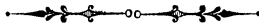

U. S. INFANTRY AND CAVALRY SCHOOL.

FORT LEAVENWORTH, KANSAS, AUGUST 1, 1895.

H. S. HAWKINS,

COLONEL 20TH INFANTRY, COMMANDANT.



ANNUAL REPORT.

(INCLUDING REPORTS OF INSTRUCTORS.)

U. S. INFANTRY AND CAVALRY SCHOOL.

FORT LEAVENWORTH, KANSAS, AUGUST 1ST, 1895.

The Adjutant General, U. S. Army,

Washington, D. C.

SIR:

I have the honor to submit the following report of the operations of the U. S. Infantry and Cavalry School for the second school year commencing September 1st 1894, and ending with the graduating exercises on June 17th, 1895.

The student class which completed the course at the school was composed of the following named officers:

1st Lieutenant	Charles H. Muir	2nd Infantry
2nd	“ John S. Switzer.. . . .	4th “
2nd	“ Joseph C. Castner.. . . .	4th “
1st	“ Earl C. Carnahan.. . . .	5th “
2nd	“ Edward Sigerfoos.	5th “
2nd	“ William H. Simons	6th “
2nd	“ William Wallace.	7th “
1st	“ John A. Perry.	8th “
2nd	“ Arthur W. Yates	9th “
2nd	“ Edward A. Shuttleworth.	11th “
2nd	“ Matt R. Peterson	13th “
2nd	“ Peter C. Harris.. . . .	13th “
2nd	“ Frederick W. Fügler.	13th “
2nd	“ Charles R. Krauthoff.	14th “
1st	“ Frank Owen	14th “
1st	“ Edmund Wittenmyer.	15th “
2nd	“ Henry J. Hunt.	15th “
2nd	“ Benjamin F. Hardaway.	17th “
2nd	“ Percival G. Lowe.	18th “

2ndLieutenant	Jasper E. Brady, Jr., ,	19th	Infantry
2nd	“ John Howard	19th	“
2nd	“ Wilson Chase.	20th	“
2nd	“ Munroe McFarland	21st	“
2nd	“ Ralph H. Van Deman.	21st	“
2nd	“ Robert L. Hamilton	22nd	“
2nd	“ Albert C. Dalton	22nd	“
2nd	“ James E. Normoyle.	23rd	“
1st	“ William Black.	24th	“
2nd	“ John R. Seyburn	24th	“
2nd	“ John S. Murdock.	25th	“
2nd	“ Robert C. Williams	1st	Cavalry
2nd	“ James J. Hornbrook	2nd	“
2nd	“ John P. Ryan	3rd	“
2nd	“ Edward D. Anderson.	4th	“
2nd	“ Louis C. Scherer	5th	“
2nd	“ James G. Harbord.	5th	“
2nd	“ Ervin L. Phillips.	6th	“
2nd	“ John O’Shea	7th	“
1st	“ John C. Waterman.	8th	“
2nd	“ Matthew A. Batson	9th	“
2nd	“ Winthrop S. Wood	10th	“

The class originally reported with forty-six members-of these, four were relieved from duty at the school for various causes and one was found incapable of completing the course; the remaining forty-one members mentioned above by name, have received /the diploma of the school. This class has shown ability, zeal, and soldierly conduct and, if opportunity affords, it is confidently believed that the class will also testify in its work to the value of the course of study pursued at the school.

The following named officers having shown the greatest proficiency are recommended by the staff to be declared “Honor Graduates” of the U. S. Infantry and Cavalry School.

1. 1st Lieutenant Charles H. Muir, 2nd Infantry.
2. 2nd Lieutenant John P. Ryan, 3rd Cavalry.

3. 2nd Lieutenant Peter C. Harris, 13th Infantry.
4. 2nd Lieutenant Winthrop S. Wood, 10th Cavalry.
5. 2nd Lieutenant Edward Sigerfoos, 5th Infantry.

For a synopsis of the work done in the last year, attention is invited to the accompanying reports of the instructors in charge of the several departments.

SEPARATING SCHOOL AND GARRISON.

From this time on it is probable that there will be no necessity for detailing any officer of the garrison for additional duty with the school, so that the former trouble, which resulted in temporarily crippling some departments by the absence of its instructors who were called upon for detached service with their companies, is not likely to arise again.

The separation of the school from the garrison has still further been effected by the now clearly defined limits of each. The instructors, assistant instructors, secretary, and student officers are assigned to quarters pertaining exclusively to the school, so that whatever changes occur in the personnel of the garrison, they will not in any way affect the school. This is a great step in advance.

Some day McPherson and Thomas Halls will have to be torn down. They were old barracks for enlisted men and have been used for quarters by student officers who had families. Being uncomfortably crowded and lacking the conveniences demanded by decency, these quarters have been a cause of great complaint.

Awaiting the time when they shall disappear it is the intention now to attempt to make them more habitable by converting them into nine sets of quarters instead of fifteen as heretofore. This has been rendered possible by the acquisition of the line of houses on Riverside which were formerly used by officers on duty with the Military Prison.

This school has grown from a very disheartening start into a useful institution, and it is still growing; therefore, the benefits it bestows should become available to an increasing number of students until we should find a class of accomplish-

ed officers graduating every year. To do this it is absolutely necessary that more quarters be provided. They need not be luxurious but they should be better than can be made out of Thomas and McPherson Halls.

DETAILING OF STUDENT OFFICERS.

Regimental commanders in making selection of officers one year in advance of entrance at the school would assist greatly if their choice were made among those who they know to be qualified for the work. The school has passed beyond the preparatory stage. Its allotted time cannot be diverted to preliminary study of algebra, geometry and trigonometry. The attempt to help those lacking such elementary knowledge, by sending them to the school for study a few months before the entrance of their class, has been found not to produce results at all commensurate with the efforts made. If a young man has no training in those branches, he cannot acquire necessary proficiency in such a short time, and it is not desirable that he should be sent here to become an actual impediment in the development of the school. It must be remembered that comparatively few of the young officers can have the opportunity of benefiting by the facilities offered at this school, therefore those who do come, should be men capable of mastering the course.

if the study of text books in algebra, geometry, and trigonometry is found necessary among commissioned officers, they should be sent to a school established for that purpose.

This school is intended to train officers in the practical application of methods.

DAILY MARKS FOR RECITATIONS.

The abolishment of daily recitation marks is strongly recommended. The student should be encouraged to ask information from the instructor on points which he does not clearly understand. This is often carefully avoided from the fear that, by showing such need of explanation, he will be cut one or more tenths in his mark for the day.

At the Military Academy the system would seem to be a

necessary stimulus to exertion and the only means of accurately estimating the daily progress of the students. But to the commissioned officer there should be a higher motive in the sense that the government is investing a certain capital in fitting him to make profitable return through increase of capacity for useful service.

The cadet congratulates himself if on any one day he has been so fortunate as to recite upon the only portion of the lesson which he studied to the exclusion of all the rest. The idea never enters his head that the neglected portion is a positive loss to himself, unless, at some later day or at examination, such neglected subject should happen to be given out to him, in which case he merely looks upon his fate as unfortunate. The officer instead of jealously watching for tenths should look upon the school course as a mine of knowledge wherein he is at work for acquiring all he can to enable him to make proper return to the government when called upon.

VALUE OF DIPLOMA.

The degree of proficiency to which the student should attain ought to be raised, and if at any time the officer is found neglecting his opportunities he ought to be sent away. Then the diploma given by this institution upon graduation should be a passport for the holder for all future examinations for promotion so far as they pertain to the subjects taught at the school.

INSTRUCTION IN DRILL REGULATIONS.

It is a waste of time at this school to insist upon recitations in drill regulations. The practice is a remnant of that resorted to in the infancy of the school when no one knew where else to turn his hand to in making a beginning. The captain of a company "is responsible for the theoretical and practical instruction of his officers and requires them to study and recite the regulations so that they can explain thoroughly every movement before it is put into execution." No officer should be sent here to recite these drill regulations. It is

intended however to give instruction by lecture upon the drill regulations of foreign armies in order to facilitate comparison with our own methods.

The field work in the Departments of Military Art and Engineering is developing in a very satisfactory manner.

This spring the barbed wire fences which had been allowed for years to interfere with the field operations have been removed and numerous crossings made over railways and ravines, so that there will be increased opportunity for practical work. Attention is invited to the detailed description of such work given by the Instructor in Military Art and the Instructor in Engineering.

For practical instructions in field operations with troops, it is very desirable that at least one field battery be stationed at this post as has been so often recommended. The infantry and cavalry should be increased. Of course this is looking to the future when necessary barracks can be provided.

The annex to the academic building is now completed and will give increased facility for instruction in all the departments. Attention is invited to the report of the secretary of the school showing the necessity for the service of a janitor to care for this large building.

The recommendation of the former commandant of the school for an appropriation of \$1600 to purchase instruments for the Department of Engineering is renewed. The necessity for obtaining these instruments has been clearly shown in previous communications from the chief of the department and again in his report hereto attached.

Very Respectfully,

Your Obedient Servant,

H. S. HAWKINS.

COLONEL 20TH INFANTRY,
COMMANDANT.

REPORT OF THE SECRETARY,



U. S. INFANTRY AND CAVALRY SCHOOL.

FORT LEAVENWORTH, KANSAS, JULY 5th, 1895,

The Commandant,

U. S. Infantry and Cavalry School.

SIR: —

I have the honor to submit the following report pertaining to the school as secretary.

I assumed charge of the office September 15, 1894, relieving 1st Lieutenant W. S. Scott, 1st Cavalry, who was appointed Adjutant of his regiment.

Since the date of my predecessor's last report, the much needed addition to the academic building has been completed, and will be ready for occupation by the new class in September next.

The fifteen hundred dollars (\$1500) appropriated for the school, has been expended as follows:

Printing office furniture.	\$ 9.30
Paper, ink, plates, etc., for printing office.	81.97
Stationery and supplies for offices and section rooms, including diplomas for graduating class.	200.90
Instruments and materials for the Department of Engineering.	414.14
Maps and materials for making and mounting maps for the Department of Military Art.	120.90
Library and reference books for the various Departments, and scientific papers and periodicals	411.29

Binding and repairing library books.	42.00
Extra duty pay to enlisted men employed as printers	219.50
	-
	\$ 1500.00

These expenditures have been made in compliance with orders and regulations.

One hundred and seventeen (117) volumes were added to the library during the year by purchase, besides a number of government publications received from the several executive departments at Washington.

I would respectfully invite attention to the fact that the amount appropriated is wholly inadequate to meet even the most needed wants of the school, All of the departments are in need of materials and other facilities, especially the department of Engineering. Estimates for an increase in the appropriation have been made for several years and have received the approval of the War Department.

The records of the school have been kept in accordance with orders and regulations. Improvements have been made wherever they suggested themselves and were not in conflict with existing customs.

The school property has been properly cared for, and, with the exception of a few articles, which from continued use have become worn out, is in good condition.

The library, while much more could have been added had funds been available, has continued to grow, and is now being transferred to the newly erected hall.

In connection with the above I would respectfully call attention to the report of my predecessor for the year 1894, and to renew his recommendation that an additional man be detailed as janitor for the school. At present there is but one man detailed, who, besides performing the duties of janitor, acts also as librarian, and this really requires his entire time, checking books in and out and keeping the library in condition; besides, there are nearly one thousand maps to be cared for and held in readiness for immediate

call. While this had worked somewhat of a hardship prior to the erection of the addition, it will now be impossible for one man to take care of the twenty-six rooms-some of them very large-besides the basement, storage rooms and closets, all of which have to be cleaned and looked after daily, in addition to the attention necessary to the library.

Under the provision of G. O. No. 50, A. G. O., 1891, I have purchased during the year seventeen hundred and seven (1707) volumes, (text-books, books of reference, and professional works) for officers of the army, amounting to three thousand five hundred and two dollars and ninety-one cents (\$3502.91.) While this has necessitated a vast amount of additional labor, it has proven a great convenience to the officers, both financially and otherwise, and appreciated by all. There are but few officers in the service to-day, who have not at one time or another, within the past four years, been supplied with military text books through this office.

This office has also within the last two years received a large number of requests from officers of the National Guard, asking to be supplied with military text-books and information relative to the course pursued at the school.

Since the introduction of the "Cavalry Sketching Case" in the course here, many requests have "been received from officers for these cases. Forty of them were specially manufactured, fourteen for the use of the school, and the remainder distributed throughout the army. As the manufacture of these cases requires the very best of material and workmanship, and I do not have the means to carry a large stock of them, (if made in small lots the cost is too high) several recent orders could not be filled. If these cases could be made at one of the arsenals, where it is thought the facilities for their manufacture are ample, and kept for sale to officers, it would prove of invaluable benefit to the service, as without such a case map making, in connection with a mounted hasty reconnaissance, is almost impossible.

In conclusion I wish to state that my assistant, Mr. Philip F. Hoffman, has rendered valuable assistance- by an intelligent,

untiring and faithful performance of his multifarious duties,

Very Respectfully,

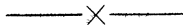
Your Obedient Servant,

C. W. PENROSE,

1ST. LIEUTENANT 1 1TH INFANTRY,

SECRETARY.

REPORT OF THE INSTRUCTOR DEPT. OF MILITARY ART.



U. S. INFANTRY AND CAVALRY SCHOOL.

DEPARTMENT OF MILITARY ART,
FORT LEAVENWORTH, KANSAS, JULY 3rd, 1895.

To

The Secretary,

U. S. Infantry and Cavalry School.

SIR:—

I have the honor to submit the following report of the course and methods of instruction in the Department of Military Art during the school year just ended.

The instruction embraced the general subjects of Army Organization, Tactics, Strategy, Logistic?, and Military Geography, and was given in the form of recitations, lectures, practical exercises in the field, and essays written by the students.

The recitations were from Wagner's "Organization and Tactics" and Hamley's "Operations of War," the latter work being supplemented by pamphlets covering the Bull Run Campaign of 1861, the Virginia Campaign of 1862, the Vicksburg Campaign, the Campaign of 1864 in Georgia, the Passage of Bull Run in 1861, and the Passage of the Rappahannock and the Rapidan by Hooker in 1863. Some of these campaigns were re-written, with corrections and amplification, from Hamley, while others were altogether new to the course. In addition to these pamphlets, were two pertaining to the Waterloo Campaign and the Passage

of the Danube by Napoleon in 1809; the first being a revision of Hamley's account, and the second being in addition to the course as given in that hook. A number of printed sheets were also prepared containing in the form of questions and answers, an epitome of the essential principles of strategy.

The instruction in Military Geography was entirely by lecture. The lectures covered the military geography of Canada, Mexico, Central America, and Chili. In addition to these, the Department will be prepared to give to the next class the military geography of the United States and the West Indies, and a general description of the military geography of Europe.

The essays written by the students were as follows:

- The Officer's Patrol... 2nd Lieut. E. D. Anderson, 4th Cav.
 Schools for Enlisted Men... 2nd Lieut. M. A. Batson, 9th Cav.
 Extended Order of Fighting for
 Infantry..... 1st Lieut. W. Black, 24th Inf.
 The Military Telegraph... 2nd Lieut. J. E. Brady, jr. 19th Inf.
 The Military Value of our
 Water-Ways..... 1st Lieut. F. C. Carnahan, 5th Inf.
 Physical Culture in our Army
 To-day..... 2nd Lieut. J. C. Castner, 4th Inf.
 An Army for the United
 States..... 2nd Lieut. W. Chase, 20th Inf.
 The Modern Theory of Ex-
 tended Order. . . . 2nd Lieut. A. C. Dalton, 22nd Inf.
 Railroads in the Civil
 War..... 2nd Lieut. F. W. Fügler, 13th Inf.
 Improvements that have been made in Small Fire-arms and
 the consequent effect upon Tactical Formations,
 2nd Lieut. R. L. Hamilton, 22nd, Inf.
 The Regular Army in the History of the United States, . . .
 2nd Lieut. J. G. Harbord, 5th Cav.
 The Wheel in War... 2nd Lieut. B. F. Hardaway, 17th Inf.
 In trenching Tools for:
 Infantry..... 2nd Lieut. P. C. Harris, 13th Inf.
 Our Common Roads . . . 2nd Lieut. J. J. Hornbrook, 2nd Cav.

- Some Needs of the Infantry
 man in the Field. . . . 2nd Lieut. J. Howard, 19th Inf.
- Means of Communication for an Army
 in the Field. 2nd Lieut. H. J. Hunt, 15th Inf.
- The Matériel of a Modern Light
 Field Battery.. . 2nd Lieut. C. R. Krauthoff, 14th Inf.
- The Enlisted Man 2nd Lieut. P. G. Lowe, 18th Inf.
- The Methods to be adopted for the prompt preparation of a
 Volunteer Force for War.
 2nd Lieut. M. McFarland, 21st Inf.
- Preparation of the Infantry
 Soldier. 1st Lieut. C. H. Muir, 2nd Inf.
- Defiles. 2nd Lieut. J. S. Murdock, 25th Inf.
- The Line of Com-
 munications. . . . 2nd Lieut. J. E. Normoyle, 23rd Inf.
- Military Observations on the Labor
 Troubles of 1894. 2nd Lieut. J. O'Shea, 7th Cav.
- The Soldier of To-day. 1st Lieut. F. Own, 14th Inf.
- Military Education in the United
 States 1st Lieut. J. A. Perry, 8th Inf.
- The Defence and Defences of
 Plevna. 2nd Lieut. M. R. Peterson, 13th Inf.
- Night Operations in Land
 Warfare. 2nd Lieut. E. L. Phillips, 6th Cav.
- Some Cavalry lessons from the
 Civil War. 2nd Lieut. J. P. Ryan, 3rd Cav.
- Limitations of the National
 Guard. 2nd Lieut. L. C. Scherer, 5th Cav.
- The employment of Troops against Mobs
 in Cities. 2nd Lieut. J. R. Seyhurn, 24th Inf.
- The Transportation and Supply of Troops in the
 Field. 2nd Lieut. E. A. Shuttleworth, 11th Inf.
- The Military Policy of the United
 States. 2nd Lieut. E. Sigerfoos, 5th Inf.
- The Development of Tactics in the War of
 Secession. 2nd Lieut. W. H. Simons, 6th Inf.

- Military Training. 2nd Lieut J. S. Switzer, 4th Inf.
 A Rational Method of Instruction for the National
 Guard. 2nd Lieut. R. H. VanDeman, 21st Inf.
 The Army in the Conflict bet ween Capital and
 Labor. 2nd Lieut. W. Wallace, 7th Inf.
 Considerations in' Training Horses for
 Cavalry. 1st Lieut. J. C. Waterman, 8th Cav.
 The Training of Cavalry for Modern
 War. 2nd Lieut. R. C. Williams, 1st Cav.
 Changes in Tactics, incident to improvement in Modern Fire
 Arms. 1st Lieut. E. Wittenmyer, 15th Inf.
 The- Supply of an Army. . 2nd Lieut. W. S. Wood, 10th Cav.
 Military Force for Suppression of an Insurrection and Acts
 of Domestic Violence, 2nd Lieut. A. W. Yates, 9th Inf.

It will be seen from the above that great latitude was allowed in the selection of subjects; each student being, in fact, allowed to select any military subject that did not manifestly belong to one of the other departments of the school. As a whole, the essays were of a high order of merit, evincing much study and careful thought on the part of the students. The essay on "The Army in the Conflict between Capital and Labor," by 2nd Lieutenant William Wallace, 7th Infantry, was deemed the most meritorious, and was publicly read by its author at the graduating exercises. This essay, and the essays of 2nd Lieutenant Louis C. Scherer, 5th Cavalry, on the "Limitations of the National-Guard" and 1st Lieutenant C. H. Muir, 2nd Infantry, on the "Training of the Infantry Soldier" have been recommended for publication, with the approval of the School Staff, in the Journal of the Military Service Institution.

The practical exercises in this department are of two kinds; namely, those with troops and those without troops.

The exercises with troops in the first term of the course, as set forth in my last report, consisted of outpost, advance guard, rear guard, screening and reconnoitring, and patrol duties, It was my intention to continue these exercises in the

second term so as to embrace the selection and occupation, the attack and defense, of positions by infantry, cavalry, and the arms combined; but, owing to the change in the garrison last fall, the departure and incoming of the troops occurred, unfortunately, at such a time as to prevent the utilization of the troops of either the old garrison or the new for the field exercises.

The tactical exercises were accordingly necessarily limited to written exercises and Field Practice Exercises without troops. Two of the former and seven of the latter exercises were given.

The following is given as a specimen of the problems solved in the written exercises:

DEPARTMENT OF MILITARY ART.

*U. S. Infantry and Cavalry School,
Fort Leavenworth, Kansas,
October 10th. 1895.*

FIELD SERVICE EXERCISE.

Problem: Camping arrangements of a detached brigade of all arms at a distance from the enemy.

Situation: At 2 p. m. to-day, a detached brigade of all arms, coming from Missouri, is approaching the eastern end of the trestle of the Missouri River Bridge at Fort Leavenworth. The command expects to rest for the night at the post, and to resume the offensive march to-morrow against an enemy reported to be between Winchester and Easton.

The command consists of:

- 1 Squadron of Cavalry,
- 1 Battery of Horse Artillery,
- 1 Brigade of Infantry,
- 1 Company of Engineers and a detachment of the Hospital Corps.

For the purposes of this problem, Fort Leavenworth is considered to be a small village without waterworks.

Questions: 1. What are the orders of the Brigade Commander for the camping and security of the Brigade?

2. What are the orders of the Commander of the advance guard, on the receipt of the above?

For the solution of the above problem the class was assembled in the lecture room, each student being furnished with writing materials and a map of the country in the vicinity of Fort Leavenworth, from the river as far west as the village of Easton, and was directed to consider in the solution of the problem, the facilities afforded by the post (under the assumed conditions) for camping the command and cooking rations, the water supply, the liability of troops to be attacked, and the necessary measures to provide for the security of the command.

In the solution of these problems great latitude was allowed the students. No hard and fast solution was assumed to which the students were compelled to conform, but any solution was accepted that was not in violation of correct military principles. The solution consisted in the formulation of a practical working order setting forth good military dispositions, and so worded that it could be clearly understood and promptly obeyed by those receiving it without the necessity of asking for explanation.

The solutions having been written out and submitted, the class was again assembled, and comments and criticism were made on the several solutions.

The field exercises without troops have been designated "Field Practice Exercises," for want of a more suitable name, though that term scarcely conveys, without explanation, a clear idea of their nature and object. They have also been termed "Terrain rides" and "Practice rides," neither of which is as satisfactory as the name finally adopted. In these exercises the students are mounted and solve tactical problems on the actual terrain various conditions being assumed, and the troops being, of course, entirely imaginary. As an illustration of **this** form of instruction, the following exercise will, perhaps, serve as well as any that can be cited.

The assumed conditions were the same as those in the

written exercise already described. Certain officers were given the missions of the several patrols supposed to be sent out from the bridge, and were directed to render reports under the assumed conditions; others were charged with the duty of selecting camps; and in several instances the reconnaissance of the village of Kickapoo was considered under the supposition that it was held by the enemy. Orders to patrols, reports from the same, orders in regard to outposts and sketches of outpost positions and sites for camps were required.

In my opinion the value of these tactical exercises, both with and without troops, can scarcely be overestimated, and I believe them 'to constitute the most beneficial part of the course in Military Art. I have endeavored to acquaint myself as far as practicable with the professional reputation of students prior to their entry upon the course of instruction at the Infantry and Cavalry School, and it is gratifying to observe that the members of the class who do best in these tactical exercises, both in theory and practice, are those who are known in their regiments as good "duty" officers. Though generally, this is not so markedly the case in the matter of pure "recitation work." It is the *intention to increase the tactical exercises at least four-fold with the new class, even if it has to be done at the expense of limiting the course in recitations.

The policy, now largely followed by regimental commanders, of selecting especially promising lieutenants for the course of study at the School is producing excellent results. The class just graduated was characterized, as a whole, by intelligence, zeal, soldierly conduct, and military ability; and it constituted a body of officers of which any army or any nation might well be proud. It is, I think, desirable that all regimental commanders should appreciate the fact that the detail of an ill-prepared, poorly educated, subaltern for a course of study at the Infantry and Cavalry School is of comparatively little benefit to him, while it deprives competent

young officers of the benefits of a course of study from which they could profit greatly. It is believed that the present system of examination for promotion from the ranks will generally insure the army from receiving the mentally "lame, halt, or blind" into its commissioned personnel. Should any such person, unfortunately, be commissioned, and should he lack the energy, ability, or self-respect necessary to enable him, by his own efforts, to remedy, at his post, the defects of his early education, he might be philosophically regarded as a regimental misfortune; but he should not be sent to Fort Leavenworth to misrepresent his regiment and to make a vain attempt to remedy his defects in arithmetic by undertaking a course in engineering; his deficiency in geography by the study of strategy; or his lack of instruction in grammar by the study of military hygiene or Constitutional law.

In closing this report I desire to express my obligations to Captain Eben Swift, 5th Cavalry, 1st Lieutenant A. L. Mills, 1st Cavalry, and 1st Lieutenant Carl Reichman, 9th Infantry, assistant instructors in Military Art, for their zealous and able assistance. To Captain Swift I am especially indebted for invaluable aid in the preparation and conduct of the tactical exercises.

Very Respectfully,
 Your Obedient Servant,
 ARTHUR L. -WAGNER,
 CAPTAIN, 6TH INFANTRY,
 INSTRUCTOR.

REPORT OF THE INSTRUCTOR DEPT. OF ENGINEERING.

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U. S. INFANTRY AND CAVALRY SCHOOL.

DEPARTMENT OF ENGINEERING,

FORT LEAVENWORTH, KANSAS, JULY 3rd, 1895.

T o

The Secretary,

U. S. Infantry and Cavalry School.

SIR:—

In compliance with paragraph 55, Regulations U. S. Infantry and Cavalry School, I have the honor to submit the following report:

The time allotted by schedule to the Department of Engineering since my last annual report has been used as follows:

	PRACTICAL WORK.	LECT- URES.	RECITA- TIONS.	DRAW- ING.	EXAMINA TIONS.
	$\frac{1}{2}$ days	No.	No. + $\frac{1}{2}$	days	$\frac{1}{2}$ days.
August, 1894.....	29	1	1	1	1
Sept. '94 to Jan. '95	19	1	40	14	4
Jan. to June '95.....	33	8	11	4	4
	81	10	51	14	8

Practical work during August consisted of practice with range finders, signaling by flag, heliograph, and lantern, reconnaissance sketching of roads and positions, instruction and practice with the new Signal Service field telephone and drill with the Field Telegraph Train, besides a lecture on high explosives and a number of experiments in making demolitions with dynamite.

From September to January the course of Field Fortification and Field Engineering was taken up and completed

besides the advance recitations in Building Superintendence (the latter coming at this time instead of the following March owing to a change of garrison having taken away the assistant instructors in the Department of Law).

Practical work during this time consisted of daily application in the field of the principles relating to shelter, trenches, field works, defilade, obstacles, revetments, spar bridges, etc., besides a continuation of the topographical course in road and position sketching.

From January to June, 1895, the course in Building Superintendence was completed, as well as the course in photography; the latter being by lectures and practice. During this time the practical course in topography was completed, by introducing the feature of outpost sketching and by requiring longer and more difficult road sketches than any "that have been given preceding classes. The success of the students in these branches was entirely satisfactory, the last sketch being of 19 miles of road (necessitating a ride of 24 miles) **was** completed between 8:30 a. m. and 5:45 p. m., with an average error in the twelve best maps of but 212 yards. These maps, on a scale of 3 inches to the mile, show roads, railroads, rivers, bridges, woods, cultivation, houses, telegraph lines, and approximate contours with an accuracy such that the commander of an expedition would have no difficulty in marching or selecting camping grounds by their aid alone.

Instruments.-The most pressing need in this Department now, as in the past three years, is additional instruments. It is very difficult to carry out the course in Plane Surveying with the few instruments at my disposal and I desire to renew my request of March 3rd, 1893, with reference to instruments needed. The total estimate at that time called for \$1,546.70 and the need for all the instruments specified (except the 6 Gabion knives, valued at \$6.00) is more pressing now than it was then.

Books.-Two new books have been adopted in this department during the past year, viz., a "Manual of Military Field

Engineering," prepared and published by the instructors in Engineering, and "Military Topography and Sketching," by 1st Lieutenant E. A. Root, 19th Infantry. The former has acceptably filled the place of the little English manual on the subject, while the latter will take the place of Johnson's Surveying and Richard's Topography.

I have no further changes in text-books to recommend at this time.

General Recommendations.-After three and a half years' experience as an instructor at this school, I am more than ever confirmed in my belief that the abolishment of the daily recitation marks in the Department of Engineering would be of lasting benefit. In this department, more than any other, the student should be encouraged to ask questions on points he does not clearly understand, for the reason that the course is progressive and a failure to fully comprehend elementary principles makes each succeeding step the harder. It is a fact apparent to all the instructors and acknowledged as well by the student that the latter will avoid displaying ignorance before his fellows and, as he presumes, prejudicing his case before the instructor, by asking to have some knotty point cleared up, whereas if he were to be graded solely on practical work and examinations it would be to his interest to ask questions during the term and thus allow the recitation hour to become one mainly of instruction instead of examination.

The work of my assistants, 1st Lieutenant A. G. Hammond, 8th Cavalry, 1st Lieutenant E. A. Root, 19th Infantry, and 1st Lieutenant T. H. Slavens, 6th Cavalry, has been continuous and in the highest degree satisfactory.

Very Respectfully,

Your Obedient Servant,

W. D. BEACH,
CAPTAIN 3RD CAVALRY,
INSTRUCTOR.

REPORT OF THE INSTRUCTOR DEPARTMENT OF LAW.



U. S. INFANTRY AND CAVALRY SCHOOL.
DEPARTMENT OF LAW.

FORT LEAVENWORTH, KANSAS, JULY 1ST, 1895.

To

The Secretary,

U. S. Infantry and Cavalry School.

SIR:

I have the honor to make the following report of instruction in the Department of Law during the past year.

My predecessor, Captain J. M. J. Sanno, 7th Infantry, and his assistants were relieved from duty in the school, and at the post, by change of stations early in October, 1894.

I was assigned to the Department of Law the 29th of October, 1894.

Captain H. A. Greene, 20th Infantry, and 1st Lieutenant Nat P. Phister, 1st Infantry, were detailed as assistant instructors in the department. Both officers are excellent instructors. Their method of hearing recitations, imparting knowledge on obscure points, and explaining the application of the law in various cases, has been a source of special benefit to the class.

The course of International and Constitutional Law was completed during the year previous to my taking charge.

The course in Military Law was completed during the past year in 44 recitations.

The examinations took place June 3rd, and 4th, and were very creditable to the entire class, every member of which was found proficient.

Very Respectfully,

Your Obedient Servant.,

J. T. HASKELL,
MAJOR 24TH **INFANTRY**,
INSTRUCTOR.

REPORT OF THE INSTRUCTOR DEPARTMENT OF INFANTRY.



U. S. INFANTRY AND CAVALRY SCHOOL.

DEPARTMENT OF INFANTRY.

FORT LEAVENWORTH, KANSAS, JULY 1ST, 1895.

The Secretary,

U. S. Infantry and Cavalry School.

SIR: ^e

I have the honor to make the following report with reference to the Department of Infantry.

I was appointed Instructor of the Department October 29th, 1894. The class had in the previous year recitations in Infantry Drill Regulations—Close Order Drill with the Evolutions of the Regiment, Brigade, Division and Corps, Manual of the Sword, all of Extended Order and General Rules for Ceremonies and Reviews. They had written examination in the foregoing subjects in June, 1894.

In the year 1894—'95, the class had twenty (20) recitations in Infantry Fire, Its Use in Battle. They had written examination in this subject in January, 1895, and all passed.

The Assistant Instructors during the past year were Captain H. A. Greene, 20th Infantry, and 1st Lieutenant N. P. Phister, 1st Infantry, both excellent instructors in every respect.

Very Respectfully,
Your Obedient Servant,

JOHN N. ANDREWS,

LIEUTENANT COLONEL 25TH INFANTRY,
INSTRUCTOR.

REPORT OF THE INSTRUCTOR DEPARTMENT OF CAVALRY.

U. S. INFANTRY AND CAVALRY SCHOOL.

DEPARTMENT OF CAVALRY,

FORT LEAVENWORTH, KANSAS, JULY 2, 1895.

TO

The Secretary,

U. S. Infantry and Cavalry School.

SIR:—

In compliance with instructions from your office, I have the honor to submit the following report of the work done in the Department of Cavalry during the past year.

The time allowed for this department was devoted to the study of Captain Carter's book, entitled "Horses, Saddles and Bridles," and to lectures by the veterinary surgeon, Dr. S. L. Hunter, on "Hippology." The book edited by Captain W. H. Carter, and which has been adopted by the school staff, is in every respect a valuable work and fully covers the ground desired. The class evinced considerable interest in this study and all passed creditable examinations.

I have no recommendations to make for the ensuing year.

The following named officers were on duty as assistant instructors during the year:

Captain W. H. Carter, 6th Cavalry,

1st Lieutenant A. L. Mills, 1st Cavalry,

1st Lieutenant A. G. Hammond, 8th Cav., and at times

1st Lieutenant T. H. Slavens, 6th Cavalry.

Very Respectfully,

Your Obedient Servant,

S. S. SUMNER.

LIEUTENANT COLONEL 6TH CAVALRY,
INSTRUCTOR.

REPORT OF THE INSTRUCTOR DEPT. OF MILITARY HYGIENE.



U. S. INFANTRY AND CAVALRY SCHOOL.

DEPARTMENT OF MILITARY HYGIENE.

FORT LEAVENWORTH, KANSAS, JULY 2nd, 1895.

The Secretary,

U. S. Infantry and Cavalry School.

SIR: -

I have the honor to report that instruction in the Department of Military Hygiene consisted of eight lectures and recitations from Woodhull's Military Hygiene, the authorized text book. The lectures included all the subjects enumerated in the "Detailed Programme of Studies." The recitations, as a rule, were satisfactory, and the majority of the examination papers were very complete and manifested a practical knowledge of the subject.

Very Respectfully,
Your Obedient Servant,

CALVIN DEWITT,

**MAJOR AND SURGEON, U. S. A.,
INSTRUCTOR.**