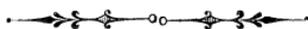

U. S. INFANTRY AND CAVALRY SCHOOL,
FORT LEAVENWORTH, KANSAS, AUGUST 1, 1894,



E. F. TOWNSEND.
Colonel 12th Infantry, Commandant.



ANNUAL REPORT.

(INCLUDING REPORTS OF INSTRUCTORS.)

U. S. INFANTRY AND CAVALRY SCHOOL.

FORT LEAVENWORTH, KANSAS, *August 1st, 1894.*

General:

I have the honor to submit this my Report of the operations and wants of the U. S. Infantry and Cavalry School for the first school year commencing September 1st 1893, and ending May 31, 1894.

The Student Class comprised the following named officers:

2nd		Lieutenant Robert C. Williams,	1st Cavalry.
2nd	⁷⁹	James J. Hornbrook,	2nd "
2nd	⁹	John P. Ryan,	3rd "
2nd	"	Edward D. Anderson,	4th "
2nd	⁷⁹	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	"	Joseph T. Crabbs,	8th "
2nd	"	Mathew A. Batson,	9th "
2nd	⁹⁹	Winthrop S. Wood,	10th "
2nd	"	Samuel D. Rockenbach,	10th "
2nd	"	Dwight E. Holley,	1st Infantry
1st	"	Charles H. Muir,	2nd "
2nd	"	William H. Morford,	3rd "

2nd	"	John S. Switzer, . . . . .	.4th	"
2nd	"	John C. Castner,	4th	"
2nd	"	William Brooke, . . . . .	.4th	"
2nd	"	Edward Sigerfoos, . . . . .	.5th	
2nd	"	William H. Simons, . . . . .	.6th	"
2nd	"	William Wallace, . . . . .	.7th	"
1st	"	John A. Perry, . . . . .	.8th	
2nd	"	Frank Owen, . . . . .	.8th	"
2nd	"	Edmund Wittenmyer, . . . . .	.9th	"
2nd	"	Arthur W. Yates, . . . . .	.9th	
2nd	"	Matt R. Peterson, . . . . .	.10th	
2nd	"	Edward A. Shuttleworth	11th	
2nd	"	Earl C. Carnahan, . . . . .	.12th	"
2nd	"	Peter C. Harris, . . . . .	.13th	"
2nd	"	Frederick W. Fuger, . . . . .	.13th	"
2nd	"	Charles R. Krauthoff, . . . . .	.14th	"
2nd	"	Henry J. Hunt, . . . . .	.15th	"
1st	"	Walter A. Thurston, . . . . .	.16th	"
2nd	"	Benjamin F. Hardaway, . . . . .	.17th	"
2nd	"	Percival G. Lowe, . . . . .	.18th	"
2nd	"	Jasper E. Brady, Jr. . . . .	.19th	"
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	

Of the foregoing, the following named officers reported at the dates opposite their respective names for preliminary instruction in mathematics.

2nd	Lieut.	William Brooke,	4th	Infantry,	March 1,	1893.
2nd	"	M. A. Batson,	9th	Cavalry,	" 1,	"
2nd	"	William Chase,	20th	Infantry,	" 1,	"

2nd	"	Henry J. Hunt, 15th Infantry,	"	4,	"
2nd	"	Earl C. Carnahan, 12th Infantry,	"	5,	"
2nd	"	Jasper E. Brady, Jr., 19th Infantry,	"	13,	"
2nd	"	Chas. R. Krauthoff, 14th Infantry,	"	14,	"
2nd	"	William Wallace, 7th Infantry,	"	15,	"
2nd	"	John O'Shea, 7th Cavalry,	"	17,	"
2nd	"	John Howard, 19th Infantry,	"	24,	"
2nd	"	John S. Murdock, 25th Infantry,	"	25,	"
2nd	"	W. H. Morford, 3rd Infantry,	"	27,	"
2nd	"	Percival G. Lowe, 18th Infantry,		April 5,	"

Lieutenant Henry C. Le Comte, Swiss Army, reported for duty at school January 1, 1894, to take a six months course, 'as per letter of instruction from the Adjutant General U. S. Army, under date of December 19, 1893. Was relieved from duty May 31, 1894 and furnished a certificate of proficiency in subjects pursued during that part of the course.

The following named officers were relieved from duty at the school from time to time during the year and for various causes.

1. 2nd Lieutenant Joseph T. Crabbs, 8th Cavalry, per par. 10. S. O. 186, Headquarters of the Army, A. G. O. August 15, 1893. Relieved before commencement of school year: and did not join the class.
2. 1st Lieutenant Walter A. Thurston, 16th Infantry, per par. 20 S. O. 210, Headquarters of the Army, A. G. O. September 20, 1893. At his own request.
3. 1st Lieutenant Dwight E. Holley, 4th Infantry, per par 3. S. O. 33, Headquarters of the Army, A. G. O. Feb'y. 8, 1894. Detailed as Professor of Military Science and Tactics at Mount Tamalpais Military Academy, San Rafael, Cal.
4. 2nd Lieutenant William Brooke, 4th Infantry, per par. 3, S. O. 49, A. G. O. Feb'y. 27, 1894. At his own request.

The Student class as a body reported September 1st, 1893, and entered upon the course of study perscribed September 15th, numbering at that time 46 members.

The subjects pursued by the members of the class from

September 15th to December 31st, 1893, were as follows:

DEPARTMENT OF MILITARY ART:

Wagner's Service of Security and Information.

DEPARTMENT OF ENGINEERING:

Johnson's Surveying.

DEPARTMENT OF LAW:

Davis' International Law.

DEPARTMENT OF MILITARY HYGIENE:

Lectures on Early aid to the Injured.

During this time there was also much practical work accomplished in the Departments of Military Art and Engineering which is fully set forth in the reports of the heads of those departments.

During the month of January, 1894, the semi-annual examination of the student class in the foregoing studies took place.

The examination of the following named officers was declared by the School Staff unsatisfactory in the subjects set opposite their names respectively:

2nd Lieutenant John Howard	}	Military Art and Engineering.
19th Infantry.		
2nd Lieutenant Wm. Brooke	}	Engineering.
4th Infantry.		
2nd Lieutenant W. H. Morford	}	Military Art and Engineering.
3rd Infantry.		

These officers were re-examined twenty days thereafter in accordance with paragraph 48 of the school regulations and having passed a satisfactory examination were declared proficient.

From January to May 31st, 1894, the course of study consisted of the following subjects, together with much practical work in Road Sketching, Reconnoissance, Mapping, etc.

DEPARTMENT OF MILITARY ART:

Wagner's Organization and Tactics,

Home's Précis of Modern Tactics.

DEPARTMENT OF ENGINEERING:

Richard's Military Topography.,

DEPARTMENT OF LAW:

Cocley's Constitutional Law.

DEPARTMENT OF CAVALRY:

Dwyer's Seats and Saddles,
Cavalry Drill Regulations.

DEPARTMENT OF INFANTRY:

Infantry Drill Regulations.

The Annual Examination of the Student Class in the foregoing subjects took place in June. The examination of the following named officers was declared unsatisfactory by the School Staff in the subjects set opposite their names respectively:

1st Lieutenant Frank Owen, 14th Infantry.

Military Art and Engineering.

2nd Lieutenant John Howard, 19th Infantry,

Military Art.

2nd Lieutenant W. H. Morford, 3rd Infantry,

Military Art, Engineering, and Constitutional
Law.

These officers were again examined twenty days thereafter and the following named officers were by the School Staff declared deficient.

1st Lieutenant Frank Owen, 14th Infantry,

In Engineering.

2nd Lieutenant W. H. Morford, 3rd Infantry,

In Military Art, Engineering and Constitutional Law.

In accordance with paragraph 48, School Regulations, a special report of the School Staff in these cases has been submitted for the action of the Major General Commanding the Army.

In the case of the first named officer I am satisfied that with steady application he could master the course without much difficulty. In the second case I believe it to be exceedingly doubtful if the officer named could graduate at all.

DEPARTMENT OF MILITARY ART.

This Department during the past year has been in charge of Captain A. L. Wagner, 6th Infantry, who succeeded Lieut. Colonel Jacob Kline, 9th Infantry, when the latter officer was relieved from duty at the school. Captain Wagner has brought untiring zeal to the accomplishment of the work in his department and with the help of his able assistant instructors has been remarkably successful in the instruction of the class. The works of which he is the author viz: "Service Of Security and Information" and "Organization and Tactics," have been used as the text books of the course, supplemented by a small portion of "Home's Précés of Modern Tactics." This book will be dropped as soon as Captain Wagner's work is entirely completed.

For a detailed account of the work done in this department I respectfully refer to the report of Captain Wagner herewith.

DEPARTMENT OF ENGINEERING.

The Department of Engineering during the past year as in the previous one, has been under the charge of Captain TV. D. Beach, 3rd Cavalry. Progress therein has been eminently satisfactory. Instructor and Assistants have been untiring in their zealous efforts to improve this part of the course of study. The new text book upon Field Engineering arranged for the use of the U. S. Infantry and Cavalry School and for the Army by the Instructor and Assistants of the Department of Engineering is completed. It has been approved by the School Staff and it is hoped will meet with the approval of the War Department. It is intended to have it printed in time for use by the present student class.

I respectfully call the attention of the War Department to the great need of additional instruments for this department. The Student Class is steadily becoming larger and more instruments are required to carry on the instructions thoroughly. They are also very expensive and the small

sum appropriated to carry on the school (\$1500 per year), should not be encroached upon for this purpose. If it be impracticable to have this amount increased as recommended (elsewhere in this report, I would respectfully ask that a special appropriation of sixteen hundred dollars (\$1600) be made for the purchase of the instruments required.

Reference is made to the report of Captain Beach herewith, which details more fully the work of his department and its requirements.

DEPARTMENT OF INFANTRY..

The Department of Infantry has during the past year been under the supervision of Major J. T. Haskell 24th Infantry, he having succeeded Lieut. Colonel Jacob Kline, 9th Infantry as instructor. A few days before the 1st of June last, Major Haskell was ordered to the Indian Territory with three companies of Infantry to repress disturbances. This was unfortunate as it took the head of the department from his duties as instructor in the school just as the examination of the student class was about to begin,

The examination in this department was therefore conducted under the supervision of the senior assistant instructor, Captain John F. Stretch, 10th Infantry whose report will be found herewith. Instruction in this department has consisted of recitations in the drill regulations and practical exercises with the troops.

DEPARTMENT OF CAVALRY.

This Department has continued under the charge of Major C. C. Carr, 8th Cavalry and has been carried on with great efficiency by him and his able assistants.

The instruction consisted of recitations in Drill Regulations, Dwyer's Seats and Saddles and practical exercises with the troops.

Major Carr's report in detail will be found herewith and is respectfully referred to.,

DEPARTMENT OF LAW.

The instruction in this department under the supervision of Captain J. M. J. Sanno, 7th Infantry, has been very complete, comprising Davis' International Law and Cooley's Constitutional Law. Considerable difficulty has been experienced in keeping instructors in this as well as in other departments, owing to the fact **that** they are generally taken from officers belonging to the troops or companies of the garrison and are constantly liable to be detached and ordered away for other duty. This subject will be more fully discussed in another part of this report. Captain Sanno's report of the work in his department will be found herewith and is respectfully referred to for details.

DEPARTMENT OF MILITARY HYGIENE.

Major Calvin DeWitt, Surgeon U. S. Army, has been in charge of this department since the departure of Major John Brooke, Surgeon U. S. Army, now retired.

The course of instruction during the past year has been limited to lectures on the subject of "Early Aid to the Injured". The principal part of the course of Military Hygiene takes place during the second year.

REMARKS AND RECOMMENDATIONS.

I take pleasure in calling the attention of the War Department to the report of 1st Lieutenant W. S. Scott, 1st cavalry, the Secretary of the School, which shows the great amount of work constantly in progress in his office. The position of secretary of the school has become of extreme importance, requiring great intelligence and unremitting labor. At no time has the place been filled more thoroughly and more to the satisfaction of all the officers connected with the school, than by the present incumbent. The assistant to the secretary, sergeant Philip F. Hoffrnan, Company H, 14th Infantry, also merits commendation for efficien-

ey and zeal. It is hoped that by the passage of the bill now before Congress, the position held by Sergeant Hoffman may become permanent.

Great embarrassment in conducting the work of the school is occasioned by the loss of instructors and assistant instructors when in an emergency the companies and troops comprising the garrison are called out on detached service.

A number of the instructors and assistants in the Departments of Law, Infantry and Cavalry, belong to these organizations and should they go with them, the course of study in the school is seriously broken in upon. Should they remain to attend to their school duties, their companies and troops are short the number of officers necessary for efficiency.

I know that it has been impracticable to detail as many **officers** for such duty as was really needed, because of limited quarters, but that difficulty has now been partially remedied by the erection of new buildings, and it may be further mitigated by the detail of a few officers for duty in the Department of Law who shall also be required to instruct in the Departments of Infantry or Cavalry.

The Departments of Engineering and Military Art are not so much affected, as the instructors and assistants in those departments are as a rule detailed by orders from **Washington**.

To illustrate the necessity of the above I will state that within a few weeks, three Companies of Infantry were ordered away from this post to the Indian Territory on detached service of indefinite duration, which took away the head of the Department of Infantry (there being already one vacancy in the Department) and this but three days before the annual examination of the student class; thus crippling a very important Department at a time when the presence of every instructor was needed.

The examination however was proceeded with, but was not completed (there being three officers to be re-examined) when five more companies were ordered to Chicago. This

carried off the head of the Department of Law, as well as an assistant instructor therein, leaving but one assistant instructor in that department to complete the work. This is liable to occur at any time and it can readily be seen how crippled the instruction of the student class might become in a sudden emergency.

In view of the above I would respectfully recommend and request that in addition to those already detailed, there be sent here by order of the War Department, one (1) 1st Lieutenant of Infantry and two (2) 1st Lieutenants of Cavalry, to be assigned to duty as assistant instructors in the Departments of Infantry, Cavalry, Military Art, or Engineering as the necessity of the case may require. By this means but few officers would be required from the garrison and should the troops or companies be ordered away suddenly, the school work might still be continued by doubling duties, there being left for duty at least two in each department.

I believe the time is approaching when the usefulness of the Infantry and Cavalry School should be further increased by graduating a class of officers every year. The time required to complete the course of study remaining as now two years, there would be about seventy officers in the two classes at any one time.

By sending 35 or 40 officers to their regiments yearly from this school, having been thoroughly instructed in its course of study and its practical work, they would very soon make their influence felt throughout the service and would result in great benefit to the army at large. It would probably enable every young officer of Cavalry and Infantry in due time to avail himself of the advantages of the school.

To carry out thoroughly this idea, would require little else than additional quarters for the increased number of students. A building but little larger than the one erected last year, now called Schofield Hall, would be sufficient for the class, while the quarters now contemplated when built will probably suffice for the few additional instructors that might be required.

It is not impossible that representatives of the Nation⁸¹ Guard whose business pursuits would permit, or new graduates of colleges having military instruction, selected by the Executive of the states, might be authorized to take the course of instruction under such restrictions as should be deemed proper, they bearing their own expenses.

The re-modelling of the Quartermaster's store house contiguous to Sherman Hall for academic purposes is greatly desired. It is by far the most convenient arrangement yet suggested. It has been proposed by the Quartermaster General to build an addition to Sherman Hall extending to the rear from the center. While I would prefer the former, yet it will undoubtedly do for the present, and it is hoped that in the near future the building originally desired may be obtained. The school will without doubt continue to be enlarged and the building will become essential to its efficiency.

Last winter a double set of officers quarters took fire and before the flames could be extinguished, were so badly burned that the building was pulled down. A double set of brick should be erected on this site and it is strongly recommended that this be done at an early day. I would again call attention to the buildings known as Thomas and McPherson Halls. They have long since been condemned and should be replaced.

I have the honor to renew my recommendation of last year that measures be taken to increase the annual appropriation for the Infantry and Cavalry School from \$1500 to \$5000. It becomes more and more evident every year that the amount allowed heretofore is entirely inadequate to meet the absolute needs of the school. Its scope is widening every year, the student class is steadily increasing in number, more facilities are required by the various departments, and the library should be largely increased. Much printing is necessary for the current business of the school, many compilations and translations as well as original work pass through the school press, all of which must be paid for from the appropriation. \$1500 is too small a sum to cover the expense of an institution of such increasing value to the military service.

It is also hoped that an appropriation may be secured to build barracks and stables for a battery of Artillery and that a battery or, better still, two batteries of Light Artillery be made a part of the garrison. The three arms of the service being thus sufficiently represented, thorough instruction of the student class as well as of the officers of the garrison in manoeuvres of the three arms combined can easily be obtained.

In all the work of the school during the past year I have had the hearty co-operation of every officer connected therewith and whatever success has been attained, has been largely due to their unceasing efforts which I here gladly recognize.

I am, Sir,

Very Respectfully ,

Your Obedient Servant,

*Colonel 12th Infantry,
Commandant.*

To the

Adjutant General,

U. S. Army,

Washington, D. C.

REPORT OF THE SECRETARY.



U. S. INFANTRY AND CAVALRY SCHOOL.

FORT LEAVENWORTH, KANSAS, JULY 20th, 1894.

The Commandant U. S. Infantry and Cavalry School.

Fort Leavenworth, Kansas.

Sir:—

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

The only articles manufactured for the school during the year are the following:

One locker, containing 50 compartments for the use of student officers for the preservation of drawings and instruments.

One photographic stand for enlarging and reducing with the camera.

Fourteen cavalry sketching cases (Verner's pattern) for use of student officers in road sketching.

The first two items were manufactured at the Military Prison through the courtesy of the Commandant, all material having been furnished by the school.

The fifteen hundred dollars (\$1500,00) appropriated for the school has been expended as follows:

Books for Library	\$615.25
Instruments, materials, etc., for Engineering	
Department	405.56
Scientific periodicals for reading room.	98.55
Stationary, repairs to books and instruments,	
printing material, maps etc.,	198.14
Clerical labor (extra duty).	182.50
	<hr/>
	\$ 1500.00

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

Four hundred and nineteen volumes were added to the

library during the year; three hundred and seventeen by purchase, and the others by the War Department, principally duplicates from its library, consisting mostly of Executive Documents.

Under provisions of G. O. 80 of 1890, I have purchased for officers 1693 volumes (professional books), amounting to three thousand and forty four dollars (\$3044. 00).

I would respectfully call attention to the need of it permanent clerk for the school. Present legislation however has this in view.

During the year the soldier on extra duty as janitor and librarian (Private Collins Co . H. 7th Infantry), was discharged by expiration of term of service. This caused considerable embarrassment as I was unable to find another to fill the place efficiently. The man detailed for that purpose was relieved to accompany his company to Chicago during the recent strike and is still absent. I have thereby been forced to utilize such help about the building as could be obtained.

The library has grown to such proportions, and there is such a constant need for checking books in and out, that one man's time should be exclusively devoted to duty in the library. I would therefore suggest that a man be detailed on extra duty as janitor and messenger for the school.

In this connection I would also state that the present room used as a library, is wholly inadequate for the purpose, necessitating the storage of several thousand volumes in a small room. The proposed addition to Sherman Hall which contains a room for a library more than twice the size of the one now in use, would give ample room for the classification of all books now on hand, and for additions to be made in the next few years,

Under recent orders the contract printing for the school has been abolished and it has been necessary to detail a soldier on extra duty as school printer. This will probably suffice for the routine printing for the school, but he will be unable to print the lectures delivered to the class by instructors and translations from foreign works which have been used in

connection with the course, both of which have been of great benefit to the school and to many officers of the army who have hailed with pleasure those publications.

In conclusion I wish to state that 23erges.n.t Philip F. Hoffman, Company H, 14th Infantry, my assistant, has rendered valuable assistance by an intelligent, untiring, and faithful performance of his duty.

Very respectfully,

Your obedient servant,

W. s. SCOTT,

1st Lieutenant 1st Cavalry,

Secretary.

REPORT OF THE INSTRUCTOR, DEPARTMENT OF MILITARY ART.



U. S. INFANTRY AND CAVALRY SCHOOL.

Department of Military Art.

FORT LEAVENWORTH, KANSAS, *August 1st, 1894.*

To the

Secretary U. S. Infantry and Cavalry School.

Fort Leavenworth, Kansas.

Sir:—

% 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 has been by recitation, by lecture, by practical tactical exercises in the field, and tactical exercise; indoors by means of the map. Only the first has been made the subject of examination though marks have been recorded in the third and fourth methods of instruction which will have suitable weight in determining the relative merits of the members of the class on graduation.

The recitations have been in Wagner's "Service of Security and Information", Wagner's "Organization and Tactics", and Home's *Précis of Modern Tactics*". In the last named book, the recitations covered only the two chapters on "Marches" and "Supply", the other subjects treated therein being embraced in other books used in the course. The text-books are all new, the student officers, in fact, using the advance sheets of "Organization and Tactics", which has not yet been published in book form,

The recitations were, on the whole, very satisfactory, and evinced on the part of the student officers industrious application and an interest in the subjects taught. The examinations were exceedingly creditable to the class as a body, though three of the students were found deficient at the last

examination, and were re-examined on the 6th instant. On the re-examination one was found deficient. In the examination in January, each member of the class was given 150 questions, which were so worded as to admit each of a brief answer. In the recent examination this was changed; the number of questions being reduced to ten, each of which called for the discussion of a particular subject. Both examinations were written, and the number of days was the same in each case; namely, three.

These questions were so selected that their discussion brought out the student's knowledge of partially every feature of the course in organization, tactics, and supply. This system of examining by means of a discussion of various subjects has been found altogether superior to the other, and will be used in future.

The lectures during the past year were six; namely, "Kriegsspiel" and "Orders and Reports", by Captain Swift, "The Austro-Hungarian Maneuvers of 1893", and "The Imperial Maneuvers of 1893", by Lieutenant Reichmann; "Military Policy and Institutions", by Lieutenant O'Brien; and "The Rise and Progress of Modern Artillery", by myself. A course of lectures on Military Geography is now in preparation for next year's course. This will include the military geography of the United States, Canada, the West Indies, Mexico, Central America, and Chili. There is no suitable text-book on military geography in English, French or German, which can be utilized either directly or in translation; and it is deemed best, therefore, to conduct the instruction by lecture, combining the study of this subject with that of strategy.

The practical tactical exercises in the field consisted of exercises with and exercises without troops. The first kind began on the 9th of October, and ended on the 10th of November. In these exercises the troops and companies of the garrison were turned over to this department, and officered by members of the class. The number of men thus made available was, however, too small for the best results to be

obtained. Generally there was about 120 cavalry, and not more than 200 infantry. The cavalry was formed in two platoons each, and the infantry into a battalion of four companies. The first two days were devoted to advance guard drill for infantry and cavalry. Then followed nine exercises in outpost duty of both cavalry and infantry. These exercises included instruction in the cordon system as well as in the use of Cossack posts. For purpose of instruction, it was ordered that sentinels, and videttes should be relieved every half hour, and pickets every hour and a half. Owing to the small number of troops available, it was necessary in all these exercises to "indicate" the reserve.

There were eleven exercises in the duties of small cavalry patrols and small infantry patrols. Opposing patrols were designated as "Blue" and "Brown", according to the uniform worn, and an umpire was detailed for each patrol. The exercise was varied daily, so that the character of the problem could not be suspected from a knowledge of those that had preceded it.

These exercises in patrolling are believed to be of great value in the practical instruction of a young officer. They teach him to study the terrain carefully with a view to concealment and shelter, and they habituate him to vigilance and accurate observation. It is training similar to that which has made the patrolling by German cavalry officers a matter of such inestimable importance in obtaining prompt and accurate information of the movements and numbers of their adversaries.

Two marches of concentration were given in the course of practical exercises in the field; four companies of infantry and two troops of cavalry being detailed for each.

In these exercises three student officers were attached to each company and troop, to perform the function of captain, first-lieutenant, and second-lieutenant, the second-lieutenant also acting as topographical officer. The captain of each company or troop accompanied it as instructor, and was directed to see that the student officer acting as captain performed properly all the details of marching and camping.

These exercises gave practical instruction in estimating the time required in marching, as well as in the use of detailed maps and its itineraries, and in the practical details of marching and camping.

The practical exercises with troops began with the simplest possible normal formation, and worked up gradually to adaptations of the tactical formation to the terrain in more complicated problems. In the first exercises, the student officers were seriously handicapped by the ignorance on the part of the soldiers of the details of advance guard, outposts, reconnaissance, etc. The company commanders had not all instructed their men therein, and it did not seem to be in my province to undertake the instruction of men belonging to the companies of other captains. It is respectfully recommended that the month of September, or so much thereof as may be practicable, be hereafter set aside for the instruction of the soldiers in the duties of security and information.

The "terrain rides", or field exercises without troops, are a new feature of instruction here. They are based upon similar method⁸ of instruction in the European staff schools, with such modifications as are required by the altered conditions found here.

The field exercises with troops having shown a lack of uniformity in making out the necessary orders, reports, etc., required in the conduct of tactical exercises, as well as a want of familiarity with most of the essentials of written orders and reports, the exercises without troops were prefaced by a lecture by Captain Swift on "Orders and Reports", to which reference has already been made. A uniform size and style was perscribed, and definite rules were given for the form of orders. The total number of field exercises without troops during the past term. was ten.

After the close of the examinations (June 15) an opportunity was afforded for additional exercises of this nature. The plan of these exercises was to assume a general military situation upon which all the tactical problems could be based, The various details could then follow in a natural consecutive

order, and the whole would give a connected military exercise.

A good map of the Military Reservation of Fort Leavenworth and the surrounding country is much needed in the practical exercises. The demands upon the time of the officers in the Department of Engineering being such that it would probably be a long time before they could prepare such a map, I would respectfully recommend that three or four alumni of this school, known to be proficient in map making, be detailed to prepare the map required. Attention is invited to the fact that in the map now used in tactical exercises many important details of the topography of the region in the neighborhood of the post are omitted

In the practical exercises in this department, the need of a greater number of qualified umpires has often been manifest. Non-graduates of this institution are not always qualified for such duty; but the alumni of the school generally are, and many of them would, if on duty here, be also available as substitute instructors. I therefore respectfully suggest that it would be greatly to the advantage of the school if all the lieutenants belonging to the companies and troops stationed here were taken from the roll of its graduates. This could easily be done as every regiment now represented here contains, I think, among its lieutenants graduates of the school, who could be transferred to the companies stationed here.

The question of providing mounts for the student officers in these exercises is a vexed one, for which no satisfactory solution has yet been found. The cavalry student officers, not being allowed transportation for their horses, are (like their infantry comrades) dependent upon the cavalry troops for horses to ride in the line of duty. It does not lie in the nature of a trooper to give up his own horse as long as there are spare horses in a troop, and any one who is at all familiar with the mounted service knows what spare troop horses are. It is useless to expect careful or intelligent attention to tactical situations from a young officer whose time is taken up in managing a vicious or stumbling horse; and on the other hand, in spite of the extreme care taken to avoid hard

riding or any abuse of the troop horses, the troop commanders have frequently complained that their horses are not brought back in good condition, and that the care of the equipments, soiled or scratched in the course of the exercise, imposes labor and expense upon the troopers which is not incurred at other posts. It is believed that suitable mounts could be provided by sending to this post good saddle horses, condemned for various reasons in the cavalry service, but sound enough to answer the purposes of the school. I am informed by cavalry officers that such horses can be easily found. They should be about forty-five in number, and should be under the care of the Post Quartermaster, a small detachment being detailed to take care of them. Such a **supply of mounts would be** a boon to the school, and a great relief to the troop commanders. The horses thus furnished would supply mounts for the instructors as well as for the student officers. In this connection, it is respectfully recommended that, in the month of August, the student officers be given practical instructions in riding and the care of horses.

The instruction in Kriegsspiel has had in view not only the generally recognized object of that game—namely, map-reading, correct estimation of the designs of an adversary, and the rapid accommodation of the player to the changing tactical conditions presented in the course of the game—but also instructions in the issuing of orders. Each important movement in the game is made in fulfillment of a written order formulated by the student and submitted to the instructor. While this necessarily prolongs the exercise, and deprives it perhaps of some of its interest as a game, it adds immeasurably to its value as a study.

The course in this branch began with the lecture on “Kriegsspiel” already mentioned, the object of which was to explain carefully the principles of the exercise, so as to make its practice more easy to the members of the class. The lecture was followed by eleven exercises, at the rate of one or two a week, until **each** member of the class had been detailed for one game. After an examination of several

systems, that of Major Livermore, of the Engineers, was adopted.

A small number of troops was represented in each case, at most not more than a regiment Of infantry, a squadron of cavalry, and a battery of artillery. In this way the common error of beginning too ambitiously with the movements of large armies--iii other words, “taking the second step before the first” was avoided. The object of each exercise was to present a study of tactics and strategy, rather than to represent the contact of hostile forces. The general character of the problems was the maneuvering of advance and rearguards, the details of the assumed situations being different in each case.

There are widely divergent views entertained by military critics as to the value of instruction by means of Kriegsspiel. It is not deemed necessary here to enter into a discussion of merits or demerits, the advantages or disadvantages, of the game; but it is a significant fact that among the class of students at this school it is observed that those who take the most interest and display the most proficiency in the game are well known as the most intelligent, zealous, and common-sense ‘duty officers.’

It is intended to replace the ordinary topographical map used with Livermore’s Kriegsspiel with a large map representing the actual terrain in the vicinity of Paris. I regret that an equally good American map is not available.

In the tactical exercises with and without troops, and in the instruction in Kriesspiel, the services of Captain Eben Swift, 5th cavalry Assistant Instructor, have been invaluable. Uniting to the information of a thorough military student an extended and varied experience in staff and line duty, he is peculiarly well fitted for the work; and I take pleasure in stating that the marked progress of this department in this class of instruction in the past year has been largely due to his able and zealous efforts.

I am greatly indebted to Major J. B. Babcock, A. A.G., in charge of the Bureau of Military Information, for much valuable information in regard to foreign military services,

which he has sent to this department during the past year. This information has been placed in the special charge of 1st Lieutenant Carl Reichmann, 9th Infantry, assistant instructor, who has placed it in such a form as to be best available to the student officers. Lieutenant Reichmann has also been specially charged with the duty of translating and compiling from the foreign military periodicals such military notes as may be of value to the class. It is thus endeavored to keep the students abreast of the military times, and to keep them informed of the systems of organization and the tactical methods of European armies. In this manner Lieutenant Reichmann has performed much valuable work in addition to his regular duties as assistant instructor.

Another assistant instructor will be required in this department for the course beginning next September. This course will embrace Strategy and Tactics, will be in the form of the study of campaigns and battles, and will require recitations of at least an hour and a half. A shorter time would necessitate a "literal" recitation of the text and would give no time for the comments of the instructors, or the presentation by them of the discussions of the campaigns by various military authorities of note. To consolidate the present six "half-section" into three sections would be to crowd the section rooms, and cause a large number of student's to have no opportunity for recitation. It is believed that four sections would be a sufficient number.

As a fitting and valuable conclusion of the course in strategy and grand tactics, I would respectfully recommend that the ten highest students in Military Art, as determined on graduation, be sent under charge of the Instructor and Senior Assistant Instructor to visit some of the most noted battlefields of the War of Secession, there to make a practical study of the terrain in connection with tactical movements. The cost to the Government for such an excursion would be slight, and the result would, I think, be excellent. It should seem that after devoting the time and the service of the student officers for two years to military education, it

would be a mistake to allow a question of slight expense and two or three weeks' time to stand in the way of putting a practical cap-sheaf to the military-scholastic work of the best students. As a beginning of this feature of instruction, I would suggest that at the close of the next year's course, five of the graduating class be sent with the Instructor to Gettysburg, Antietam, and the battlefields in the vicinity of Fredericksburg, Va., and the other five of the ten highest graduates be sent with the Senior Assistant Instructor to the battlefields in the vicinity of Nashville and Chattanooga, Tenn. I earnestly request that this recommendation be carefully weighed. If it be approved and adopted, the two months delay now allowed the students, should in the case of the officers selected for the military excursions begin upon the completion of this duty. In addition to the other and greater advantages, the military excursion would, I believe, prove a strong incentive to study on the part of the members of the class.

I am, Sir,

Very Respectfully,

Your Obedient Servant,

ARTHUR L. WAGNER,

Captain 6th Infantry,

Instructor.

REPORT OF THE INSTRUCTOR, DEPARTMENT OF ENGINEERING.

U. S. INFANTRY AND CAVALRY SCHOOL.

Department of Engineering.

FORT LEAVENWORTH, KANSAS, JUNE 30th, 1894.

To the

Secretary U. S. Infantry and Cavalry School,

Fort Leavenworth, Kansas.

SIR:—

In accordance with Par, 55, Regulations U. S. Infantry and Cavalry School, I have the honor to report as follows:

Work in this department of the School, allotted by the schedule of the past year, has been divided as follows--

Recitations. 56 half days.

Drawing. 11 half days.

Practical Work 55 half days.

Lectures... 1 half day.

This does not include the work carried on during part of July and August, 1893, with the officers sent here for preliminary instruction in mathematics.

One of my assistants, 1st Lieutenant J. T. HAINES, 5th Cavalry, was relieved from duty at the School at the close of August, 1893, and two others, 1st Lieutenant W. C. WREN, 17th Infantry, and 1st Lieutenant T. H. SLAVENS, 6th Cavalry, have been detailed for duty in this department, so there are now three Assistant Instructors on duty. This number was rendered necessary by the large size of the present student class, and, while I consider three Assistant Instructors sufficient for the present class of 43, the detailed work of the department has demanded constant application and the undivided attention of myself and assistants in order to prevent loss of time. During the work in September, October and November, 1893, Instructors who had sections

in the morning were in charge of field work in the afternoon until 5 p. m., so that the usual course of instruction was completed with the few surveying instruments at our disposal, although the class is one-third larger than the previous one. In this connection I desire to renew my request and estimate of April 3rd, 1893, for surveying instruments. This estimate was for \$1546.70 which sum would secure the additional instruments needed in the course in plane surveying for the class to enter in September, 1895, and make it possible to give each student officer more practice than is now possible.

A greater familiarity with the methods and the designs of the School has but served to confirm my belief that the "practical work" course in all departments (Law excepted) could with great advantage be increased. There should, as far as possible, be a practical illustration in the field of whatever is studied in the section room. An object lesson of this character serves to make permanent an otherwise fading and possibly confused mental impression. This fact has been proved to my satisfaction in scores of cases where, on written examination, student-: have been required to discuss some general subject fully described in the text but have apparently forgotten the text entirely and have explained in their own way the special case in application that they individually worked out in the field.

The practical work carried on in this department during the past year has been as shown below. Record work of each variety (by which is understood only that which affects a students standing in the class) has been preceded by one or more preliminary problems involving the same principles of a student's knowledge of the subjects studied and his skill with instruments used.

From September to December this work for each student . consisted of:

- 1st. A Compass Survey, courses being chained.
- 2nd. A Transit Traverse.
- 3rd. A Plane Table Survey.
- 4th. One problem in Differential Levelling.

5th. One problem in levelling for Profile and Grade.

6th. A Transit and Stadia Survey of South Parade with contouring of same,

The above (except No 4.) were afterwards plotted to a given scale during drawing hours.

During the second half year the practical work in Military Topography consisted of

- 1st. Estimation of distance by sight, by sound, and by pacing,
- 2nd. Contouring with Compass and Clinometer of a single hill,,
- 3rd. Contouring with Compass and Clinometer of a variety of slopes.
- 4th. A Road Sketch on foot, using the Topographical Field Note Book and Box Compass? distance about five miles.
- 5th. A Road Sketch, including contours, made with Field Board and same instruments, plotting at sight, distance about three and one-half miles .
- 6th. A Combined Survey covering about one square mile of military reservation.
- 7th. A Road Reconnaissance, Sketch, and Report , using Field (Cavalry) Sketching Case, mounted, distance over nine miles.

This last class of work, together with the position sketching, will be continued throughout the remainder of the course.

Previous to the mounted work, with Field Sketching Case, instruction in making the conventional signs in colored pencil was given ; this part of the course being much facilitated by the use of a new set of colored plates, purchased from the school appropriation.

The department has been much hampered by the lack of a topographical draughting room and a suitable room for instruments and maps, but it is believed that another year will bring an improvement in this respect.

Owing to the difficulty encountered in finishing the first three months' course in Engineering before cold weather, I believe it would be of great advantage to the school, and to this department in particular, if incoming classes were ordered to report on August 15, and recitations were to commence on September 1st, instead of September 15th.

The work done and service rendered by my Assistants, 1st Lieutenant E. A. ROOT, 19th Infantry, 1st Lieutenant W. C. WREN, 17th Infantry, and 1st Lieutenant T. H. SLAVENS, 6th Cavalry, has been continuous and in the highest degree satisfactory.

Very Respectfully,

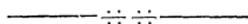
Your Obedient Servant,

W. D. BEACH,

Captain 3rd Cavalry.

Instructor.

REPORT OF THE INSTRUCTOR, DEPARTMENT OF INFANTRY.



U. S. INFANTRY AND CAVALRY SCHOOL.

Department of Infantry.

FORT LEAVENWORTH, KANSAS, JULY 1st, 1894.

The Secretary U. S. Infantry and Cavalry School,

Fort Leavenworth, Kansas.

SIR:—

I have the honor to make the following report in reference to the Department of Infantry in which department I find myself the senior officer by reason of Major J. T. Haskell, 24th Infantry, having been ordered for duty with troops in the field in the Indian Territory.

In this department during the past year there were recitations in Infantry Drill Regulations, the Infantry officers of the present student class having been examined in the drill regulations to include the school of the battalion (close order) on entering the school, The recitation, began in the Close Order Drill, with the Evolutions of the Regiment, and included the Brigade? Division and Corps, Manual of the Sword, all of Extended Order and the General rules for Ceremonies and Reviews, with Captain James Fornance, 13th Infantry, and myself as Assistant Instructors.

Lack of time prevented the student officers from receiving thorough practical instruction on the parade ground and field, in the Close and Extended Order drills, although student officers are required to attend Parades, Monthly Inspections and Reviews.

At the close of the term (June, 1894), written examinations were held, all the officers being found proficient.

If time could be found for it without depriving other departments of the limited amount given them for their also important courses, I believe that all Infantry Officers belong-

ing to the student class should receive practical instruction in Close and Extended Order drill; that they should be placed in command of companies at batallion and regimental drill, and should command companies in the Extended Order drill to include the battallion in regiment, on the offensive and defensive, and the batllion acting alone on the offensive and defensive.

This instruction is made the more necessary because of lack of such opportunity before entering the school, and to accustom them somewhat to the duties of similar and higher positions which they may be called upon to fill in the more extensive maneuvers pertaining to field exercises.

Knowledge of details will not usually embarrass any Commander, and if obtained in this manner it is more complete and will be rembered longer than when simply memorized for the school room.

The Subject of Fire Tactics, another division of the Department of Infantry, will be taken up the coming winter and the text book heretofore used in the school on this subject viz: "Infantry Fire Tactics" by Major C. B. Mayne R. E. will be superceded, as per decision of the School Staff, by "Infantry Fire; Its Use in Battle", by J. B. Batchelor 1st Lieutenant 24th Infantry.

Very Respectfully,

Your Obedient Servant,

J. F. STRETCH,

Captain 10th Infantry,

Instructor in charge.

REPORT OF THE INSTRUCTOR, DEPARTMENT OF CAVALRY.

U. S. INFANTRY AND CAVALRY SCHOOL.

Department of Cavalry.

FORT LEAVENWORTH, KANSAS, JULY 6th, 1894.

The Secretary U. S. Infantry and Cavalry School,

Fort Leavenworth, Kansas.

SIR:—

In compliance with instructions received 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 edition of Fitzwygram's Horses and Stables heretofore used in the school having been exhausted, and the revised one in course of publication not yet available at the beginning of the school year, it became necessary to substitute therefore Dwyer's Seats and Saddles, which properly belongs in the second year. This was unfortunate, as much of Dwyer's work is not easily comprehended without a knowledge of so much of the anatomy and conformation of the horse as is supplied by Fitzwygram; however, all the officers have passed satisfactory written examinations on the subject.

The course in Drill Regulations embraced the subject of Evolution of the Regiment, Extended Order, entire, and the Employment of Cavalry.

The assistant instructors during the past year were Captains S. M. SWIGERT, 2nd Cavalry, E. A. GODWIN, 8th Cavalry, and W. H. CARTER, 6th Cavalry, all officers of wide experience, and capable and zealous in the performance of their duties as instructors.

I would suggest that the time has arrived for the compilation of an American book or books, to take the place of the foreign ones we have been compelled to use so far. Dwyer and Fitzwygram, although the best of their kind now in ex-

istence, were never written for use as text books in schools, and they could both be condensed and amended so as to facilitate instruction in the subjects of which they treat, and to the saving of time which could be devoted to other things

There is much in each which has no application to the conditions existing in our country, and I think it would be wise to substitute for everything of that kind, matter which we know, from actual experience, it is important to impress upon the minds of younger officers.

Very Respectfully,

Your Obedient Servant,

C. C. C. CARR,

Major *8th Cavalry*

Instructor.

REPORT OF THE INSTRUCTOR, DEPARTMENT OF LAW.

U. S. INFANTRY AND CAVALRY SCHOOL.

Department of Law .

FORT LEAVENWORTH, KANSAS, JULY 1st, 1894.

To the

Secretary U. S. Infantry and Cavalry School,

Fort Leavenworth, Kansas.

SIR:—

I have the honor to report for the information of the Commandant that instruction in the department of Law, during the past year, consisted of 47 recitations, which completed the prescribed course of International and Constitutional Law.

International Law was taken up December 1, 1893, and after 21 recitations, was followed by a written examination in January which was satisfactorily passed by all the student officers.

Commencing March 7, 1894, 26 recitations in Constitutional law were held, and on the 16th of June the written examination was held. One student officer failed to pass a satisfactory examination.

The members of the class manifested a great deal of interest in the course, the evidence of which is shown in the examination papers submitted.

The class was divided for instructions into six sections under charge of the following assistant instructors who were zealous and efficient in the discharge of their duties :

- 1st Lieutenant C. W. Abbot Jr., 12th Infantry,
- 1st Lieutenant F. G. Hodgson, 6th Cavalry,
- 1st Lieutenant C. W. Penrose, 11th Infantry.

Lieutenants Abbot and Hodgson prepared a valuable synopsis of the text book on Constitutional law which was very

much appreciated by the class and enabled the department to maintain a uniformity in the different sections.

Very Respectfully,

Your Obedient Servant,

J. M. J. SANNO,

Captain 7th Infantry,

Instructor.



REPORT OF THE INSTRUCTOR, DEPARTMENT
OF MILITARY HYGIENE.



U. S. INFANTRY AND CAVALRY SCHOOL.

Department of Military Hygiene.

FORT LEAVENWORTH, KANSAS, JULY 24th, 1894.

To the

Secretary U. S. Infantry and Cavalry School.

Fort Leavenworth, Kansas .

Sir:—

I have the honor to report that the time allotted during the school year for the subject of "Military Hygiene" was taken up by lectures on "Early Aid in Sickness and Injuries, "

They were illustrated by charts and diagrams, and made practical by showing such operations as "artificial respiration , treatment of fractures, etc. ," on a living subject.

Very Respectfully,

Your Obedient Servant,

CALVIN DEWITT,

Major and Surgeon, U. S. Army,

Instructor.