reorganized in July, 1898; and at Fort Meade, South Dakota, to October 6, 1898; Huntsville, Alabama, to November 9, 1898; Puerto Principe, Cuba, to February 25, 1902; Fort Riley, Kansas, to date.

NINTH CAVALRY.

Headquarters.—Fort Robinson, Nebraska, to April 20, 1898; Camp Thomas, Georgia, to April 30, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to September 27, 1898; Fort Grant, Arizona, to July 28, 1900; Philippine Islands to date.

"A."—Fort Robinson, Nebraska, to April 20, 1898; Camp Thomas, Georgia, to April 30, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to September 27, 1898; Fort Grant, Arizona, to July 28, 1900; Philippine Islands to date.

"B."—Fort Du Chesne, Utah, to April 20, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to September 27, 1898; Fort Grant, Arizona, to July 28, 1900; Philippine Islands to date.

"C."—Fort Robinson, Nebraska, to April 20, 1898; Camp Thomas, Georgia, to April 30, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to September 27, 1898; Fort Du Chesne, Utah, to June 1, 1899; Fort Douglas, Utah, to July 23, 1900; Philippine Islands to date.

"D."—Fort Washakie, Wyoming, to April 20, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to September 27, 1898; Fort Grant, Arizona, to April 24, 1899; Fort Ringgold, Texas, to January 22, 1900; Fort Huachuca, Arizona, to July 27, 1900; Philippine Islands to date.

"E."—Fort Robinson, Nebraska, to April 20, 1898; Camp Thomas, Georgia, to April 30, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to September 27, 1898; Fort Apache, Arizona, to July 27, 1900; Philippine Islands to date.

"F."—Fort Du Chesne, Utah, to April 20, 1898; Tampa, Florida, to August 6, 1898; Montauk Point, New York, to September 27, 1898; Fort Huachuca, Arizona, to July 27, 1900; Philippine Islands to date.

"G."—Fort Robinson, Nebraska, to April 20, 1898; Camp Thomas, Georgia, to April 30, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to September 27, 1898; Fort Apache, Arizona, to July 27, 1900; Philippine Islands to date.

"H."—Fort Robinson, Nebraska, to April 20, 1898; Camp Thomas, Georgia, to April 30, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to September 27, 1898; Fort Sill, Oklahoma, to January 4, 1899; Fort Wingate, New Mexico, to July 22, 1900; Philippine Islands to date.

"I."—Fort Washakie, Wyoming, to April 20, 1898; Tampa, Florida, to August 6, 1898; Montauk Point, New York, to September 27, 1898; Fort Du Chesne, Utah, to April 14, 1901; Philippine Islands to date.

"K."—Fort Robinson, Nebraska, to April 20, 1898; Camp Thomas, Georgia, to April 30, 1898; Tampa, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to September 27, 1898; Fort Huachuca, Arizona, to June 21, 1899; Fort Bayard, New Mexico, to November 22, 1899; Fort Du Chesne, Utah, to April 4, 1901; Philippine Islands to date.

"L."—Reorganized June 19, 1898, at Tampa, Florida; at Tampa, Florida, to August 6, 1898; Montauk Point, New York, to September 27, 1898; Fort Huachuca, Arizona, to April 28, 1899; Fort Brown, Texas, to February 3, 1900; Fort Wingate, New Mexico, to July 19, 1900; Fort Apache, Arizona, to April 2, 1901; Philippine Islands to date.

"M."—Reorganized June 19, 1898, and at Tampa, Florida, to August 6, 1898; Montauk Point, New York, to September 27, 1898; Fort Grant, Arizona, to April 24, 1899; Fort Clark, Texas, to January 18, 1900; Fort Grant, Arizona, to July 21, 1900; Fort Apache, Arizona, to April 2, 1901; Philippine Islands to date.

TENTH CAVALRY.

Headquarters.—Fort Assiniboine, Montana, to April 19, 1898; Camp Thomas, Georgia, to May 14, 1898; Lakeland, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to October 6, 1898; Huntsville, Alabama, to January 29, 1899; Fort Sam Houston, Texas, to April 28, 1899; Manzanillo, Cuba, to April 24, 1902; Fort Robinson, Nebraska, to date.

"A."—Fort Keogh, Montana, to April 20, 1898; Camp Thomas, Georgia, to May 14, 1898; Lakeland, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to October 6, 1898; Huntsville, Alabama, to January 29, 1899; Fort Sam Houston, Texas, to April 28, 1899; Manzanillo, Cuba, to July 14, 1899; Bayamas, Cuba, to October 4, 1899; Manzanillo, Cuba, to April 24, 1902; Fort Robinson, Nebraska, to date.

- "B."—Fort Keogh, Montana, to April 20, 1898; Camp Thomas, Georgia, to May 14, 1898; Lakeland, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to October 6, 1898; Huntsville, Alabama, to January 29, 1899; Fort Ringgold, Texas, to April 30, 1899; Gibora, Cuba, to February 1, 1900; Mayari, Cuba, to August 3, 1900; Holguin, Cuba, to May 5, 1902; Fort Robinson, Nebraska, to date.
- "C."—Fort Assinniboine, Montana, to April 19, 1898; Camp Thomas, Georgia, to May 14, 1898; Lakeland, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to October 6, 1898; Huntsville, Alabama, to January 29, 1899; Fort Clark, Texas, to April 28, 1899; Manzanillo, Cuba, to July 14, 1899; Bayamo, Cuba, to October 4, 1899; Manzanillo, Cuba, to November 11, 1900; Bayamo, Cuba, to December 20, 1901; Manzanillo, Cuba, to April 24, 1902; Fort Robinson, Nebraska, to date.
- "D."—Fort Assinniboine, Montana, to April 19, 1898; Camp Thomas, Georgia, to May 14, 1898; Lakeland, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to October 6, 1898; Huntsville, Alabama, to January 29, 1899; Fort Clark, Texas, to May 11, 1898; Holguin, Cuba, to June 5, 1899; Mayari, Cuba, to February 6, 1900; Holguin, Cuba, to May 5, 1902; Fort Robinson, Nebraska, to date.
- "E."—Fort Keogh, Montana, to April 20, 1898; Camp Thomas, Georgia, to May 14, 1898; Lakeland, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to October 6, 1898; Huntsville, Alabama, to January 29, 1899; Fort McIntosh, Texas, to May 11, 1899; Holguin, Cuba, to January 5, 1900; Fort Brown, Texas, to March 26, 1901; Philippine Islands to date.
- "F."—Fort Assinniboine, Montana, to April 19, 1898; Camp Thomas, Georgia, to May 14, 1898; Lakeland, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to October 6, 1898; Huntsville, Alabama, to January 29, 1899; Eagle Pass, Texas, to May 11, 1899; Bares, Cuba, to December, 1899; Gibora, Cuba, to January, 1900; Fort McIntosh, Texas, to April 9, 1901; Philippine Islands to date.
- "G."—Fort Assinniboine, Montana, to April 19, 1898; Camp Thomas, Georgia, to May 14, 1898; Lakeland, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to October 6, 1898; Huntsville, Alabama, to January 29,

- 1899; Fort Sam Houston, Texas, to April 28, 1899; Campechula, Cuba, to June 15, 1899; Manzanillo, Cuba, to June 2, 1900; Fort Ringgold, Texas, to April 9, 1901; Philippine Islands to date.
- "H."—Fort Assinniboine, Montana, to April 19, 1898; Camp Thomas, Georgia, to May 14, 1898; Lakeland, Florida, to August 17, 1898; Montauk Point, New York, to October 6, 1898; Huntsville, Alabama, to January 29, 1899; Fort Sam Houston, Texas, to April 28, 1899; Manzanillo, Cuba, to January 2, 1900; Fort Clark, Texas, to April 9, 1901; Philippine Islands to date.
- "I."—Fort Assinniboine, Montana, to April 19, 1898; Camp Thomas, Georgia, to May 14, 1898; Lakeland, Florida, to June 14, 1898; Santiago Campaign to August 14, 1898; Montauk Point, New York, to October 6, 1898; Huntsville, Alabama, to January 31, 1899; Fort Bliss, Texas, to May 1, 1899; Holguin, Cuba, to May 5, 1902; Fort Robinson, Nebraska, to date.
- "K."—Fort Assinniboine, Montana, to April 19, 1898; Camp Thomas, Georgia, to May 14, 1898; Lakeland, Florida, to August 17, 1898; Montauk Point, New York, to October 6, 1898; Huntsville, Alabama, to February 2, 1899; Fort Brown, Texas, to April 28, 1899; Puerto Padre, Cuba, to January 16, 1900; Holguin, Cuba, to May 5, 1901; Fort Robinson, Nebraska, to date.
- "L."—Reorganized May 31, 1898, and at Lakeland, Florida, to August 17, 1898; Montauk Point, New York, to October 6, 1898; Huntsville, Alabama, to January 29, 1899; Fort Sam Houston, Texas, to April 28, 1899; Bayamo, Cuba, to January 9, 1900; Manzanillo, Cuba, to April 24, 1902; Fort Robinson, Nebraska, to date.
- "M."—Reorganized May 31, 1898, and at Tampa, Florida, to August 17, 1898; Montauk Point, New York, to October 6, 1898; Huntsville, Alabama, to January 29, 1899; Fort Clark, Texas, to April 28, 1899; Jiquani, Cuba, to September 26, 1899; Bayamo, Cuba, to November 14, 1900; Manzanillo, Cuba, to April 24, 1902; Fort Robinson, Nebraska, to date.

ELEVENTH CAVALRY.

- Headquarters.*—Organized March 10, 1901, at Fort Myer, Virginia; remained at Fort Myer, Virginia, to January 20, 1902; Philippine Islands to date.
- "A."—Organized March 10, 1901, at Fort Myer, Virginia; remained at Fort Myer, Virginia, to April 11, 1901; Fort Ethan Allen, Vermont, to July 22, 1901; Jefferson Barracks, Missouri, to December 7, 1901; Philippine Islands to date.

- "B."—Organized March 10, 1901, at Fort Myer, Virginia; remained at Fort Myer, Virginia, to April 4, 1901; Washington Barracks, D. C., to April 11, 1901; Fort Ethan Allen, Vermont, to July 22, 1901; Jefferson Barracks, Missouri, to December 7, 1901; Philippine Islands to date.
- "C."—Organized March 10, 1901, at Fort Myer, Virginia; remained at Fort Myer, Virginia, to April 4, 1901; Washington Barracks, D. C., to April 11, 1901; Fort Ethan Allen, Vermont, to July 22, 1901; Jefferson Barracks, Missouri, to December 7, 1901; Philippine Islands to date.
- "D."—Organized March 10, 1901, at Fort Myer, Virginia; remained at Fort Myer, Virginia, to April 11, 1901; Fort Ethan Allen, Vermont, to July 22, 1901; Jefferson Barracks, Missouri, to December 7, 1901; Philippine Islands to date.
- "E."—Organized at Fort Myer, Virginia, April 4, 1901; Fort Myer, Virginia, to July 2, 1901; Fort Ethan Allen, Vermont, to December 4, 1901; Philippine Islands to date.
- "F."—Organized at Fort Myer, Virginia, April 4, 1901; at Fort Myer, Virginia, to May 18, 1901; Fort Ethan Allen, Vermont, to December 4, 1901; Philippine Islands to date.
- "G."—Organized at Fort Myer, Virginia, April 4, 1901; at Fort Myer, Virginia, to May 18, 1901; Fort Ethan Allen, Vermont, to December 4, 1901; Philippine Islands to date.
- "H."—Organized at Fort Myer, Virginia, April 4, 1901; Fort Myer, Virginia, to July 2, 1901; Fort Ethan Allen, Vermont, to December 4, 1901; Philippine Islands to date.
- "I."—Organized May 18, 1901, at Fort Myer, Virginia; remained at Fort Myer, Virginia, to January 20, 1902; Philippine Islands to date.
- "K."—Organized May 18, 1901, at Fort Myer, Virginia; remained at Fort Myer, Virginia, to January 20, 1902; Philippine Islands to date.
- "L."—Organized June 9, 1901, at Fort Myer, Virginia; remained at Fort Myer, Virginia, to January 20, 1902; Philippine Islands to date.
- "M."—Organized June 9, 1901, at Fort Myer, Virginia; remained at Fort Myer, Virginia, to January 20, 1902; Philippine Islands to date.

TWELFTH CAVALRY.

Headquarters.—Organized February 8, 1901, at Fort Sam Houston, Texas; remained at Fort Sam Houston, Texas, to May 20, 1902; Fort Clark, Texas, to date.

- "A."—Organized March 25, 1901, at Fort Sam Houston, Texas; remained at Fort Sam Houston, Texas, to May 14, 1901; Fort Clark, Texas, to May 2, 1902; Fort Sam Houston, Texas, to date.
- "B."—Organized April 17, 1901, at Fort Sam Houston, Texas; remained at Fort Sam Houston, Texas, to May 14, 1901; Fort Clark, Texas, to May 2, 1902; Fort Sam Houston, Texas, to date.
- "C."—Organized April 22, 1901, at Fort Sam Houston, Texas; remained at Fort Sam Houston, Texas, to May 31, 1901; Fort Clark, Texas, to May 2, 1902; Fort Sam Houston, Texas, to date.
- "D."—Organized April 24, 1901, at Fort Sam Houston, Texas; remained at Fort Sam Houston, Texas, to May 15, 1901; Fort Bliss, Texas, to May 10, 1902; Fort Sam Houston, Texas, to date.
- "E."—Organized May 4, 1901, at Fort Sam Houston, Texas, remaining at that post to June 20, 1901; Fort McIntosh, Texas, to May 10, 1902; Fort Clark, Texas, to date.
- "F."—Organized May 6, 1901, at Fort Sam Houston, Texas, remaining at that post to June 27, 1901; Fort Clark, Texas, to date.
- "G."—Organized May 10, 1901, at Fort Sam Houston, Texas, remaining at that post to October 18, 1901; Fort McIntosh, Texas, to May 10, 1902; Fort Clark, Texas, to date.
- "H."—Organized at Fort Sam Houston, Texas, May 13, 1901; remained at that post to April 19, 1902; Fort Clark, Texas, to date.
- "I."—Organized May 19, 1901, at Fort Sam Houston, Texas; remained at that post to March 20, 1902; Fort Clark, Texas, to date.
- "K."—Organized May 20, 1901, at Fort Sam Houston, Texas; remained at that post to March 20, 1902; Fort Clark, Texas, to date.
- "L."—Organized May 21, 1901, at Fort Sam Houston, Texas; remained at that post to March 20, 1902; Fort Clark, Texas, to date.
- "M."—Organized May 22, 1901, at Fort Sam Houston, Texas; remained at that post to March 20, 1902; Fort Clark, Texas, to date.

THIRTEENTH CAVALRY.

Headquarters.—Organized May 1, 1901, at Fort Meade, South Dakota, remaining at that post to date.

- "A."—Organized May 4, 1901, at Fort Meade, South Dakota, remaining at that post to June 17, 1901; Fort Assiniboine, Montana, to May 15, 1902; Fort Yellowstone, Wyoming, to date.
- "B."—Organized May 14, 1901, at Fort Meade, South Dakota, and subsequently changed to "E"; reorganized June 23, 1901, remaining at Fort Meade to July 18, 1901; Fort Robinson, Nebraska, to April 20, 1902; Fort Meade, South Dakota, to date.

- "C."—Organized May 23, 1901, at Fort Meade, South Dakota, remaining at that post to June 17, 1901; Fort Assinniboine, Montana, to May 15, 1902; Fort Yellowstone, Wyoming, to date.
- "D."—Organized June 19, 1901, at Fort Meade, South Dakota, remaining at that post to July 18, 1901; Fort Robinson, Nebraska, to April 20, 1902; Fort Meade, South Dakota, to date.
- "E."—Organized by transfer of Troop B, June 23, 1901, at Fort Meade, South Dakota; remained at that post to August 5, 1901; Fort Keogh, Montana, to date.
- "F."—Organized July 1, 1901, at Fort Meade, South Dakota, remaining at that post to August 7, 1901; Fort Keogh, Montana, to date.
- "G."—Organized July 8, 1901, at Fort Meade, South Dakota, remaining at that post to September 11, 1901; Fort Assinniboine, Montana, to date.
- "H."—Organized July 15, 1901, at Fort Meade, South Dakota, remaining at that post to September 11, 1901; Fort Assinniboine, Montana, to date.
- "I."—Organized July 20, 1901, at Fort Meade, South Dakota, remaining at that post to date.
- "K."—Organized July 26, 1901, at Fort Meade, South Dakota, remaining at that post to date.
- "L."—Organized July 29, 1901, at Fort Meade, South Dakota, remaining at that post, to May 4, 1902; Fort Yates, North Dakota, to date.
- "M."—Organized July 29, 1901, at Fort Meade, South Dakota, remaining at that post to date.

FOURTEENTH CAVALRY.

- Headquarters.*—Organized March 5, 1901, at Fort Leavenworth, Kansas, remaining at that post to September 13, 1901; Fort Grant, Arizona, to date. X
- "A."—Organized March 5, 1901, at Fort Leavenworth, Kansas, remaining at that post to April 22, 1901; Fort Riley, Kansas, to February 8, 1902; Fort D. A. Russell, Wyoming, to date.
- "B."—Organized March 5, 1901, at Fort Leavenworth, Kansas, remaining at that post to April 22, 1901; Fort Riley, Kansas, to February 9, 1902; Fort Huachuca, Arizona, to date.
- "C."—Organized March 5, 1901, at Fort Leavenworth, Kansas, remaining at that post to April 22, 1901; Fort Riley, Kansas, to February 8, 1902; Fort Mackenzie, Wyoming, to date.

- "D."—Organized March 5, 1901, at Fort Leavenworth, Kansas, remaining at that post to April 22, 1901; Fort Riley, Kansas, to February 9, 1902; Fort Huachuca, Arizona, to date.
- "E."—Organized March 5, 1901, at Fort Leavenworth, Kansas, remaining at that post to September 14, 1901; Fort Logan, Colorado, to date.
- "F."—Organized March 5, 1901, at Fort Leavenworth, Kansas, remaining at that post to September 3, 1901; Fort Wingate, New Mexico, to date.
- "G."—Organized March 5, 1901, at Fort Leavenworth, Kansas, remaining at that post to September 13, 1901; Fort Wingate, New Mexico, to date.
- "H."—Organized in April, 1901, at Fort Leavenworth, Kansas, remaining at that post to September 14, 1901; Fort Logan, Colorado, to date.
- "I."—Organized in April, 1901, at Fort Leavenworth, Kansas, remaining at that post to July 20, 1901; Fort Grant, Arizona, to date.
- "K."—Organized in April, 1901, at Fort Leavenworth, Kansas, remaining at that post to July 20, 1901; Fort Grant, Arizona, to date.
- "L."—Organized in April, 1901, at Fort Leavenworth, Kansas, remaining at that post to July 20, 1901; Fort Grant, Arizona, to date.
- "M."—Organized in April, 1901, at Fort Leavenworth, Kansas, remaining at that post to July 20, 1901; Fort Grant, Arizona, to date.

FIFTEENTH CAVALRY.

- Headquarters.*—Organized February 25, 1901, at the Presidio, San Francisco, California; remained at the Presidio until December 16, 1901; in the Philippine Islands to date.
- "A."—Organized February 25, 1901, at the Presidio, San Francisco, California; remained at the Presidio until March 18, 1901; Philippine Islands to date.
- "B."—Organized February 25, 1901, at the Presidio, San Francisco, California; remained at the Presidio until March 18, 1901; Philippine Islands to date.
- "C."—Organized February 25, 1901, at the Presidio, San Francisco, California; remained at the Presidio to April 1, 1901; Philippine Islands to date.

- "D."—Organized February 25, 1901, at the Presidio, San Francisco, California; remained at the Presidio to April 1, 1901; Philippine Islands to date.
- "E."—Organized March 8, 1901, at the Presidio, San Francisco, California; remained at the Presidio until March 26, 1901; Benicia Barracks, California, to November 25, 1901; Philippine Islands to date.
- "F."—Organized March 8, 1901, at the Presidio, San Francisco, California; remained at the Presidio until March 26, 1901; Benicia Barracks, California, to November 25, 1901; Philippine Islands to date.
- "G."—Organized March 8, 1901, at the Presidio, San Francisco, California; remained at the Presidio until March 25, 1901; Fort McDowell, California, to April 5, 1901; Philippine Islands to date.
- "H."—Organized March 8, 1901, at the Presidio, San Francisco, California; remained at the Presidio to June 3, 1901; Yosemite National Park, California, to October 27, 1901; Presidio, San Francisco, California, to December 16, 1901; Philippine Islands to date.
- "I."—Organized April 13, 1901, at the Presidio, San Francisco, California; remained at the Presidio to June 3, 1901; Sequoia National Park, California, to October 27, 1901; Presidio, San Francisco, California, to December 16, 1901; Philippine Islands to date.
- "K."—Organized May 6, 1901, at the Presidio, San Francisco, California; remained at the Presidio to December 16, 1901; Philippine Islands to date.
- "L."—Organized June 13, 1901, at the Presidio, San Francisco, California; remained at the Presidio to December 16, 1901; Philippine Islands to date.
- "M."—Organized June 12, 1901, at the Presidio, San Francisco, California; remained at the Presidio to December 16, 1901; Philippine Islands to date.

EDITOR'S TABLE.

It gives extreme satisfaction to know that the July number of THE UNITED STATES CAVALRY JOURNAL has met with general endorsement by members of the Association. It is ample recompense for much labor performed in its publication and an encouragement for greater endeavor in the future. Much, however, depends upon the active support of members of the Association. Without their help but little can be accomplished. It must be borne in mind that a magazine such as the JOURNAL is limited to the profession of arms, particularly that of the cavalry branch. In order that the highest professional standard may be maintained, much will be required of the Association members. They must give something of their time to the preparation of papers, not only of a professional character, but of such nature as will prove interesting to the "man-at-arms," and assist in widening the field of circulation of the JOURNAL.

All matter sent for publication in the JOURNAL must pass the scrutiny of those designated by the Association to supervise the publication. Contributors, however, may rest assured that this service will be performed with the greatest care and a full sense of the responsibilities called for.

RECOLLECTIONS OF FORT RILEY.

The paper "Recollections of Fort Riley," read before the Kansas Historical Society and reproduced in this number of the JOURNAL, forms an interesting chapter of the earlier history of that post. It is extremely fortunate for the Army student that Mr. Lowe has so vividly given his recollections of those stirring times. To older officers of the Army it will recall the many hardships and trials undergone on the frontier, and must awaken an interest in the younger officers of to-day that can only lead to efforts to become useful in their profession and to the country.

Mr. Lowe, though for many years out of the Army, was himself an enlisted man in the First Dragoons, serving from 1846 until 1854, and for the last half of that period as first sergeant of Company B. He campaigned with his regiment from the North Platte to Mexico, and from the Missouri to the Rocky Mountains. Following his discharge from the Army he was employed by the Quartermaster's Department, in which he served six years. He organized wagon trains for the great Utah expedition in 1854. During the period of the war he was again

called into the service of the department. Mr. LOWE still resides in Leavenworth. He has served his State as a senator, and also the County of Leavenworth as sheriff for two consecutive terms. He is a splendid representative of the men who served their country in the ranks of the Army in the "days befo' de wah," who, upon their discharge, settled in the West and became useful and influential citizens.

DEFENSE OF CAPTAIN RYAN.

In placing upon the pages of this number of the JOURNAL the defense of Captain J. A. RYAN, Fifteenth Cavalry, before the general court-martial before which he was tried and honorably acquitted of charges of cruelty, several reasons governed.

From a legal standpoint, the paper shows Captain RYAN to be possessed of a good knowledge of military law and a fine discriminating sense in the construction of orders and rules governing commanders of troops in the field.

From a literary standpoint, it is excellent and will serve the military student.

But its greatest value lies in the fact that by placing it on record in these pages it will serve the future generations of Army officers when writing history of the stirring events of the past four years in the Philippines.

Captain RYAN presents the situation in the Philippines in a manner not heretofore given the American people, and the desire to save it from the archives of the Government, to which it will be consigned with the proceedings of the court-martial, is another reason for preserving this admirable paper.

Though accomplished indirectly, Captain RYAN deserves the thanks of the Army for this defense.

"PROUD OF OUR WEST POINT."

There was a time, and not very long ago, when the fashion was among Europeans to speak slightly of everything American. They called us a nation of shop-keepers and peasants. They ridiculed our armies, saying they were no better than armed mobs. They poked fun at our Navy for being different from the naval models they had established.

It is significant that all has changed since the Spanish-American War. Certain events in the vicinity of Manila and Santiago wrought a complete revolution in the aspect of things American.

At any rate, the commanding general of the British armies was reported as saying a few days ago that the American Army was the best in the world. The remark being questioned, the general was

asked if he had been correctly quoted. He expressed himself even more forcibly.

Following this comes the information that the Royal Military College at Sandhurst, England, an ancient school for training young men for the British Army, is to be remodeled after the pattern of West Point. Colonel KITSON, at one time military *attaché* of the British embassy at Washington, has been made sole head of the institution for this avowed purpose.

We Americans are not a little proud of our West Point. It is one of the institutions that GEORGE WASHINGTON was directly responsible for, and it has done a lot for the sturdy youth of the people.

All this is flattering to us as citizens of a great republic. In the pursuits of peace we have been unquestionably triumphant for years. And now they come to us to learn the science of war.—*St. Joseph (Mo.) Evening Press.*

WORDS OF WELCOME.

General WESLEY MERRITT writes:

"I have just received this morning the July number of the CAVALRY JOURNAL. It does me good to see it again, and in such a creditable form."

Captain W. C. RIVERS, First Cavalry, writes:

"I have read the first number of the rejuvenated CAVALRY JOURNAL with much interest, and most heartily commend you all upon the success attained. It is a most important and useful thing, and the start is fine."

Captain ANDREW HERO, Jr., Artillery Corps, Manager and Editor writes:

"We received with pleasure this morning a copy of the JOURNAL OF THE U. S. CAVALRY ASSOCIATION for July, 1902. We are glad to see once more this excellent publication, and congratulate you on the make-up of this number as regards material, general appearance and arrangement. The Cavalry should be proud of such a publication, and find it not only of interest, but also of great value professionally."

Captain JAMES H. REEVES, Fourteenth Cavalry, writes:

"It seems to me that there was never a time when it was more important or when a greater variety of interesting material could be obtained. If for no other reason, it would be highly advisable to resume the publication of this JOURNAL in order to keep up some organization of the Cavalry Service—this seems particularly necessary to me at this time, when most all of the Cavalry is on foreign service and likely to remain so for some time to come. The JOURNAL furnishes a means of keeping us all in touch, and also is a good medium for the

expression of the opinions of the Cavalry Service on important questions arising from time to time. As a means of awaking the interest of the great number of recent officers, it would be of great service."

The Journal of the Military Service Institution says:

"The *Journal of the Military Service Institution* welcomes to its exchange list the familiar face of its old auxiliary, the JOURNAL OF THE U. S. CAVALRY ASSOCIATION.

"While opinion is divided as to the wisdom of attempting to maintain a number of periodicals, each limited to the literature of a single branch of service, rather than to concentrate the professional ability and encouragement of our officers upon one or two publications devoted to the interests of the Army at large, yet the revival of the Cavalry organ indicates a healthy condition of professional thought and a keener appetite for military study than appears to be possessed by by some of our trans-Atlantic friends. On this account, the new venture of the mounted service has our best wishes, and we shall observe with interest its progress in promoting the fortunes of a branch of the line which has so glorious a past and so promising a future. That the operations of our Cavalry have at last attracted the attention of foreign military experts is shown by the interesting translation from a French contemporary of which the third and concluding installment appears in this number of our *Journal*. T. F. R."

The Journal of the U. S. Artillery says:

"The JOURNAL OF THE U. S. CAVALRY ASSOCIATION, in bright new dress, comes to us with this issue, and we take pleasure in welcoming its re-appearance. This number, for July, 1902, is replete with matter of interest and value for the cavalry officer. Captain Dickman entertains us with 'Experiences in China,' in a very interesting article, with illustrations, wherein he gives impressions of the various European forces participating in that expedition. Captain Walker relates some 'Cavalry Experiences from 1898 to 1901.' Other articles are: 'Transportation of Public Animals by Sea;' 'Fort Washakie, Wyoming;' 'The Automatic Small Arm;' 'The Revolver or Pistol Best Suited to Cavalry;' 'Molasses as a Food for Army Horses.'"

BOOK REVIEWS.

Company Commander's Manual of Army Regulations. By Lieut. Waldron, Twenty-ninth Infantry. Published by Hudson-Kimberly Publishing Company, Kansas City, Mo. Cloth. \$1.00.

The hard-worked company commanders, especially those in the field and remote posts, will find Lieutenant Waldron's *Company Commander's Manual of Army Regulations* a most useful compilation.

Here we have in convenient form, and apparently well indexed (which the Army Regulations are not), all of the Army Regulations which pertain to the administration of a company, troop and battery.

All this we have in the Army Regulations, it is true; but Lieutenant Waldron's publication gives us what the Army Regulations do not—the blank forms and the instructions thereon which have all the force of regulations. These forms themselves are bulky, and while usually at hand when wanted, are sometimes at remote posts and in the field not accessible, and then the company commander would willingly give the price of the book for a single form, of which Lieutenant Waldron gives us photographic reproductions on a reduced scale, so that they can be written out when required.

This little book should be in the hands of every company officer and one at hand in each orderly-room. W. C. B.

The Tactics of Coast Defense. By John P. Wisser, Major, Artillery Corps. Hudson-Kimberly Publishing Co., Kansas City, Missouri. 1902. Pp. 232, illustrated. Red cloth, \$2.00.

We congratulate Major Wisser on having produced such an extremely good book on this important subject.

The necessity of such a work is apparent, for to students and others interested in this branch of our national defense, under modern conditions of coast and naval warfare, there are few works available in English. General Abbot's standard work is obsolete in many respects; General Maurice's applies more particularly to British needs, and the articles and essays that of late have been written on this subject, though containing valuable information, are more or less of a special nature, hence disconnected, and there has been no such coordination and logical arrangement of principles as is to be found in the work before us.

We may except, however, the writings of Colonel Mielielchofer, of the Austrian Army, with whom students of coast defense are probably familiar. Commencing in 1897, this author has developed the subject in several pamphlets and essays, which, taken *as a whole*, present a scientific arrangement of the principles and a complete system of coast defense.

Major Wisser bases his work largely upon that of Colonel Mielielchofer, and he has done signal service in presenting to English readers the features of that system as applied to our units, guns and conditions. But in addition to this, years of study on the subject and his

opportunities for collecting much current information bearing on the general line of his study has enabled him to present in this book a practical and logical exposition of all the questions and principles of the Tactics of Coast Defense in the light of the best authorities of the day.

The author states that the system of tactics here considered contemplates coast defense, and not merely harbor defense; but we must confess that to us the direct, practical and excellent treatment of the chapters dealing more especially with harbor defense appeals more strongly and constitutes, we think, by far the most important part of the book.

Commencing with armament in general, the book treats of the systems of artillery, calibers to be used, location of outer and inner mine fields depending on the principles governing their relation to the guns, influence of the width of channel on their location and in deciding on the proper guns needed in the defense, kinds and number of pieces necessary and the uses of the various calibers. The principles of all features of a proper system are thus fully analyzed, the details connected therewith are carefully gone into and worked out by the author for our coast defense guns, and the whole subject is scientifically treated.

Similar considerations and analyses lead to the discussion and determination of the proper sites for the batteries and forts of the defense.

In these discussions, the author assumes that with the new powders our guns give a muzzle velocity of 2,600 f. s. We fail to see how this velocity can be assumed for our present 35 caliber coast cannon, as with our pieces of present dimensions an initial velocity of over 2,300 f. s. cannot be obtained. This is an important consideration, as on this assumption depend many of the deductions and conclusions in these and following chapters. We also consider that more accurate terms could be employed than "medium-power" and "low-power" guns, on pages 33 and 34, in reference to the guns there mentioned; for these guns are not of that nature.

Bombarding range, it is believed, can scarcely be definitely fixed, in view of the high angles of elevation now possible with modern naval ordnance and mounts on some of the recent foreign warships.

The chapters on coast artillery material, organization of coast artillery, including general scheme of defense, fire control and direction, garrisons, coast guard corps, etc., and that on instruction and training of the personnel, are excellent. The matter is well presented

and arranged and is in accordance with modern thought and recognized methods. Two types of fortified harbors, illustrating all the principles discussed by the author, are here given: one by Colonel Mielichhofer, the other according to Colonel Bujnicki, of the Russian Army. The plates are of assistance in showing the application of the principles and help the student in fixing these in mind.

The author then discusses in full detail the battle tactics of coast defense under the heads of blockade, bombardment, attack in its various forms, and run past, and having thus considered the object, phases and other features of the attack, takes up the defense and treats it similarly and under corresponding heads.

A final chapter on combined naval and land operations completes the book.

In a careful perusal of the book, we have been impressed at times with a sense of repetition in some parts. This may be largely due to the detailed treatment of the subdivisions of the subject, but it interferes to some extent with continuity of thought.

Major Wisser is entitled to great credit for the work he has done. His book is a pioneer effort in the field, but it forms an important work—in fact, the best we have on this subject, and one that all can study with profit. For that very reason we would like to see it free from these defects that we have noticed in this first edition. It is already used in the course at the U. S. Artillery School, and we have no doubt that it will soon be recognized as the standard work on this subject.

ANDREW HERO, JR.,
Captain Artillery Corps.

Horses, Saddles and Bridles. By Colonel William H. Carter, Assistant Adjutant-General U. S. Army (Late Captain Sixth Cavalry). The Friedenwald Company, Baltimore, Md., U. S. A.

It is probable that when man began to emerge from the upper status of barbarism, he had already acquired a good practical knowledge of the selection, training and management of horses. The earliest records of history contain references to the good points and valuable services of the horse: a writer named Simo is believed to have been the first to publish a work on horses. Xenophon, who makes complimentary references to Simo, published a treatise on "Horse-manship" about 2300 years ago, which may still be read with much interest and profit. His enthusiasm on the subject of the horse is well expressed in the following extract:

"So extremely beautiful and admirable and noble a sight is a horse that bears himself superbly, that he fixes the gaze of all who see

him, both young and old; no one, indeed, leaves him, or is tired of contemplating him, as long as he continues to display his magnificent attitudes."

The knowledge of all that pertains to this noble animal has been preserved by a succession of authors in many languages; yet, it is not too much to say that the general dissemination in the U. S. Army of elementary information about the horse dates from the publication, official adoption and distribution of Captain Carter's work in 1895. Young officers upon entering the service used to regard the determination of the age of horses by some old sergeant as something occult, or an art only to be acquired by long experience. Notions about biting and training were rather hazy; it was the exception, not the rule, to find officers well-informed on these subjects. Of the officers who joined the Cavalry soon after the close of the Civil War—eighty were transferred from the Infantry—a considerable number probably had never seen a book on horsemanship; some of them we know had not learnt how to march a cavalry command in time of peace in spite of their long experience in war. Those of the younger officers who were interested in their profession had to dig out for themselves and pick up here and there items of information which are now so easily accessible.

A great improvement in the state of education of officers and non-commissioned officers of the Army in horse subjects has taken place in the last eight years; the work above mentioned is entitled to a large part of the credit therefor. In its second edition the whole work has been carefully revised and several of the chapters have been added to or partly re-written. A new chapter on "Transportation of Horses by Rail and at Sea" embodies the experience of our officers during the last four years in transporting animals from the Mississippi Valley to the antipodes across the great ocean, and is a valuable addition to the work. So also the new chapter on "The Horse's Foot," which is replete with solid information and good advice. The chapter on "Stable Management" contains the new "Veterinary Supply Table," a description of the properties of remedies, simple prescriptions, and "Stable Instructions." In the chapters on "Forage and Diseases" the new conditions and experiences encountered in the Philippines have not been overlooked.

The author's easy and luminous style is preserved throughout the work; this makes its reading attractive to the layman, and its study a pleasure to the young soldier.

The typographical excellence and the character of the illustrations leave nothing to be desired and form a pleasing contrast to many other military publications in this country.

To those who are desirous of further improvement in the riding of our cavalry, to cavalry officers, and to lovers of the horse in general, the second edition of the work, by General Carter, will be a welcome stimulant to continued interest and effort.

Notes on Writing Orders and Reports in the Field. This is the title of a pocket edition by Captain H. C. Evans, Fourth V. B. Manchester Regiment, and written mainly for volunteer officers with the hope that it may also prove of use to his comrades in the regular Army. In his introduction Captain Evans states that though there are a few books which deal with this subject alone, he has not come across one yet which goes into details as much as he has done. Gale & Polden's Military Series.

Preparatory Battle Formations. Major-General H. M. Bengough, C. B., announces that the call for his edition of "Preparatory Battle Formations" was so insistent that he was compelled to issue a second edition, which gives him great satisfaction and assures him that the principles it sets forth have been accepted by a large number of soldiers. Gale & Polden's Military Series.

RECEIVED FOR REVIEW.

Target Practice and Remount Systems Abroad. Military Information Division, War Department. 1902.

Views of Cambridge University. Gale & Polden, Ltd., London.

Skirmishing Made Easy: What to Do and How to Do It, with Questions and Answers. By Major B. Witherby, Late Adjutant First Battalion King's Own. Gale & Polden, Ltd., London.

AMONG OUR EXCHANGES.

THE UNITED STATES.

The United Service. August, 1902. Recent Army Reorganization. Social Life in Spain. A Tangled Web. The New York. Accidents of History. Personal Recollections of What Happened in Manila Bay after the Battle. A Few Facts about the Friars. A Vaccination Lesson of the Civil War, during

the Siege of Charleston, S. C. A Sprig of Scotch Heather. Marshal Mascena.

September, 1902. Personal Recollections of What Happened in the Philippines after the Battle of Manila Bay. Education of Officers. A Tangled Web. Across the New Northwest in 1860. Depths of the Sea. "Dan." Bobby Shafto.

Proceedings of the Naval Institute. June, 1902. The Defense of Our New Naval Stations. The School of the Officer. The Seymour Relief Expedition. Converted Yachts or Small Gun-Boats for Training Landsmen. The Results of the Navy Personnel Law of March 3, 1899. McCormick's Navigating Protractor. Opening Address Delivered by the President of the War College, June 4, 1902. Discussions. Professional Notes.

Journal of the United States Artillery. May and June, 1902. The Organization, Care and Service of a 16-Mortar Battery. Comments on "Report of Coast Artillery Target Practice, Fort Monroe." Answers to Captain Haan's Fort Monroe, Va. Inquiries. A Battery-Manning Drill. Extract from the Proceedings of the Board of Officers Convened at Fort Wadsworth, N. Y. Professional Notes.

July and August, 1902. Plotting-Board for Mortars. Firing Mortars at Moving Targets. Manual for the 12-inch Breech-Loading Mortar. Construction of a Difference Chart. Triangle for Telemetric Calculations. French Field Artillery. Method of Laying Heavy Guns. Late Developments in Ordnance and Armor. Commentaries on Contemporaneous Art of Defense. Professional Notes.

Journal of the Military Service Institution. July, 1902. Trench, Parapet or "The Open." Promotion. Loose-Leaf Company Record. The Fighting Tactics of Filipinos. The Campaign of Eckmühl. Disappearing Guns. Translations and Reprints. August, 1902. Notes on Transportation by a Member of the China Relief Expedition. Combined Army and Navy Operations. Sea Coast Forts in China. Engineering in the National Guard. Campaign of Eckmühl (*continued*). On the Pacific Coast.

Pennsylvania Magazine of History and Biography.

The Seventh Regiment Gazette. To date.

The National Guardsman. To date.

Dumb Animals. To date.

ENGLAND.

Journal of the Royal United Service Institution. June, 1902. New Russian First-Class Battleship "Peresviet." Second Prize Essay—Subject: "What Should Be the Disposition of the Materiel and Personnel of the British Navy in Time of Peace, and How Can the Peace Strength be Most Rapidly Expanded to War Strength?" Volunteer Artillery: Past, Present and Future. A German View of British Tactics in the Boer War. Peace Strength of the Russian Army. January, 1902.

July, 1902. New First-Class Armoured Cruiser "Jeanne d'Arc." Garrisons for Coaling Stations. Officers' Shoulder-Belt Plates. Coal Economy and the Price of Speed in Warships. Realistic Targets.

August, 1902. Snapshots Taken by an Officer at Rustenburg during the Boer Surrender. A Reserve for the Navy from the Navy. On Military Education in England from a National and Imperial Point of View. A Study of the Late M. Jean de Bloch's Theories as Applied to the Question of Sea Power. The Peace in South Africa. Suggestions for an Imperial Militia Service.

The United Service Magazine. July, 1902. The Color of Warships. Admiralty. Sidelights on Naval Education. The Coronation: Its Strategic Significance. The Empire and Peace. Essays on Artillery—III. Offensive. The History and Present Position of the Field Howitzer. Tactics in Modern War. The Burden of the Troop Horse. My Impressions of the British Army. A Lady's Visit to the Natal Battlefields.

August, 1902. The Peace Distribution of the Fleet. A Reply to Some Critics. Wei-Hai-Wei. Essays on Artillery—IV. Individualism in War. Intelligence and Information in War. The Report of the Committee on the Education of Officers. Our Military Colleges and the Staff. The Real Thing. How to Begin. A Plea for Professionalism. The Army Medical Service—A Suggestion.

September, 1902. The Coronation. Comparison of Battleships of England, France and Russia. Colonial Contributions to the Navy.

Armed Merchant Vessels. An Existing Training School for the Fighting Services. Strategy and Tactics in Mountain Ranges. The Employment of Infantry and Artillery in Action. Cavalry Remounts. The Passing of the Chinese Regiments. The Expenses of Officers. Alaric.

Proceedings of the April and May, 1902. Recruiting for the Royal
Royal Artillery Artillery. Narrative of a Boer. Horse-Management in South Africa. Observation of Fire from a Flank. Defense for Secondary Forts against Probable Enemies, Based upon an Appreciation of Peculiarities of the *Personnel* and *Matériel* in Such Enemies. Recent Development of Field Artillery *Matériel* on the Continent. Norway and Sweden. Signaling for Horse and Field Artillery. The First Electric Instrument for Measuring the Velocity of Projectiles. A Useful Method for Enhancing the Mobility of Mountain Guns when Required to Move with Mounted Troops.

FRANCE.

Revue de June, 1902. Can the Napoleonic Cavalry Still
Cavalerie. Serve as a Model? Action and Reaction (*continued*).
Paris. Method of Tracing Horses in the Italian Cavalry. The New Tendencies of the German Army, Revealed by the *Revue des Deux Mondes* and Explained by the *Cosaque du Kouban* (*continued*). Carrier Pigeons in the Cavalry.

July, 1902. New Cavalry Tactics. Can the Napoleonic Cavalry Still Serve as a Model? (*continued*). The Lance Question. Action and Reaction (*concluded*). With Regard to the Ostend-Brussels Race. The Trotting and the Saddle Horse.

Revue May, 1902. The Influence of Modern Arms
Militaire. on the Offensive and on the Defensive.
Paris. The Russian Imperial Manœuvres of 1901. The German Mobilization and Centralization in 1870 (*continued*). Study of the South African War, 1899-1900 (*continued*). The Breeding of Chargers and the Remount Service in Germany and in Austria-Hungary (*continued*).

June, 1902. Study of the South African War, 1899-1900 (*continued*). The Influence of Modern Arms on the Offensive and on the Defensive (*continued*). The Russian Imperial Manœuvres of 1901 (*con-*

cluded). The German Mobilization and Centralization in 1870 (*continued*).

July, 1902. The German Mobilization and Concentration in 1870 (*continued*). Studies of the South African War, 1899-1900 (*continued*). The Influence of Modern Arms on the Offensive and on the Defensive (*concluded*).

Revue du May 3, 1902. Suspects! Our Navy in the At-
Cercle Militaire. lantic. The German Western Frontier. May
Paris. 10. Army and School. Round Bores, 1870 (one map). The Moroccan Army. The Field Diary of Colonel de Villebois-Mareuil. May 17. The Martinique Catastrophe. Tactical Scheme (1 map). The Brain Work of an Army Commander. A Mission Besieged in Mongolia. Army and School (*concluded*). May 24. Notes on the Navy. A Mission Besieged in Mongolia (*concluded*). Horse Hygiene. May 31. The English New Infantry Drill Regulations. Notes on the Navy (*continued*).

June 7, 1902. The New Belgian Military Law. The New German Garrison Service. Notes on the Navy (*continued*). June 14. In the Transvaal—The Epilogue. Tactical Scheme (1 map). Notes on the Navy (*concluded*). June 21. An Army Staff of the Eighteenth Century. The Japanese Army at the Grand Manœuvres of 1901. Austria-Hungary—The War and Naval Budgets for 1903. June 28. The Camp at Lazare. Organization of the Military Telegraphic Service.

July 5, 1902. Losses in the Anglo-Boer War. Evolution of Artillery during the 19th Century. Decorated Colors—The 76th Infantry Regiment. July 12. A Staff in the 20th Century. The Russian Grand Manœuvres in 1902 (with two sketches). Evolution of Artillery during the 19th Century (*continued*). July 19. The Fortress of Metz (with one map). A Staff of the 20th Century (*continued*). Evolution of Artillery during the 19th Century (*continued*). July 26. Tactical Scheme (with map). The French Gun in China. A Staff of the 20th Century (one map, *concluded*). Germans on the Bosphorus. Evolution of Artillery during the 19th Century (*continued*).

CONSTITUTION OF THE UNITED STATES CAVALRY ASSOCIATION.

Adopted at Fort Leavenworth, Kansas, January 17, 1898.

ARTICLE I.

TITLE.

This society shall be known as "The United States Cavalry Association."

ARTICLE II.

HEADQUARTERS.

The headquarters shall be at Fort Leavenworth, Kansas.

ARTICLE III.

DESIGN.

The aim and purpose of this Association shall be to unite all persons directly or indirectly interested in the Cavalry arm of the military service, for the professional improvement of its members and the advancement of the mounted service generally.

ARTICLE IV.

MEMBERSHIP.

SECTION 1. This Association shall consist of (1) regular members, (2) associate members, and (3) honorary members.

SEC. 2. The following shall be eligible to regular membership: (a) Commissioned officers of the Cavalry of the regular Army. (b) Former commissioned officers of the Cavalry of the regular or volunteer services, provided their records are honorable. (c) General officers of the regular Army and former general officers.

SEC. 3. 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 (other than those mentioned in Section 2), or in the Navy. (b) Persons who are, or who ever have 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.

SEC. 4. Honorary members may be elected from men distinguished in military and naval service and from eminent men of learning. They shall be elected as such for the period of five years. Honorary members shall be elected by the Executive Council, and it shall require a two-thirds vote of all members of the Council to elect.

SEC. 5. Any person eligible to regular or associate membership may become such upon making application to the Secretary, accompanied with the amount of the annual dues for the first year (\$2.00), and upon furnishing satisfactory evidence of his eligibility to such membership.

SEC. 6. Any person or society may become a subscriber for the quarterly JOURNAL; and all persons paying for and receiving the JOURNAL, but who are not regularly admitted and entered as regular, associate, or honorary members, shall be considered as subscribers merely.

SEC. 7. Any member may withdraw from the Association at any time by tendering his resignation in writing, provided he be not in arrears.

SEC. 8. Any person may be expelled from the Association for cause by the Executive Council, but it shall require the consent of two-thirds

CONSTITUTION OF U. S. CAVALRY ASSOCIATION. 269

of the members of the Council, unless the cause be the non-payment of dues or other obligations to the Association, in which case a majority vote of the members of the Council present shall suffice. Any member may be expelled whose indebtedness to the Association is \$4.00 or over.

SEC. 9. Membership shall date from the first day of the quarter in which the member joins, January 1st, April 1st, July 1st, October 1st, and his annual dues shall become payable on that date in each succeeding year.

ARTICLE V.

RIGHTS AND OBLIGATIONS OF MEMBERS.

SECTION 1. Every member of the Association, of whatever class, shall be entitled to one vote at all regular or special meetings of the Association. This vote may be cast in person or by proxy, in which latter case the authority therefor must be in writing.

SEC. 2. Regular members only shall be eligible to hold office, or to vote upon alterations of, or amendments to, this Constitution. With those exceptions, all members, of whatsoever class, shall have equal rights and privileges, and be subject to the same obligations, except that honorary members shall pay no annual dues.

SEC. 3. All members, of whatsoever class, shall receive the quarterly JOURNAL without other cost than the annual dues. The subscription price to non-members shall be two dollars per year in advance.

SEC. 4. The annual dues of all members, except honorary ones, shall be two dollars, payable at the beginning of each year of membership.

SEC. 5. Additional pecuniary obligations can be imposed upon the members only by an act of the Association at a regular or special meeting, a two-thirds vote of the members present or duly represented by proxy being required to carry such measures.

ARTICLE VI.

MEETINGS AND ELECTIONS.

SECTION 1. The regular meetings of the Association shall be held once each year at Fort Leavenworth, Kansas, on the third Monday in January.

SEC. 2. Special meetings shall be called to meet at the same place by the President upon the written request therefor, signed by fifty members. When such special meetings are called, at least fifteen days' notice shall be given thereof to each member by the Secretary. The same notice shall be given in the case of regular meetings also.

SEC. 3. Twenty per cent of the total membership of the Association, either present in person or represented by proxy, shall constitute a quorum for the transaction of business.

SEC. 4. The annual election of officers shall take place at the regular annual meeting of the Association. The election shall be by ballot, and a plurality of all votes cast in person or by proxy shall elect.

ARTICLE VII.

OFFICERS.

SECTION 1. The elective officers of the Association shall be: a President, a Vice-President, and five members of the Executive Council. Their terms of office shall be one year, or until their successors are elected, and all except the President shall be residents of Fort Leavenworth, Kansas.

SEC. 2. The appointive officers of the Association shall be two; viz., an Editor, a Secretary and Treasurer. They shall be appointed by the Executive Council, and shall hold office at the pleasure of the same.

SEC. 3. The duties of the officers shall be such as usually pertain to their respective offices, and such additional ones as may be prescribed in this Constitution or the By-laws enacted by the Executive Council under the authority granted by this Constitution.

ARTICLE VIII.

EXECUTIVE COUNCIL.

SECTION 1. The Executive Council shall consist of the President, the Vice-President, the five elected members, the Editor, and the Secretary and Treasurer. But when the President is not a resident of Fort Leavenworth, he shall for all purposes be considered as not belonging to the Executive Council, unless actually present.

SEC. 2. The Executive Council shall meet from time to time at the call of its Chairman, who shall be the senior member of the Council present at the headquarters of the Association.

SEC. 3. Five members shall constitute a quorum for the transaction of business. But if through the removal of officers from Fort Leavenworth, or other cause, the Council be reduced below five members, such number as remain shall constitute a quorum for the purpose of filling vacancies, but for this purpose only.

SEC. 4. It shall require a majority vote of all members of the Council to carry and proposition, except an adjournment, which shall require a majority of those present.

SEC. 5. The several members of the Executive Council shall have an equal voice and vote in the determination of all questions acted upon by the Council, except that the Editor and the Secretary and Treasurer shall have no vote upon questions connected with their own appointment or removal, or their own compensation.

SEC. 6. The Executive Council shall be responsible for the general administration of the affairs of the Association. To this end they are empowered to carry out any measures whatsoever, which, in their judgment, seem expedient in order to further the interests of the Association, or to attain the ends and aims of the organization; Provided, however, That such measures do not conflict with any of the provisions of this Constitution. Within such limits the Council shall have power to make permanent regulations, which they shall in such cases designate as By-laws, in contradistinction to their ordinary regulations, and such By-laws shall be binding upon the Association and its members, and shall remain in force until duly revoked.

SEC. 7. The Executive Council shall have power to fill vacancies for unexpired terms, which may occur in its membership.

SEC. 8. The Executive Council shall carefully examine and audit the accounts of the Secretary and Treasurer as soon as practicable after the close of the fiscal year, and at such other times as they may deem expedient.

SEC. 9. Funds of the Association can be expended only upon the order of the Executive Council, and money paid out or obligations incurred by the Secretary and Treasurer without such order shall be at his own risk, and if not subsequently approved by the Council, he shall make the same good to the Association; but the auditing and approving of the accounts by the Council shall be considered as authorizing all transactions and expenditures previous to such action.

ARTICLE IX.

THE JOURNAL.

The Association shall publish a JOURNAL devoted to the interests of the organization, and in furtherance of its ends and aims, as laid down in Article III. of this Constitution. This JOURNAL shall be published quarterly, and, as far as practicable, about the close of each quarter of the calendar (or fiscal) year.

ARTICLE X.

THE EDITOR.

The Editor shall edit the quarterly JOURNAL, and such other documents as may from time to time be published by the Association. In the performance of this duty he shall be subject to the supervision of the Executive Council, to whom he shall be directly responsible.

ARTICLE XI.

THE SECRETARY AND TREASURER.

The duties of the Secretary and Treasurer shall be such as usually devolve upon such officers. He shall keep a journal of the proceedings of the Association, and a separate record of the proceedings of the Executive Council. He shall keep in form suitable for reference permanent records of the By-laws that may from time to time be enacted by the Executive Council. He shall be generally the organ of the Association in matters of finance, business and correspondence.

In the performance of these duties he shall be subject to the supervision of the Executive Council, to whom he shall be directly responsible. The books, papers and accounts pertaining to his office shall be always subject to examination by the Council. At each regular annual meeting he shall submit a report showing the financial condition of the Association at the time. Within thirty days after the close of each fiscal year of the Association (which shall be considered as identical with the calendar year) he shall submit to the Council a detailed report of the business transactions of his office during the preceding twelve months. This report shall show: the cash on hand at the beginning of the fiscal year; the receipts and expenditures during the year; the cash on hand at the close of the fiscal year; the assets of the Association; the outstanding obligations of the Association; the membership in the various classes at the beginning of the year and the gains and losses in the same during the year; such other matters as may be called for by the Council. He shall also make such additional reports at such times and upon such subjects as the Executive Council may desire.

ARTICLE XII.

In order to effect the transition from the old Constitution to this new one, the following sections are hereby enacted:

SECTION 1. Except as regards matters concerning which a different rule is herein prescribed, this Constitution shall go into effect upon the day of its adoption.

SEC. 2. Although life memberships are no longer contemplated, such as are in existence at the time of the adoption of this Constitution shall continue to exist under the same conditions as originally granted.

SEC. 3. Members who joined the Association previous to September 30, 1897, shall date from the first day of the calendar year, as originally prescribed; but the membership of such as have joined the Association subsequent to September 30, 1897, shall date from the first day of the quarter, exactly as if this Constitution had been in force at the time of joining.

SEC. 4. All who, under the old Constitution, were regular or associate members at the time of the adoption of this Constitution shall become such members under this Constitution, even though they might not be eligible under its provisions.

SEC. 5. Such persons as are honorary members at the time of the adoption of this Constitution shall become such under its provisions, and they shall be considered as having become such upon the date of the adoption of this Constitution.

ARTICLE XIII.

ALTERATION OF THE CONSTITUTION.

SECTION 1. The Constitution may be added to or amended by a two-thirds vote of the regular members present or properly represented by proxy, at an annual meeting of the Association. Proposed alterations shall be furnished the Secretary in writing, signed by five or more members, not less than three months prior to the meeting at which they are to be acted upon. The Secretary, under the direction of the Executive Committee, shall publish such proposed alterations to the Association not less than sixty days prior to said meeting.

THE UNITED STATES CAVALRY.

FIRST CAVALRY—COLONEL ALMOND WELLS.

Adjutant, CAPTAIN SAMUEL B. ARNOLD; Quartermaster, CAPTAIN JACOB G. GAL-
BRATH; Commissary, CAPTAIN MILTON F. DAVIS.
HEADQUARTERS, MANILA, P. I.
All troops of regiment serving in Philippine Islands.

SECOND CAVALRY—COLONEL ELI L. HUGGINS.

Adjutant, CAPTAIN THOMAS J. LEWIS; Quartermaster, CAPTAIN WILLIAM F. CLARK;
Commissary, CAPTAIN ———.
HEADQUARTERS, FORT MYER, VA.

Troops—A, B, C, D, I, K, Fort Ethan Allen, Va.; E, F, G, H, Fort Myer, Va.; L, M, Fort
Sheridan, Ill.

THIRD CAVALRY—COLONEL ALBERT E. WOODSON.

Adjutant, CAPTAIN HENRY L. RIPLEY; Quartermaster, ———.
Commissary, CAPTAIN GEORGE H. MORGAN.
HEADQUARTERS, FORT ASSINKIPOINTE, MONT.

Troops—A, D, I, K, L, M, Fort Assinkipoine, Mont.; B, C, Fort Yellowstone, Wyo.; E, F,
Yosemite National Park, Cal.; G, R, Fort Apache, Ariz.

FOURTH CAVALRY—COLONEL CAMILLO C. C. CARR.

Adjutant, CAPTAIN GEORGE H. CAMERON; 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. HENNISSE.

Adjutant, CAPTAIN ———; Quartermaster, CAPTAIN NATHANIEL F. MCCLURE; Com-
missary, CAPTAIN LAWRENCE J. FLEMING.
HEADQUARTERS, MANILA, P. I.
All troops serving in Philippine Islands.

SIXTH CAVALRY—COLONEL ALLEN SMITH.

Adjutant, CAPTAIN JOHN W. FURLONG; Quartermaster, CAPTAIN GEORGE L. BYRAM.
HEADQUARTERS, MANILA, P. I.
All troops of regiment serving in Philippine Islands.

SEVENTH CAVALRY—COLONEL THEODORE A. BALDWIN.

Adjutant, CAPTAIN WILLIAM A. MESCHER; Quartermaster, CAPTAIN SOLOMON P. VESTAL;
Commissary, CAPTAIN WM. H. PAYNE.
HEADQUARTERS, CHICKAMAUGA PARK, GA.
All troops stationed at Chickamauga Park, Ga.

EIGHTH CAVALRY—COLONEL LOUIS H. RUCKER.

Adjutant, CAPTAIN ANDREW G. HAMMOND; Quartermaster, CAPTAIN WM. F. FLYNN.
CAPTAIN CHAS. G. SAWYERS en route to the United States.
HEADQUARTERS, JEFFERSON BARRACKS, MO.

Troops—A, B, C, D, Fort Sill, Okl.; E, F, G, H, Jefferson Barracks, Mo.; I, K, L, M, Fort
Riley, Kan.

NINTH CAVALRY—COLONEL EDWARD S. GODFREY.

Adjutant, CAPTAIN JOHN T. NANCE; Quartermaster, CAPTAIN FRANK S. ARMSTRONG.

TENTH CAVALRY—COLONEL J. A. AUGER.

Adjutant, CAPTAIN ROBERT G. PAXTON; Quartermaster, CAPTAIN CHAS. H. GRIERSON.
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.

THE UNITED STATES CAVALRY.

273

ELEVENTH CAVALRY—COLONEL FRANCIS MOORE.

Adjutant, CAPTAIN STEPHEN H. ELLIOTT; Quartermaster, CAPTAIN LETCHER HARDEMAN.
HEADQUARTERS, MANILA, P. I.
All troops serving in the Philippine Islands.

TWELFTH CAVALRY—COLONEL WM. C. FORBUSH.

Adjutant, CAPTAIN ROBERT E. L. MICHIE; Quartermaster, CAPTAIN JOSEPH E. CCSACK.
Commissary, CAPTAIN 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.

THIRTEENTH CAVALRY—COLONEL E. M. HAYES.

Adjutant, CAPTAIN WILLIAM J. GLASGOW; Quartermaster, CAPTAIN WALTER M.
WHITMAN; Commissary, CAPTAIN THOMAS M. CORCORAN.
HEADQUARTERS, FORT MEADE, S. D.

Troops—A, Fort Yellowstone, Wyo.; B, C, D, Fort Meade, S. D.; E, F, G, H, Fort Keogh,
Mont.; I, K, Fort Meade, S. D.; L, Fort Yates, N. D.; M, Fort Meade, S. D.

FOURTEENTH CAVALRY—COLONEL THOMAS C. LEBBO.

Adjutant, CAPTAIN MATTHEW C. SMITH; Quartermaster, CAPTAIN OREN B. MEYER.
HEADQUARTERS, FORT GRANT, ARIZONA.

Troops—A, Fort Du Chesne, Utah; B, C, D, Fort Huachuca, Ariz.; E, Fort Logan, Col.;
F, G, Fort Wingate, N. M.; H, Fort Logan, Col.; I, K, L, M, Fort Grant, Ariz.

FIFTEENTH CAVALRY—COLONEL WM. M. WALLACE.

Adjutant, CAPTAIN FRANCIS C. MARSHALL; Quartermaster, CAPTAIN LINCOLN C. ANDREWS;
Commissary, CAPTAIN KENZIE W. WALKER.
HEADQUARTERS, MANILA, P. I.
All troops serving in Philippine Islands.

CAVALRY OF THE NATIONAL GUARD.

NOTE.—The following have no mounted troops: Alaska, Arizona, Dela-
ware, District of Columbia, Florida, Idaho, Indiana, Iowa, Kansas, Kentucky,
Louisiana, Maine, Michigan, Minnesota, Nevada, North Carolina, South
Dakota, West Virginia, Vermont.

ALABAMA.

First Cavalry Squadron.

Major James T. Beck, Commanding, Camden.
Captain A. J. Forber, Adj't. Montgomery.
Captain L. L. Lassiter, Commissary, Mont-
gomery.
Captain John F. Burnes, Quartermaster,
Burnsville.

TROOP A—MONTGOMERY.

Captain W. O. Garside,
First Lieutenant W. W. Walker,
Second Lieutenant Tom Robertson,
Second Lieutenant C. E. Dexter.

TROOP B—CAMDEN.

Captain J. D. Jenkins,
First Lieutenant O. J. Spiers,
Second Lieutenant E. B. Tate,
Second Lieutenant F. W. McIntosh.

TROOP C—SELMA.

Captain V. B. Atkins,
First Lieutenant J. S. Ford,
Second Lieutenant G. C. Phillips,
Second Lieutenant J. P. Doherty, jr.

TROOP D—BIRMINGHAM.

Captain E. J. McCrossin,
First Lieutenant C. S. Pierce,
Second Lieutenant C. H. Mandy.

ARKANSAS.

TROOP A—PANOLA.

Major M. C. House.

TROOP B.

Captain S. W. Murtishaw.

CALIFORNIA.

TROOP A—SAN FRANCISCO.

Captain Charles Jansen.

TROOP B—SACRAMENTO.

Captain S. W. Kay.

TROOP C—SALINAS.

Captain C. J. Fuller.

First Lieutenant F. W. Winham.

Second Lieutenant F. M. Vierra.

TROOP D—LOS ANGELES.

Captain John D. Fredericks.

COLORADO.

First Squadron of Cavalry.

Major Zepp T. Hill, Commanding, Denver.

First Lieutenant A. M. Chase, Adjutant.

TROOP A—GRAND JUNCTION.

Captain James M. Kennedy.

Second Lieutenant T. H. Van Buren.

TROOP B-DENVER.

Captain F. A. Perry.
First Lieutenant R. W. Strickland.
Second Lieutenant W. F. Hayden.

TROOP C-DENVER.

Captain Harry S. Smith.
First Lieutenant C. S. Card.
Second Lieutenant J. G. Dickinson.

CONNECTICUT.**TROOP A-NEW HAVEN.**

Captain Lucius Ledington.
First Lieutenant William J. Bradnock.
Second Lieut. Robert J. Woodruff, Orange.

GEORGIA.

First Cavalry-Headquarters, Savannah.

Colonel P. W. Meldrim.
Lieutenant-Colonel R. Gordon.
Major J. B. Dyer.
Major W. F. Wain.
Major R. T. Sinclair.

TROOP A-SAVANNAH.

Captain W. W. Gordon.

TROOP B-McINTOSH.

Captain A. G. Canale.

TROOP C-SPRINGFIELD.

Captain C. F. Berry.

TROOP D-REIDSVILLE.

Captain E. J. Giles.

TROOP E-JOHNSON'S STATION.

Captain J. W. Hughes.

TROOP F-GAINESVILLE.

Captain G. F. Canning.

TROOP G-DARIEN.

Captain E. D. Fox.

TROOP I-JESUP.

Captain E. W. Whaley.

TROOP K-AUGUSTA.

Captain A. J. Twigg.

TROOP L-ATLANTA.

Captain Geo. M. Hope.

ILLINOIS.

First Cavalry-Headquarters, 229 Franklin Street, Chicago.

FIELD AND STAFF.

Colonel Edward C. Young.
Lieutenant-Colonel —.
Major Frank B. Alsip.
Major Milton J. Furman.
Captain Willie Cunningham, Adjutant.
Captain Harry C. Cassidy, Inspector of Rifle Practice.
Captain Leo Wainfield, Quartermaster.
Captain Samuel Chapman, Commissary.
Captain Stewart S. Baker, Veterinary Surgeon.
First Lieutenant Martin Peterson, Squadron Adjutant.
First Lieutenant Walter A. Rosenfield, Squadron Adjutant.

TROOP A-CHICAGO.

Captain Joseph C. Wilson.

TROOP B-SHIRLEY.

Captain Isaac F. Douglas.

TROOP C-CHICAGO.

Captain Frank S. Dunham.

TROOP D-SPRINGFIELD.

Captain John W. Verhee.

TROOP E-CHICAGO.

Captain Charles H. Alsip.

TROOP F-CHICAGO.

Captain Frederick B. Sherwin.

TROOP G-PERORIA.

Captain Stephen O. Tripp.

TROOP H-MACOMB.

Captain E. Lewis Head.

MARYLAND.**TROOP A-PIKESVILLE.**

Captain Joseph W. Shirley.
First Lieutenant C. Lyon Rogers, jr.
Second Lieutenant Redmond C. Stewart.

MASSACHUSETTS.**First Battalion of Cavalry.**

Major William A. Ferrins, Commanding, Boston.
First Lieutenant Alexander Winthrop, Adjutant, Scoughton.
First Lieutenant John C. Kerrison, Quartermaster, Beverly.
Major George Westgate Mills, Surgeon, Medford.
First Lieutenant Arthur W. May, Veterinary Surgeon, Jamaica.
First Lieutenant John W. Hall, Paymaster, Boston.
First Lieutenant Albert J. Walton, Inspector of Rifle Practice, Boston.

COMPANY A-BOSTON.

Captain Frank E. Neal, Boston.
First Lieut. George Proctor, South Boston.
Second Lieut. Frank T. Hitchcock, Malden.

COMPANY D-BOSTON.

Captain John Perrins, jr., Boston.
First Lieutenant William H. Kelly, Boston.
Second Lieutenant Eugene A. Coburn.

COMPANY F-CHELMSFORD.

Captain John J. Monahan, Chelmsford.
First Lieutenant Edward H. Keys, North Chelmsford.
Second Lieutenant Elisha H. Shaw, North Chelmsford.
First Lieutenant Arthur Scoboria, Surgeon, Chelmsford.

MONTANA.**TROOP A-BILLINGS.**

Captain J. C. Bond.

TROOP B-BOZEMAN.

Captain J. F. Keown.

NEBRASKA.**TROOP A-SEWARD.**

Captain W. L. Holland.
First Lieutenant Bruce McCullough.
Second Lieutenant Harry E. Tagg.

SOUTH OMAHA INDEPENDENT CAVALRY TROOP.

Captain Clifton E. Holland.
First Lieutenant Arthur H. Shultz.
Second Lieutenant Amos Thomas.

NEW HAMPSHIRE.**TROOP A-PETERBOROUGH.**

Captain Charles B. Davis.

NEW JERSEY.**FIRST TROOP CAVALRY-NEWARK.**

Captain William A. Bryant.

SECOND TROOP CAVALRY-RED BANK.

Captain Edwin Field.

NEW MEXICO.

First Battalion-Headquarters, East Las Vegas.

Major R. C. Rankin, Commanding.
First Lieutenant A. P. Tarkington, Adjutant.
First Lieutenant Robert Gross, Quartermaster.
Second Lieutenant R. C. Reid, Commissary.

TROOP A.

Captain W. C. Reid.
First Lieutenant James G. McNary.
Second Lieutenant Edward J. McWenig.
All officers reside in East Las Vegas.

NEW YORK.

Squadron A (Three Troops)-Headquarters, New York City.

Major Oliver B. Bridgman.
First Lieutenant Robert C. Lawrence, Adjutant.
First Lieutenant Louis V. O'Donohue, Quartermaster.
First Lieutenant John N. Stearns, Commissary of Subsistence.
First Lieutenant Reginald H. Sayre, Inspector of Small Arms Practice.
First Lieutenant George H. Davison, Veterinary Surgeon.

TROOP 1.

Captain William C. Camman.
First Lieutenant Merritt H. Smith.
Second Lieutenant Max de Motte Marsellus.

TROOP 2.

Captain Howard G. Badgley.
First Lieutenant Francis C. Huntington.
Second Lieutenant Edward M. Ward.

TROOP 3.

Captain Herbert Barry.
First Lieutenant Stowe Phelps.
Second Lieutenant Joseph S. Frelinghuysen.

TROOP B-ALBANY.

Captain Edward J. Wheeler.
First Lieutenant Harry S. Richmond.
Second Lieutenant Ernest L. Miller.

TROOP C-BROOKLYN.

Captain Charles I. De Bevoise.
First Lieutenant James C. McLeer.
First Lieutenant Edward McLeer.
Second Lieutenant Paul Grout.
Second Lieutenant George J. Morgan.

NORTH DAKOTA.**First Battalion of Cavalry.**

Major Wm. H. McKee, Commanding, Kenmare.
Captain Steven S. Howard.
Assistant Surgeon Bottineau.
First Lieutenant Albert H. McKee, Adjutant, Kenmare.

TROOP A-DUNSEITH.

Captain Joseph D. Eaton.

OHIO.**TROOP A-CLEVELAND.**

Captain Frank E. Banta.

TROOP B-COLUMBUS.

Captain John J. Baird.
First Lieutenant Robert D. Palmer.
Second Lieutenant Ben Chamberlain.

OREGON.**TROOP A-LEBANON.**

Captain C. H. Young.
First Lieutenant L. A. Wiley.
Second Lieutenant E. L. Powers.

PENNSYLVANIA.

Philadelphia City Cavalry.

FIRST TROOP.

Captain John C. Groome.
First Lieutenant J. Franklin McFadden.
Second Lieutenant J. Willis Martin.
Cornet William E. Bates.

SECOND TROOP.

Captain Frank Earle Schermerhorn.
First Lieutenant John P. Wood.
Second Lieut. Clarence E. Schermerhorn.
Second Lieutenant Randolph Sailer, Quartermaster.

SHERIDAN TROOP-TYRONE.

Captain C. S. W. Jones.
First Lieutenant Luther F. Crawford.
Second Lieutenant Harry S. Fleck.
Second Lieutenant Robert A. Zentmyer, Quartermaster.

GOVERNOR'S TROOP-HARRISBURG.

Captain Frederick M. Ott.
First Lieutenant Charles P. Meek.
Second Lieutenant John M. Major.
Second Lieutenant Edgar C. Hummel, Quartermaster.

RHODE ISLAND.

First Battalion of Cavalry-Headquarters, Pawtucket.

Major William A. Maynard, Providence, Commanding.
First Lieutenant Leo F. Nadeau, Adjutant, Providence.
Major Charles F. Sweet, Surgeon, Pawtucket.
First Lieutenant Lucius H. Newell, Quartermaster, Pawtucket.
First Lieutenant Edward G. Leach, Commissary, Providence.
First Lieutenant Edward M. Holmes, Paymaster, Central Falls.
First Lieutenant Joseph J. Woolley, Chaplain, Pawtucket.

TROOP A-PAWTUCKET.

Captain Charles Allenson, Central Falls.
First Lieutenant P. Henry McKenna, Valley Falls.
Second Lieutenant John T. McAnley, Lonsdale.

TROOP B-PROVIDENCE.

Captain John J. Richards.
First Lieutenant Joseph A. Crowshaw.
Second Lieutenant Frank P. Dronney.

SOUTH CAROLINA.

First Regiment, South Carolina Volunteer Cavalry-Headquarters, Georgetown.

FIELD AND STAFF.

Colonel J. B. Sparkman.
Lieutenant-Colonel Chas. W. Collock.
Major S. H. Marvin.
Major W. T. Elerbe.
Adjutant J. W. Doar.
Quartermaster P. H. McMaster.
Adjutant, Third Battalion, J. D. West.

TROOP A-EDGEFIELD.

Captain N. G. Evans.

TROOP B-EDISTO ISLAND.

Captain M. M. Seabrook.

TROOP C-PANOLA.

Captain R. C. Richardson, jr.

TROOP D-ST. PAUL.

Captain A. J. Richbourg.

TROOP E-CHARLESTON.

Captain Theo. S. Stukler.

TROOP F-WALTERBORO.

Captain D. C. Hayward.

TROOP G-GILLIBONVILLE.

Captain W. A. Seale.

TROOP H-EUTAWVILLE.

Captain R. G. Cansey.

TROOP I-LEVY.

Captain R. G. W. Bryan.

TROOP K-SAMPIT.

Captain R. O. Bourne.

TROOP L-CONWAY.

Captain L. D. Long.

TROOP M-MONCK'S CORNER.

Captain W. T. Owens.

TROOP DETACHED-GEORGETOWN.

Captain H. T. McDonald.

SOUTH DAKOTA.

First Squadron of Cavalry.

Major Roy L. Sharpe, Commanding, Deadwood.

Lieutenant Edward A. Beckwith, Adjutant, Pierre.

Lieutenant Herbert O. Allen, Asst. Quartermaster, Deadwood.

TROOP A-DEADWOOD.

Captain Carl F. Fay.

First Lieutenant Charles E. Johnson.

Second Lieutenant Christopher C. Johnson.

TROOP B-PIERRE.

Captain Samuel Logan.

First Lieutenant W. C. Notmeyer.

Second Lieutenant Leonard Scovel.

TROOP C-WATERTOWN.

Captain Harry J. Mowrey.

First Lieutenant Frank M. Munroe.

Second Lieutenant William A. McIntire.

TEXAS.

First Cavalry Squadron.

Major Churchill Towles, Commanding, Houston.

First Lieut. J. C. Allen, Adjutant, Houston.

First Lieut. Ira D. Davis, Quartermaster, Houston.

First Lieut. J. L. Short, Assistant Surgeon, Houston.

Captain W. K. Lloyd, Chaplain, Paris.

TROOP A-HOUSTON.

Captain W. W. Cockrell.

TROOP C-AUSTIN.

Captain H. B. Wilson.

TROOP D-CORSICANA.

Captain W. H. Murphy.

The above comprises all mounted Troops in the State, with the exception of the Ranger Force.

TENNESSEE.**TROOP A-NASHVILLE.**

Captain George F. Hagar.

First Lieutenant W. F. Hardin.

Second Lieutenant W. G. Bush.

TROOP B-CHATTANOOGA.

Captain J. P. Pyffe.

First Lieutenant R. S. Sharp.

Second Lieutenant W. J. Nixon.

UTAH.**TROOP A-SALT LAKE CITY.**

Captain George F. Summers.

First Lieutenant R. T. Coverdale.

Second Lieutenant Arley F. Savage.

VIRGINIA.**TROOP B-SURRY.**

Captain Henry C. Land.

WASHINGTON.**TROOP B-TACOMA.**

Captain Everett G. Griggs.

WISCONSIN.**FIRST CAVALRY.****TROOP A-MILWAUKEE.**

Organized April 27, 1880.

Captain Robert W. Mueller.

First Lieutenant Walter L. O'Neil.

Second Lieutenant ———.

WYOMING.**ONE TROOP-CHEYENNE.**

Captain Robert LaFontaine.

First Lieutenant George Gregory.

Second Lieutenant James F. Gross.

MEMBERSHIP OF THE UNITED STATES CAVALRY ASSOCIATION.

The list of members of this Association is published for the purpose of showing the membership, and also the names of those eligible to membership.

It is the earnest desire of the Association to include in its membership list the name of every cavalry officer of the Army.

The attention of all members is invited to the list, and their aid is solicited in getting others to join.

Commanding officers of regiments and posts, and their adjutants, are requested to join in this effort, and to send in the names of new members.

LIST OF MEMBERS OF THE UNITED STATES CAVALRY ASSOCIATION.

LIFE MEMBERS.

(The Constitution no longer permits life memberships. Such as are in existence at the time of the revision of the Constitution shall continue to exist under the same conditions as originally granted.)

Bixby, Wm. E., Major, Engineer Corps. Parker, Dexter W.
Dodge, Charles O., General, M. G. Remington, Frederick.
Grisson, H. S., Brig.-Gen., retired. Windsor, Henry, Jr.
Norman, Wm. W., Colonel, Punjab Cav. Wetmore, Wm. Borum.

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 or volunteer services, provided their records are honorable; general officers of the regular Army and former general officers.)

Errors, if found, should be reported to the Editor.

GENERAL OFFICERS.

MAJOR-GENERALS.

Young, Samuel B. M.
Chaffee, Adna R.
MacArthur, Arthur.

BRIGADIER-GENERALS.

Wade, James F.
Sumner, Samuel S.
Wood, Leonard T.
Boal, J. Franklin.
Carter, William H.
Siles, Theodor H.†

ADJUTANT-GENERAL'S DEPARTMENT.

Colonels.

Babcock, John B.
Hall, William P.†
Lieutenant-Colonels.
Johnston, John A.
Kerr, J. E.†

Majors.

Parker, James.†
Fountain, Samuel W.
McClernand, Edward J.†

INSPECTOR-GENERAL'S DEPARTMENT.

Colonels.

Vroom, Peter D.†
Gauger, Joseph F.

Lieutenant-Colonels.

Knox, Thomas T.
Major.

West, Frank.†

JUDGE-ADVOCATE-GENERAL'S DEPT.

Brigadier-General.

Davis, George B.

Lieutenant-Colonels.

Crowder, Knack H.

QUARTERMASTER'S DEPARTMENT.

Lieutenant-Colonels.

Pond, George E.

Majors.

Hodgson, Frederick G.
Bellinger, John B.
Aleshire, James B.
Bingham, Gonzales S.

Captains.

Cruise, Thomas
Shoem, H. J.†
Knight, John T.
Carson, John M., jr.
Wood, Winthrop S.
Williamson, Geo. McK.
Sewell, Robert.
Slavens, Thomas H.†
Schmiedel, Rishm'd McA.
Walcott, Charles O.†
White, George P.
Crabbe, Joseph T.

ORDNANCE DEPT.

Chief of Ordnance.

Crosier, William.†

Retired List.

Bacon, John M., col.
Bairst, William, capt.
Batson, Matthew A., capt.
Bell, James M., brig.-gen.†
Bernard, E. F., lt.-col.†
Biddle, James, col.†
Boutelle, F. A., capt.†
Braden, Chas., 1st lieut.
Brock, Sam'l., brig.-gen.
Barnett, G. E., 1st lieut.
Carlton, O. H., brig.-gen.†
Carpenter, L. E., 1st lieut.
Carr, E. A., brig.-gen.†
Carroll, Henry, col.†

Claus, J. W., brig.-gen.
Cola, George W., capt.
Compton, Charles E., col.
Converse, G. L., capt.†
Cooney, Michael, col.†

Davis, Wirt, col.†

Evans, George H., capt.

Forryth, J. W., maj.-gen.

Grierson, B. H., brig.-gen.

Harris, Moses, maj.†

Boyle, George G., maj.†

Hunt, George G., col.†

Jackson, Henry, col.

Jackson, James, lt.-col.

Kelley, Joseph M., maj.

Kellogg, Sanford C., 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.

Ludington, M. J., brig.-gen.†

McGregor, Thomas, col.

MacKay, Edward G., maj.

McCook, A. McD., m.-gen.

Merritt, Wm., maj.-gen.†

Milla, Anson, brig.-gen.

Moses, Harris, maj.†

Norvell, S. T., lt.-col.†

Noyes, Henry E., col.†

Oakes, James, col.†

Olinstead, F. E., 1st lieut.

Powell, Philip P., capt.

Richards, James E., capt.

Russell, Gerald, maj.†

Sheridan, M. V., brig.-gen.

Viele, Charles D., col.

Wagner, Henry, lt.-col.†

Walters, H. De H., 1st lieut.†

Wessendorf, Max, capt.

Wheeler, James N., col.

Wheeler, Fred, maj.†

Whitfield, Sam. M., col.

Wheeler, Jos., brig.-gen.

Wood, T. J., brig.-gen.

ROSTER OF CAVALRY OFFICERS. U. S. ARMY.

Those whose names are preceded by an asterisk are members of the Association

1st CAVALRY.

Colonel.

Wells, Almond B.

Lieutenant-Colonel.

Sprole, Henry W.†

Majors.

Ward, Frederick K.†
Woodward, Samuel L.
Borus, Peter S.

Captains.

Galbraith, Jacob G.
Brown, Wm. C.†
Brown, Oscar J.†
Landis, J. F. Reynolds.

Miller, Albert L.

Scott, William.

Goode, George W.

Cabell, De Rosey C.†

Wright, Edmund S.†

Rivers, William C.†

Hartman, John D. L.

Davis, Milton F.†

Lindsley, Elmer†

Arnold, Samuel B.†

Sills, Wm. G.†

First Lieutenants.

Smither, Henry C.

Arnold, Percy W.†

Moseley, George V. H.†

Foy, Robert C.†

Hickman, Edwin A.

Tilford, James D.†

Hazzard, Russell T.†

Richmond, Henry H.

Fitch, Rogers†

Chapman, Leslie A.†

McAndrew, Joseph E.

Gleaves, Samuel E.†

Nolan, Robert M.

Thomas, Charles O., jr.

Second Lieutenants.

Gregory, Daniel D.

Kear, Guy.

Enos, Copley.†

Bell, William H., jr.†

Lindiger, Clarence.

Graham, Arthur M.†

Munro, Horace N.†

Roscoe, David L.†

Smith, -elwyn D.†

Rodney, Walter H.†

Jones, C. Hodman.†

Bissell, Eugene V. N.†

Pegram, John C.

Hodges, Harry L.

Krumm, Herbert Z.

Veterinarians.

Nockolds, Coleman.

2d CAVALRY.

Colonel.

Huggins, Eli L.†

Lieutenant-Colonel.

Dimmick, Eugene D.

Majors.

Schuyler, Walters S.

Robinson, Frank O.

Pearson, Daniel C.

Captains.

Fuller, Alfred M.
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.†
Harron, Joseph S.
Wade, John P.
Kochersperger, S. M.

First Lieutenants.

Orton, Edward P.†
Pope, Francis H.†
Hanna, Matthew E.†
Johnson, Frederick C.†
Moore, John W.
Parker, Henry W.
Reaney, Robert J.†
Mumma, Morton C.†
Harvey, Charles G.†
Smith, Gilbert C.†
Coughlan, Timothy M.†

Second Lieutenants.

Pike, Emory J.
Collins, Robert L.†
Pope, William E.†
McEnhill, Frank.†
Garity, Geo.†
Martin, Walter F.†
Sayles, John T.
Love, Moss L.†
Smalley, Howard E.
Lynch, Frank E.†
Eby, Charles McH.
Taulbee, Joseph F.

Veterinarians.

Lusk, William V.†
Grutzman, W. R.

3d CAVALRY.

Colonel.

Woodson, Albert E.

Lieutenant-Colonel.

Swigert, Samuel M.

Majors.

Kingsbury, Henry P.
Helm, Otto L.
Andrus, Edwin P.

Captains.

Ripley, Henry L.
Morgan, George H.†
Boughton, Daniel H.†
Johnson, Franklin O.
McDonald, John B.†
Heard, John W.
Tate, Daniel L.†
Rice, Sedgwick.
Thayer, Arthur.
Hedekin, Charles A.
Barton, Frank A.†
Conrad, Julius T.†
Williams, Andrew E.
Pattison, Harry H.†
Conrad, Casper H., jr.

First Lieutenants.

Bell, Ole W.
Chitty, William D.
Sirmver, Edgar A.
Babcock, Conrad S.†
Wallach, Robert E.†
McNally, Reginald E.†
Buchan, Fred E.
Cowan, William B.
Cullen, Dorsey.
Van Voorhis, Daniel.
Wood, Robert E.†
Grant, Walter S.
Benjamin, Julian A.†
Jackson, Robert F.
Comly, George B.†

Second Lieutenants.

Sterling, E. Kearsley.
Hazard, Oliver P. M.
Maize, Sidney D.†
Coppock, Edward R.†
Hemphill, John E.
Seane, Consuelo A.†
Lesher, Robert W.†
Taylor, William E.†
Hansaker, Irvin L.
Bernard, Thomas P.†
Valliant, Higby D.
Mitchell, Henry E.
Goodspeed, Nelson A.

Veterinarians.

Schwarzkopf, Olaf.
Gelston, Samuel L.

4th CAVALRY.

Colonel.

Carr, Camillo C. C.†

Lieutenant-Colonel.

Stedman, C. A.

Majors.

Rodgers, Alexander.
Lockett, James.
Murray, Canlife H.
Edwards, Frank A.

Captains.

Erwin, James B.
Benson, Harry C.
Rivers, Tyree R.
Cameron, George H.
Cress, George O.†
Hughes, James B.
Brown, Robert A.
Kochler, Lewis M.†
Stewart, Cecil.
Harris, Floyd W.†
Scherrer, Louis C.†
Winkus, Edwin B. Jr.†
O'Shea, John.
Rutherford, S. McP.†

First Lieutenants.

Kelly, William, Jr.†
Summerlin, George T.
Boyd, Charles T.
Parsons, Lanning.
Arnold, Frederick T.†
Munro, James N.
Henry, Guy V., Jr.†
Pershing, Ward B.†
Haight, Charles S.

Boniface, John J.
 • Darcy, Don H. †
 • Farvian, Samuel A. †
 • McCaskey, Doug. A. †
 • Henschler, Fred W.
 • Knox, Thomas H. †

Second Lieutenants.

Franty, Leonard W.
 Haylor, Charles J.
 Martin, Williams S.
 • Moha, Albert J. †
 • Edwards, Frank B. †
 • Degan, John A. †
 • Mowry, Philip †
 • Steele, John.
 • Tortorella, G. R. †
 • Perkins, Edward O. †
 • Starrett, Robert.
 • Jurick, Anton, Jr. †
 • Henry, James H., Jr. †
 • Cowles, William H.

Veterinarians.

Flemmer, Alex.

8th CAVALRY.

Lieutenant-Colonel.

• Hatfield, Charles A. P.
 Majors.

• Faddock, George H.
 • Watts, Charles H.
 • Bishop, Basil S.

Captains.

• Wheeler, Homer W.
 • Swift, Eben. †
 • Foster, Fred W.
 • Goldman, Henry J.
 • Macomb, Augustus C.
 • Bryan, Roger B. †
 • Holbrook, Willard A.
 • Frank, Peter E.
 • Jenkins, John M.
 • McChure, Nathaniel F. †
 • Fleming, Lawrence J.
 • Blanton, August C. †
 • Fritchard, George B. †
 • Willard, Harry O.
 • Holbrook, Leland R.

First Lieutenants.

• Dailan, Samuel F. †
 • Valentine, William S. †
 • Hall, Chas. G.
 • McChure, Albert H.
 • Foley, Hamilton.
 • McClintock, John. †
 • Sturges, Edward A. †
 • Myers, Hu B.
 • Royer, Marion C.
 • Lewis, John H.
 • Rodney, Geo. B. †
 • Martin, Charles F.
 • Dixon, Varian D. †
 • Frazier, Lewis. †

Second Lieutenants.

• Oliver, Prince A. †
 • Cooley, William H. †
 • Meers, Frederick †
 • Bernard, Joseph H. †
 • Hennessey, Peter J.
 • English, Ebert G. †
 • Swift, Eben. †
 • Andrews, Edwin D.
 • Whitley, Wm. F. †
 • Dlugan, Ernie F. †
 • Sauerbille, George R.
 • Jacobs, Douglas H. †
 • Rensselaers, Wm. B.
 • Winick, Chas. O.
 • Rothwell, Thomas A.
 • Dockery, Albert B.

Veterinarians.

Vane Agnew, Robert S.

9th CAVALRY.

Colonel.

Smith, Allen.

Lieutenant-Colonel.

• Anderson, George S. †

Majors.

• Beck, Wm. H.
 • Groscham, John O.
 • Fitcher, John.

Captains.

• Cheever, Benj. H.
 • Wilcox, Elton F.
 • Sando, George H.
 • Allen, Henry T.
 • Forsyth, William W. †
 • Steele, Matthew F. †
 • Cole, James A. †
 • Hutcheson, Groce.
 • Hyman, George L.
 • Howse, Robert L.
 • Ryan, John P.
 • Rhodes, Charles D. †
 • Farlong, John W.
 • Anderson, A. Van P.
 • Heiberg, Elvin E. †

First Lieutenants.

• Raymond, John C. †
 • Craig, Malin. †
 • Guiney, Patrick W.
 • Heintzelman, Stuart.
 • Read, Beverly A. †
 • Karaca, Wm. L.
 • Baer, Joseph A. †
 • Morris, Wm. J. †
 • Biddle, David H. †
 • Miller, Archie.
 • Read, William O.
 • Glover, Francis W.

Second Lieutenants.

• Lahm, Frank P. †
 • West, Emory S.
 • Place, Olney. †
 • Miller, Ralph.
 • Butler, Rodman. †
 • Hanson, John P. †
 • Schroeter, Anton H.
 • Turner, Frederick G. †
 • Keyes, Edward A.
 • Bidman, Frank E. †
 • Stryker, Gots L. †
 • Joyce, Kenyon A.
 • Woode, Albert J.
 • Winter, John G., Jr. †
 • McCabe, F. B. Warner. †
 • Foley, Oscar.
 • Griffin, Frederick D.

Veterinarians.

Hunter, Sidney L.
 Uri, Jules H.

7th CAVALRY.

Colonel.

Baldwin, Theodore A.

Lieutenant-Colonel.

• Edgerly, Winfield S. †

Majors.

• Godwin, Edward A.
 • Chase, George F.
 • Varnam, Charles A.

Captains.

• Blockson, Augustus P.
 • Scott, Hugh L. †
 • McCormick, Loyd S.

• Stakel, Horatio G. †
 • Brewer, Edwin P.
 • Mosser, William A. †
 • Waterman, John C.
 • Tompkins, Selah E. H.
 • Beach, Francis H.
 • Vestal, Solomon F.
 • Anderson, Edward.
 • Butler, Matthew C., Jr.
 • Paine, Wm. H. †
 • Averill, Nathan K.
 • Hawkins, Clyde E. †

First Lieutenants.

• Powers, Robert B.
 • Mitchell, Geo. E.
 • Murphy, Pierce A. †
 • Harper, Roy B. †
 • Booth, Ewing E. †
 • Humphrey, Evan H.
 • Khea, James C.
 • Connell, William M.
 • Boice, Charles H.
 • Castee, Delphay T. E.
 • Lovell, Geo. E. †
 • Gienty, Daniel H.
 • Kendrick, William J.
 • Bach, Christian A.
 • Commiskey, Archib'd F.

Second Lieutenants.

Brown, Lewis, Jr.
 Hayden, Ralph N.
 • Latum, Howard C.
 • Bamberger, Raymond.
 • Jennings, Thomas H.
 • Palmer, Orlando G.
 • Austin, Wm. A.
 • • Tyner, Geo. P. †
 • Mann, Herbert E.
 • Lee, George M.
 • Barney, James P.
 • Cartmell, Nathaniel M.
 • McKenney, Henry J.
 • Maigne, Chas. M.
 • Herr, John K.

Veterinarian.

Jefferis, Joseph E.

8th CAVALRY.

Colonel.

• Rucker, Louis H.

Lieutenant-Colonel.

• Morton, Charles.

Majors.

• Stanton, William.
 • Ayres, Charles G.
 • Shunk, William A.

Captains.

• Gaston, Joseph A.
 • Hammond, Andrew G.
 • Dickman, Joseph F. †
 • Slocum, Stephen L. H.
 • Flynn, William F.
 • Duff, Robert J.
 • Sayre, Farrand.
 • Farber, Charles W.
 • Barnum, Melvern H.
 • Evans, Ellwood W.
 • Donaldson, T. Q., Jr.
 • Stockie, George E. †
 • Sattelle, Charles G. †
 • Saxton, Albert K.
 • Miller, Alex M., Jr. †

First Lieutenants.

• Lott, Abraham G. †
 • Wells, Rush S.
 • Williams, George.
 • Roberts, Hugh A. †
 • Oliver, Llewellyn W.

• Norvell, Gur S. †
 • Latrobe, Osmun, Jr.
 • King, Albert A.
 • • Wesson, Charles M. †
 • Watson, John.
 • Elliot, Duncan.
 • Kirkman, Hugh. †
 • Purlington, George A.
 • Carson, Lawrence S.
 • Coxe, Alexander B. †

Second Lieutenants.

• Keller, Frank. †
 • Cunningham, T. H. †
 • Kilbourne, Louis H. †
 • Walker, Richard W.
 • Young, John S. E.
 • • Otis, Frank I. †
 • Megill, Sebring C.
 • Davis, Frank E. †
 • Smith, Talbot. †
 • Righter, Joseph C., Jr.
 • Phillips, Albert E.
 • • T-rrell, Henry S. †
 • Bailey, George F.
 • McCain, William A.

Veterinarians.

• Stancilist, Ray J. †
 • Steele, Harry F.

9th CAVALRY.

Colonel.

• Godfrey, Edward S.

Lieutenant-Colonel.

• Steever, Edgar Z.

Majors.

• Garrard, Joseph.
 • Wright, Henry H.
 • • Gile, George H. G.

Captains.

• McBlain, John F. †
 • Fuller, Alvarado M.
 • Cornish, Lester W.
 • Walsh, Robert D.
 • Read, George W. †
 • Nance, John T.
 • Young, Charles.
 • Armstrong, Frank S.
 • Hamilton, George F.
 • Bigelow, Mortimer O.
 • Dixon, Henry B.
 • • Sievert, Herman A.
 • Christian, John B.
 • Moses, George W.
 • Stodter, Chas. E.

First Lieutenants.

• Babottom, E. Holland.
 • Pearson, Samuel B.
 • • Morrow, Henry M. †
 • Fair, John S.
 • Coleman, Sherrard.
 • • Winterburn, Geo. W. †
 • Quinlan, Dennis P.
 • Calvert, Edward.
 • Fechet, James E.
 • • Pilcher, Winston. †
 • Jones, Frederick M.
 • Gibbins, Henry.
 • • Cole, Casper W. †

Second Lieutenants.

• Haskell, William N.
 • Barton, Robert M. †
 • Cox, Edwin L.
 • • Hathaway, C. Emery. †
 • Buchanan, E. A. †
 • • Esty, Thomas B. †
 • Love, Robert E. †
 • McNirney, Frank T.

Kuznik, Joseph V.
 Camp, Beauford B.
 Howard, John H.
 • • McGee, Oscar A. †
 • MacKinn, Wm. E. W.
 • Bowie, Hamilton.
 • • Ruggles, Francis A. †
 • Sheridan, Philip H.
 • Smith, Andrew W.
 • Miller, Troup.

Veterinarians.

Glason, S., Jr.
 Tempany, John.

10th CAVALRY.

Colonel.

• Augur, J. A. †

Lieutenant-Colonel.

• Hughes, Martin B.

Majors.

• Scott, George L. †
 • Fuller, Ezra B. †
 • Beach, W. D. †

Captains.

• Bigelow, John, Jr.
 • Read, Robert D., Jr.
 • • Grierson, Charles H.
 • • Watson, James W.
 • • Freeman, Samuel D.
 • • Johnson, Carter P.
 • • Macdonald, Godfrey H.
 • Hay, William H.
 • Paxton, Robert G.
 • • Livermore, Richard L.
 • • Fleming, Robert J.
 • Carson, Thomas G.
 • Cavanaugh, Harry LaT.
 • Parker, James S.
 • Jervey, Eugene P., Jr.

First Lieutenants.

Whitehead, Henry C.
 • Kennington, Alfred E.
 • Roberts, Thomas A.
 • • McCoy, Frank R. †
 • Farmer, Charles C., Jr.
 • • Whitely, Warren W.
 • Gaujot, Julien E.
 • Hart, Augustus C.
 • Fonda, Ferdinand W.
 • • Godson, Wm. F. H. †
 • • Cornell, Wm. A.
 • • Oden, Geo. J. †
 • Huston, James.
 • Palmer, Bruce.
 • Wagner, John A.

Second Lieutenants.

Müller, Carl H.
 • Tompkins, Daniel D.
 • Stott, Clarence A.
 • Bowdish, Myron B.
 • O'Connor, Marr.
 • Wells, Edward C.
 • Davis, Benjamin O.
 • Johnston, Gordon.
 • Price, Geo. E.
 • • Herman, Frederick J. †
 • Cook, Seth W.
 • Scott, Walter J.
 • Edwards, William W.

Veterinarians.

McMardo, C. D.
 Service, S. W.

11th CAVALRY.

Colonel.

• Moore, Francis

Lieutenant-Colonel.

Hennisse, Argalus G.

Majors.

Hickey, James B.
 • Finley, Walter L.
 • Sibley, Frederick W.

Captains.

• West, Parker W.
 • • Haines, John T.
 • • Brooks, Edward C.
 • • Hardeman, Letcher.
 • • Elliott, Stephen H.
 • • Perry, Alexander W.
 • • Langhorne, George T.
 • • Rowell, Melvin W.
 • • Jones, Samuel G. †
 • • Harbord, James G.
 • • Tomkins, Frank.
 • • Clayton, Powell, Jr.
 • • Leary, Edmund M.
 • • Vidmer, George.
 • • White, Herbert A. †

First Lieutenants.

• King, Edward L.
 • • McCormack, Willard H.
 • • scales, Wallace B.
 • • Kromer, Leon B.
 • • Cushman, Guy.
 • • Lubn, William L.
 • • Ryan, Thos. F. †
 • • Taylor, Theodore B.
 • • Davis, Edward.
 • • Amos, Frank P.
 • • Rockwell, Verne La S.
 • • Odell, Albert S. †
 • • Shelley, James E.
 • • Tompkins, Edmond R.

Second Lieutenants.

Smith, Walter D.
 Cox, Creed F.
 Pearson, John H.
 Symington, John.
 Baird, George H.
 • Warren, Rawson.
 • Cocke, John.
 • • Grunert, George †
 • • Parker, Ralph M.
 • • Perkins, Alvin S.
 • • Meade, William G.
 • • Rittenhouse, Basil N.
 • • Westmoreland, Wade H.
 • • Caldwell, Ralph C.
 • • Casad, Adam F.
 • • Stevenson, William L.

Veterinarians.

McDonald, Alex.

12th CAVALRY.

Colonel.

• Forbush, Wm. C. †

Lieutenant-Colonel.

• Dorst, Joseph H.

Majors.

Hare, Luther R.
 • Gullfoyle, John F. †
 • Kendall, Henry F.

Captains.

• Nicholson, William J.
 • • Trippe, Percy E.
 • • Duman, Thos B.
 • • • Michie, Robert E. L. †
 • • • Littlebrant, William T.
 • • Caldwell, Frank M.
 • • Hornbrook, James J.
 • • Grimmons, Charles J.
 • • Anderson, Edward D.

* Beckenbach, Sam. D. †
 * Cusack, Joseph E. †
 * Deussen, John E. †
 * Fester, Francis L. J. †
 * Craig, John W. †
 * Berkeley, Hugh D.

First Lieutenants.

* Brown, Herbert J. †
 * Lee, Pittsburgh, Jr. †
 * Long, John D. †
 * Ryan, John J. †
 * Sharpley, Arthur G. †
 * Foster, Ashton H. †
 * Ouse, Frank L. †
 * Ooten, Harry E. †
 * Van Way, Charles W. †
 * Burroughs, James M. †
 * Horey, Lewis S. †
 * Bolles, Frederick B. †
 * Ouse, Lewis W. †
 * Kimball, Gordon S. †
 * Bagler, George W.

Second Lieutenants.

* Truett, Orlando C. †
 * Beck, Robert McC. Jr. †
 * Olney, Edward M. †
 * Mayo, Charles E. †
 * Jeffers, Solomon L. †
 * Fitch, Arthur H. †
 * Lamb, Oscar S. †
 * Butler, James S. †
 * Beaman, Taylor M. †
 * Abbott, James E. †
 * Quinn, Max. †
 * Tate, Robert F. †
 * Graham, William M., Jr. †
 * Coffey, Edgar S.

Veterinarian.

Hill, William F.

12TH CAVALRY.

Colonel.

Hayes, E. M.

Lieutenant-Colonel.

* Thomas, Earl D.

Majors.

* Hunt, Levi P. †
 * Jones, Thaddeus W. †
 * Taylor, Charles W. †

Captains.

* Lockridge, F. D. †
 * Dade, Alexander L. †
 * Preston, Guy H. †
 * Foster, Charles W. †
 * Carver, Thomas M. †
 * Glasgow, William J. †
 * Phillips, Edwin L. †
 * Williams, Robert G. †
 * Short, Albert C. †
 * Sweeney, George E. †
 * Whitman, Walter M. †
 * Babcock, Walter C. †
 * Myer, Benjamin B. †
 * Cassatt, Edward B. †
 * Hawkins, Hamilton S. †

First Lieutenants.

* Benney, Charles A. †
 * Leachman, J. Jr. †
 * Wilkins, William H. †
 * Ball, Louis E. †
 * Morgan, Dexter †
 * Henton, Wilson G. †
 * Harrington, Wm. F. †
 * Gotha, James †
 * Wilson, John W. †
 * Davidson, Alexander H. †
 * Low, William L. †
 * Stoenberg, George. †

* Moffet, Wm. P. †
 * Clifton, Wm. H., Jr. †
 * Dietrich, Conrad L.

Second Lieutenants.

* Smith, Walter H. †
 * Meyer, Henry A., Jr. †
 * Dean, Fred L. †
 * MacLane, Paul E. †
 * Donnelly, John T. †
 * Bristol, Matt. C. †
 * Dougherty, C. A. †
 * Trumbo, Geo. A. F. †
 * Hill, Walter H. †
 * Ellis, Rowland B. †
 * Reynolds, Robert W. †
 * Bull, Henry T. †
 * Oathro, Thomas E. †
 * Jennings, Charles H. †
 * Pritchard, William D.

Veterinarian.

Malden, Wm. J.

14TH CAVALRY.

Colonel.

* Lebo, Thomas C. †

Lieutenant-Colonel.

* Cooper, Chas. L.

Majors.

* Dodd, George A. †
 * Hardie, Francis H. †
 * O'Connor, Chas. M. †

Captains.

* Carter, Jesse McI. †
 * Gray, Alonso †
 * Bailey, Edwin M. †
 * McNamee, M. M. †
 * Moyer, Orrin B. †
 * Howard, Harold P. †
 * Reeve, James H. †
 * Walker, Kirby †
 * Adams, Sterling P. †
 * Smith, Cornelius C. †
 * Smothery, Wm. E., Jr. †
 * Yates, William †
 * Crosby, Herbert B. †
 * Smith, Mathew C. †
 * Drake, Charles B. †

First Lieutenants.

* Day, Clarence E. †
 * McKinley, James F. †
 * Heidt, Grayson V. †
 * Rayne, Paul T., Jr. †
 * Schultz, Theodore †
 * Gillem, Alvan C. †
 * Lippincott, Aubrey †
 * Robinson, Freeborn P. †
 * Whitlock, Frank O. †
 * Thomas, Edward M. †
 * Corbender, Philip W. †
 * Wells, William S., Jr. †
 * Pedlow, Arthur. †

Second Lieutenants.

* Jordan, Harry B. †
 * Russell, George M. †
 * Piffow, Jerome G. †
 * Egan, Earl T. †
 * Kyles, Allen C. †
 * Good, John H., Jr. †
 * Fisher, Arthur G. †
 * Jewell, James M. †
 * Rothorst, Otto W. †
 * Becker, Kyle †
 * Fisher, Ronald E. †
 * Myer, Randolph E. †
 * Hume, John K. †
 * Weymann, Paul †
 * Zane, Edmund L.

Veterinarian.

Peter, Henry W.

15TH CAVALRY.

Colonel.

* Wallace, Wm. M.

Lieutenant-Colonel.

* Pratt, Richard H. †

Majors.

* Hunter, George K. †
 * Craig, Louis †
 * Day, Matthias W.

Captains.

* Pershing, John J. †
 * Rooster, Francis J. †
 * Overton, Clough †
 * Merrill, Alfred C. †
 * Marshall, Francis C. †
 * Ryan, James A. †
 * Johnson, William T. †
 * Barnhardt, George C. †
 * Lindsey, Julian E. †
 * Hickok, Howard B. †
 * Kirkpatrick, G. W. †
 * Andrews, Lincoln C. †
 * Walker, Kenzie W. †
 * Park-r, Frank †
 * Eitinge, Le Roy.

First Lieutenants.

* Forsyth, William D. †
 * Dean, Warren †
 * Dudley, Clark D. †
 * Van Leer, Samuel †
 * Ross, James O. †
 * McCullough, Charles E. †
 * Duncan, Geo. O. †
 * Bowman, George T. †
 * Cameron, Francis H., Jr. †
 * Tremaine, Wm. C. †
 * Briand, Christian †
 * Going, Richard B.

Second Lieutenants.

* Mangum, Wiley P. †
 * Burnett, Chas. †
 * Lynch, Arthur J. †
 * Gardenhire, William C. †
 * Culver, Clarence C. †
 * Lear, Ben, Jr. †
 * Ely, Eugene J. †
 * McMullen, Joseph I. †
 * Barriger, Wm. †
 * Norton, Clifton E. †
 * Holliday, Milton G. †
 * Martin, Isaac †
 * Partridge, Leon E. †
 * Overton, Wm. W. †
 * Enslow, Raymond S. †
 * Foster, Victor S. †
 * Robertson, Samuel W.

INFANTRY.

* Barber, Henry A. Capt., 24th Reg.

ARTILLERY.

* Van Deusen, George W., Captain. †

CIVIL LIFE.

* Quay, A. G. C., Captain.

PROFESSOR MILITARY ACADEMY.

Wood, E. E., Colonel. †

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 * Appleton, D., Colonel N. G., N. Y.
 * Biddle, J., Captain, Corps Engineers.
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 * Conklin, John, Captain, Art. Corps. †
 * Clark, C. H., Captain, Ord. Dept. †
 * Craigie, D. J., Colonel, 11th Infantry.
 * Cole, G. M., Gen. Con. N. G. †
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 * Dodge, T. A., Lieutenant-Colonel, retired.
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 * Evans, R. K., Major, Asst. Adjt.-Gen.
 * Foster, A. B., Captain, 19th Infantry.
 * Fuller, C. J., N. G. Cal. †
 * Gardner, E. F., Major, Medical Dept. †
 * Goodin, J. A., Captain, 7th Infantry.
 * Hardin, E. F., Major, 7th Infantry.
 * Hasbronck, H. C., Colonel, Art. Corps.
 * Head, G. E., Lieutenant-Colonel, retired.
 * Hoff, J. Van R., Lieut.-Col., Med. Dept.
 * Irons, J. A., Major, Inspector-General. †
 * Jackson, J. S., Major, 11th Infantry.
 * Kline, Jacob, Colonel, 21st Infantry.
 * Lacey, F. E., Captain, 1st Infantry.

* Macomb, M. M., Major, Artillery Corps.
 * Mason, C. W., Major, 4th Infantry.
 * Maus, M. P., Lieut.-Col., 22d Infantry.
 * Nichols, W. A., Major, 21st Infantry.
 * Noyes, C. R., Captain, 9th Infantry.
 * Page, C., Colonel, Medical Department.
 * Pearson, E. P., Colonel, retired.
 * Rafferty, O., Major, Medical Dept.
 * Randolph, Wallace F., Col., Art. Corps.
 * Rowan, Hamilton, Captain, Art. Corps. †
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 * Russell, E. K., Lieut.-Col., Ord. Dept.
 * Schermerhorn, F. E., P. N. G. †
 * Sharpe, H. G., Colonel, Subistence Dept.
 * Smedburg, W. R., Captain, retired.
 * Straub, O. I., Captain, Artillery Corps.
 * Sturgis, S. D., Captain, Artillery Corps.
 * Tucker, W. F., Major, Pay Department.
 * Vierra, F. M., 2d Lieut., Cal. N. G. †
 * Winham, F. W., 1st Lieut., N. G. Cal. †
 * Wise, Hugh D., Captain, 7th Infantry.
 * Wagner, A. L., Colonel, Asst. Adjt.-Gen.
 * Wissner, John P., Captain, Art. Corps.

EDITOR'S NOTICE FOR ADVERTISERS.

Attention is invited to Mr. Richard Springe's advertisement, which appears in this issue of the JOURNAL. The firm is the oldest exclusive tailoring and men's outfitting establishment in Leavenworth, and enjoys the confidence of the community and all high-grade dressers.

Mr. Springe at all times keeps in touch with new improvements, and this is what he has to say: "Realizing that Fort Leavenworth is going to be the largest military post in America, I have added to my stock of merchandise a complete line of *military cloth and equipments*, and I am now prepared to fill orders for any article pertaining to the Army. Mr. E. R. Bannon has charge of this department, and shall be pleased to fill any order or answer any inquiry pertaining to prices or other information. The military tailoring department is under the management of Mr. E. S. Petterson, a gentleman of high ability and years of experience as a military cutter. All our work is absolutely guaranteed, and no garment is allowed to leave our establishment unless it is to the perfect satisfaction of our customer. Send for our samples and we will be pleased to quote prices."

The advertisement of Lemcke & Buechner, of 812 Broadway, New York city, appearing in this issue of the JOURNAL, will serve to introduce this firm to the newer members of the Cavalry Association. The firm is well known by the older officers in the service, as importers of all kinds of books. They keep in stock a large number of the standard books, which they can furnish without delay. Those not on hand are quickly procured, and the firm attends to all matters of paying duty, etc. If in want of any book whatsoever, you need only address the firm, and they will attend to your wants promptly and at reasonable cost. They are reliable, accurate, courteous and expeditious.

The attention of the JOURNAL's readers is called to the hotel advertisements in this number, including hostelrys in Washington, Leavenworth and San Francisco. In no other cities of the country can so large a number of officers of the Army be found as in the three named. The one the capital of the Nation, the second the seat of the General Service and Staff College, the third the rendezvous for those going to and returning from the Philippines. Hotel managers appreciate Army patronage, and those who are wide-awake are quick to recognize the value of printer's ink by making good use of the JOURNAL's advertising department. The Occidental at San Francisco, the New Planters and the National at Leavenworth, and the Ebbitt at Washington are places where Army officers make their headquarters. Leavenworth has been particularly fortunate in the opening of its New Planters in anticipation of the opening of the General School at Fort Leavenworth. It is classed among the best hotels in the West, and is sustaining its reputation among those who have been so fortunate as to make it their headquarters.