

ANNUAL REPORT

OF THE

SUPERINTENDENT

OF THE

UNITED STATES MILITARY ACADEMY.

1898.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
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HEADQUARTERS U. S. MILITARY ACADEMY,
West Point, N. Y., September 19, 1898.

SIR: As Acting Superintendent of the United States Military Academy, I have the honor to submit the following report for the year ending September 1, 1898. Upon the departure of Brig. Gen. O. H. Ernst, United States Volunteers, to join the Army in the field, I assumed command of the Military Academy and post of West Point on June 11, 1898, and am still in the exercise of this command, the new Superintendent, Col. A. L. Mills, not having yet reported for duty.

PERSONNEL.

The number of officers and instructors present for duty at this post on September 1, 1898, was as follows: 7 professors, 1 associate professor, 44 commissioned officers, 1 chaplain, 1 master of the sword, and 1 teacher of music; a total of 55. See roster appended, marked "A."

The number September 1, 1897, was 64. This difference is accounted for by the following: Superintendent, surgeon, cavalry instructor, instructor of practical military engineering, and two instructors in department of modern languages not yet joined; one assistant instructor practical military engineering, in the field at Santiago; and one instructor department of philosophy, and one assistant to the quartermaster not appointed.

The number of cadets present and absent September 1, 1898, was 325, including one foreigner under instruction by special authority of Congress. The number in 1897 was 338, including one foreigner.

During the year 47 men were discharged for deficiency in studies, 1 discharged for deficiency in discipline, 8 resigned, and 59 were graduated, a total loss of 115, while there were admitted in all at the examination held in March, June, and August, 101, and 1 admitted by reappointment.

In the three examinations referred to there were appointed 311 candidates, including 117 alternates; of these 42 failed to appear and 159 were found not duly qualified, either mentally or physically, or both. Of the remaining 110 who passed, 15 were alternates whose principals also passed, and for whom there were, therefore, no vacancies, leaving 95 who were regularly admitted. Of those rejected by the medical board, 6 were subsequently admitted, 4 of whom were on probation.

The first class was graduated on April 26, by order of the War Department, in consequence of the war with Spain, and did not undergo the final examination prior to receiving their diplomas.

The number of cadets now authorized by law is 371, and the number of cadets at present 325, which leaves 46 vacancies, and this latter number as usual will be increased considerably during the present school year. The average number of vacancies in the corps of cadets at the beginning of the second term of the academic year (after the January examination) during the past five years was 74, from which it will be seen that in order to have the corps of cadets contain at all times the maximum strength (approximately) now authorized by law, and for which there are sufficient instructional and barracks facilities, a slight increase in the number of the annual appointments of cadets would be necessary. This has been recommended in many previous annual reports of the Superintendent of the Military Academy and by the recent and former Boards of Visitors, and is again recommended for your consideration.

ACADEMIC DEPARTMENTS.

There have been but few important changes in the operations of the various departments of instruction during the past year. Where improvements have been introduced they are noted in the appended reports of the various heads of departments.

In the department of tactics the scope of the course of instruction was considerably widened, and it was placed upon a more practical basis. Attention is invited to the report of the commandant of cadets, hereto appended and marked "B."

In the department of law two new text books, Fisher's Brief History of the Nations and Flanders's Manual of the Constitution, were substituted for Fisher's Outline of Universal History and for Andrews's Manual of the Constitution, which were not found to be well adapted to the needs of the Academy after full trial.

In the department of practical military engineering it was found necessary to suspend the usual course on April 26, on account of the departure of the instructor, his assistant, and Company E, Battalion of Engineers, for the seat of war. A supplementary course in practical military engineering was therefore outlined for the instruction of the cadets of the first and third classes during the summer encampment, under charge of Second Lieut. George Blakely, Second Artillery. In this course the cadets were taught the practical use of the new portable intrenching tools with which the battalion was equipped during the latter part of the summer, and subsequently had practice in the construction of hasty intrenchments in a tactical field exercise, carried out while on practice march.

The report and supplementary report of the instructor of practical military engineering are herewith appended and marked "C."

INSTRUCTION IN MILITARY HYGIENE.

During the summer encampment a course of lectures upon the subject of military hygiene was introduced. These strictly practical lectures were delivered to the first class by the surgeon, on days which could not be used for outdoor drills and exercises, and comprised the following subjects: Anatomy and physiology of the circulating and respiratory systems, hemorrhage, antiseptic surgery, the use of the first-aid packet, fractures and dislocations, and the emergencies requiring prompt non-medical attendance. Attention is invited to the report of the surgeon, hereto appended, marked "G."

THE LIBRARY.

During the year ending August 31, 822 volumes were purchased for the library and 838 volumes were presented to it, making an increase of 1,660 volumes. One hundred and twenty duplicate Government publications were returned to the Superintendent of Public Documents. The net gain during the year was 1,360 volumes, besides 380 pamphlets, making the total number of books in the library September 1, 1898, 41,638 volumes and 6,889 pamphlets. This is exclusive of a large number of maps and charts; these, it is proper to state, are almost entirely unavailable on account of lack of space in which to properly store or display them.

The pressing necessity for enlarging and reconstructing the library building has been emphasized in former reports, and full plans, specifications, and estimates for the work have been prepared.

The urgency of this work becomes greater each year, as is fully set forth in the report of the librarian, which is appended hereto and marked "D."

The recommendation contained in former reports that the salary of the assistant librarian be increased from \$1,200 to \$1,500 is renewed.

DISCIPLINE AND DRILL.

The discipline of the corps of cadets has been generally very good, with some exceptions, and the usual high standard of drill has been maintained.

ACCOUNTS AND SUPPLIES.

Attention is invited to the report of the quartermaster and commissary of cadets, hereto appended and marked "E."

The cost of subsistence during the year averaged 53 cents per cadet per day, which is slightly in excess of the cost of the past fiscal year, due to the advance in the cost of flour, etc., occasioned by the war. The quality and quantity of the food furnished has been satisfactory in every respect. The other supplies furnished to cadets were very satisfactory as to quality and cost.

During the summer encampment, campaign hats, leggings, gray flannel shirts, and rubber blankets were furnished to the entire battalion of cadets for the purpose of equipping them more suitably for field exercises and practice marches.

The present foot gear has not been found entirely satisfactory, and patterns of a more serviceable and comfortable shoe are now being carefully examined, with a view to improvement in this respect.

The plant of the cadet laundry has not been found satisfactory, and needs considerable improvement to make it perform well and promptly all of the work required during the summer months. An estimate of the cost of these necessary improvements has been carefully prepared, and is included in the annual estimate for the fiscal year.

BAND.

It is earnestly recommended that the Military Academy band, which is the only military band recognized and directly supported by the Government, be restored to the numbers and pay which it had before its reduction in 1877, and that the leader be given the pay and emoluments of a second lieutenant of infantry.

At the time of its reduction the band consisted of 1 teacher of music and 40 enlisted musicians, 10 of whom received \$34 and the remainder \$30 per month, with the usual allowances of enlisted men. Its present authorized strength comprises 1 teacher of music and 24 enlisted men. Of the latter, 6 receive \$34 per month, 6 \$20 per month, and the remaining 12, \$17, with the usual allowances of enlisted men. As these musicians must depend entirely upon their pay, having no facilities for increasing their meager compensation by engagements away from West Point, it is extremely difficult and almost impossible to obtain accomplished musicians for our only national military band.

MASTER OF THE SWORD.

Attention is invited to the recommendation submitted in the last annual report of the Superintendent and in the report of the Board of Visitors of 1898, concerning the status and pay of the very efficient and capable master of the sword and instructor of gymnastics and swimming, Mr. H. J. Koehler.

It would be wise to give this instructor, who is required to exercise control and maintain the discipline of cadets under his instruction, proper military rank, in order to strengthen his position and authority, and I recommend that Congress be requested to give him rank and pay of a first lieutenant of infantry.

WATER SUPPLY.

Work on the new reservoir and filter beds, except some minor improvements, was interrupted on April 28, on account of the departure of the officers and overseers connected with the work for the war; it was again resumed upon their return on September 4.

Estimates are submitted for the completion of the dam and filter beds, and of the roadways, fences, keeper's dwelling, and other improvements connected with these works.

Attention is invited to the report of the instructor of practical military engineering, hereto appended and marked "C."

BUILDINGS AND GROUNDS.

The erection and completion of the following public works were made during the year: New guardhouse at the south gate, public latrine, coal suspension cable way worked by electric motors from coal shed to new dock, ordnance boathouse, iron stairway at engineer barracks, besides other improvements and repairs from special appropriations proper for such purposes. The new dry dock and ferry slip will be completed by December 5 of this year.

It is recommended that the extra-duty pay of the men of the army service detachment, which was discontinued on April 26 last, under the provisions of section 6, act of Congress, published in General Orders No. 29, A. G. O., April 29, 1898, abolishing extra-duty pay, be restored not only for the future but for the period of the war with Spain, during which time it was discontinued. These men were enlisted to do specific work, for which, at the time of enlistment, they expected to receive additional compensation, and are deserving of the same. Attention is invited to the report of the quartermaster, hereto appended and marked "F."

MEMORIAL HALL.

Work upon the Memorial Hall is finished with the exception of the interior decoration and artificial lighting of the building by gas and electricity, funds for which are still available.

Before this magnificent edifice is ready for occupation it will be necessary to suitably furnish it, for which an estimate is now being carefully prepared and will be shortly submitted as a supplement to the annual estimates.

HEALTH.

The health of the command during the past year has been generally very good. Attention is invited to the report of the surgeon, hereto appended and marked "G."

COMPANY E, BATTALION OF ENGINEERS.

Company E, Battalion of Engineers, performed its usual multifarious and important duties most efficiently at this post until April 30, when it was ordered into the field. It participated in the Santiago campaign and returned here September 4.

CAVALRY DETACHMENT AND HORSES.

The cavalry detachment has performed the usual duties and is in a very good state of drill and discipline. It lost 23 enlisted men during the war by transfers, at their own requests, to cavalry regiments engaged in active service in the field, but these losses have since been made good and it is now up to its maximum strength.

At present the total number of horses available for cavalry instruction is 98, but 48 of this number are also required to furnish teams for the carriages of the field battery of instruction. This unavoidable use of the same horses for both saddle and draft purposes unfits them for both cavalry and artillery instruction, and should be remedied by the provision of 48 artillery horses and a detachment of artillerymen for noncommissioned officers and drivers, to be used for battery instruction only.

ARTILLERY MATERIAL.

It is recommended that all of the obsolete artillery material in the siege and seacoast batteries of instruction, part of which has already been discarded on account of its unserviceableness, be replaced by modern guns and that the field battery, comprising only four 3.2-inch guns and carriages, be increased by two guns, as the present battery of instruction is inadequate for the standing gun drills of the fourth class, which averages about 100 cadets.

For further details on this subject, attention is invited to the report of the commandant of cadets, marked "B."

ESTIMATES.

The estimates for the next fiscal year do not differ materially from those of last year. The most important items comprise the amounts needed for the improvement and reconstruction of the library building, for completing the construction of the filter beds and connecting them

with the new reservoir, completing necessary improvements to the water supply system, and for repair and remodeling the old army service barracks into a commissary storehouse.

MANEUVER TERRAIN.

The use of the ground on the reservation between the post proper and Highland Falls as a vegetable garden for the cadet mess has been discontinued, as this was not found to be profitable, and the ground, which is admirably adapted for maneuver terrain for the tactical exercises of cadets, will be gradually put in condition for that purpose.

I am sir, very respectfully, your obedient servant,

O. L. HEIN,

*Lieutenant-Colonel of Cavalry, Commandant of Cadets,
Acting Superintendent.*

The ADJUTANT-GENERAL UNITED STATES ARMY,
Washington, D. C.

LIST OF APPENDIXES.

- A.—Roster.
- B.—Report of commandant of cadets.
- C.—Report of instructor of practical military engineering.
- D.—Report of librarian.
- E.—Report of quartermaster and commissary of cadets.
- F.—Report of quartermaster.
- G.—Report of surgeon.

A.

UNITED STATES MILITARY ACADEMY.

WEST POINT, NEW YORK.

SUPERINTENDENT.

Col. ALBERT L. MILLS, captain and assistant adjutant-general, United States Volunteers; first lieutenant, First Cavalry. Absent; not yet joined.
Lieut. Col. OTTO L. HEIN, commandant of cadets; acting superintendent.

MILITARY STAFF.

Second Lieut. SAMUEL C. HAZZARD, First Artillery, adjutant of the Military Academy and of the post; recruiting officer; commanding post noncommissioned staff and band and detachment of field musicians; assistant to the quartermaster, and officer of police.

Maj. WILLIAM F. SPURGIN, Twenty-third Infantry, quartermaster of the Military Academy and of the post; disbursing officer; director of gas works; commanding detachment of army service men, quartermaster's department.

Capt. CHARLES B. HALL, Nineteenth Infantry, treasurer of the Military Academy and quartermaster and commissary of cadets.

First Lieut. GEORGE F. LANDERS, Fourth Artillery, commissary and treasurer of the post; in charge of post exchange.

Maj. WILLIAM L. KNEEDLER, brigade surgeon, United States Volunteers; captain and assistant surgeon, U. S. A., surgeon.

First Lieut. DOUGLAS F. DUVAL, assistant surgeon, U. S. A.

ACADEMIC STAFF.

Professors whose service at the Academy, as professor, exceeds ten years have the assimilated rank of colonel, and all other professors the assimilated rank of lieutenant-colonel.

DEPARTMENT OF TACTICS.

Lieut. Col. Otto L. Hein, captain, First Cavalry, commandant of cadets and instructor of tactics (June 15, 1897).

Capt. Edward Anderson, assistant adjutant-general, United States Volunteers (first lieutenant, Seventh Cavalry), assistant instructor of tactics.

First Lieut. Granger Adams, Fifth Artillery, senior instructor of artillery tactics; commanding company of cadets.

First Lieut. Samson L. Faison, First Infantry, senior instructor of infantry tactics; commanding company of cadets.

Capt. Robert L. Howze, assistant adjutant-general, United States Volunteers (first lieutenant, Sixth Cavalry), senior instructor of cavalry tactics (joined September 2, 1898).

First Lieut. William Lassiter, First Artillery, assistant instructor of tactics.

Second Lieut. David M. King, Fourth Artillery; on temporary duty; commanding company of cadets.

Second Lieut. Julian R. Lindsey, Ninth Cavalry, assistant instructor of tactics; commanding company of cadets; commanding detachment of cavalry.

DEPARTMENT OF CIVIL AND MILITARY ENGINEERING.

Gustav J. Fiebeger, professor (May 4, 1896).

First Lieut. Francis R. Shunk, Corps of Engineers, assistant professor.

First Lieut. Chester Harding, Corps of Engineers; First Lieut. Jay J. Morrow, Corps of Engineers, instructors.

DEPARTMENT OF NATURAL AND EXPERIMENTAL PHILOSOPHY.

Peter S. Michie, professor (February 14, 1871).
 Maj. Henry C. Davis, Third Regiment United States Volunteer Engineers (first lieutenant, Seventh Artillery), assistant professor.
 First Lieut. Wilmot E. Ellis, Fourth Artillery; First Lieut. Joseph T. Crabbs, Ninth Cavalry, instructors.

DEPARTMENT OF MATHEMATICS.

Edgar W. Bass, professor (April 17, 1878).
 Wright P. Edgerton, * associate professor (July 1, 1893).
 Second Lieut. George Blakely, Second Artillery, assistant professor.
 Second Lieut. Frank W. Coe, First Artillery; Second Lieut. William M. Cruikshank, First Artillery; Second Lieut. David M. King, Fourth Artillery; Second Lieut. Harry H. Stout, Sixth Cavalry; Second Lieut. Thales L. Ames, Third Artillery; Second Lieut. Samuel V. McClure, Seventh Infantry; Second Lieut. James W. Hinkley, jr., Fifth Artillery, instructors.

DEPARTMENT OF CHEMISTRY, MINERALOGY, AND GEOLOGY.

Samuel E. Tillman, professor (December 21, 1880).
 First Lieut. Richmond P. Davis, Second Artillery, assistant professor.
 First Lieut. George F. Landers, Fourth Artillery; First Lieut. Edward D. Anderson, Tenth Cavalry; First Lieut. Palmer E. Pierce, Thirteenth Infantry, instructors.

DEPARTMENT OF DRAWING.

Charles W. Larned, professor (July 25, 1876).
 Second Lieut. Jens Bugge, Third Infantry, assistant professor.
 Second Lieut. Charles H. Paine, Thirteenth Infantry; Second Lieut. Frederick W. Lewis, Twenty-second Infantry, instructors.

DEPARTMENT OF MODERN LANGUAGES.

Edward E. Wood, professor (October 1, 1892).
 First Lieut. Charles H. Hunter, First Artillery, assistant professor of the Spanish language.
 Second Lieut. Samuel C. Hazzard, First Artillery, assistant professor of the French language.
 Second Lieut. James M. Williams, Seventh Artillery; Second Lieut. Joseph L. Knowlton, Second Artillery; Second Lieut. Girard Sturtevant, Twenty-fifth Infantry; Second Lieut. Eugene P. Jervey, jr., Fifth Cavalry, instructors.

DEPARTMENT OF LAW AND HISTORY.

George B. Davis, lieutenant-colonel and deputy judge-advocate-general, U. S. A., professor (August 20, 1895). By assignment under act June 6, 1874.
 First Lieut. Frank G. Mauldin, Seventh Artillery, assistant professor.
 Second Lieut. Mathew C. Smith, Second Cavalry; Second Lieut. Samuel Hof, Sixth Cavalry; Second Lieut. Herbert A. White, Sixth Cavalry, instructors.

DEPARTMENT OF PRACTICAL MILITARY ENGINEERING.

Second Lieut. George Blakely, Second Artillery, senior assistant instructor.
 Second Lieut. Charles H. Paine, Thirteenth Infantry, assistant instructor.

DEPARTMENT OF ORDNANCE AND GUNNERY.

Capt. Lawrence L. Bruff, Ordnance Department, instructor (August 17, 1891).
 Second Lieut. Jay E. Hoffer, Third Artillery, senior assistant instructor.
 Second Lieut. William R. Smith, First Artillery, assistant instructor.

CHAPLAIN.

Rev. Herbert Shipman (April 22, 1896).

Herman J. Koehler, master of the sword (February 1, 1885).
 George Essigke, teacher of music (October 15, 1895).

* Associate professor, with the rank of captain.

PERSONNEL.

The following-named officers were detached or wholly relieved from duty at the Military Academy, upon the outbreak of the war with Spain or during the recent campaigns, to join the army in the field:

AT THE FRONT.

Brig. Gen. O. H. Ernst, United States Volunteers, colonel of engineers, Superintendent.
 Associate Professor Wright P. Edgerton.
 Maj. George H. Torney, surgeon, U. S. A. Relieved.
 First Lieut. Charles H. Hunter, First Artillery.
 First Lieut. Thomas H. Rees, Corps of Engineers. Relieved.
 First Lieut. J. J. Pershing, Tenth Cavalry.
 First Lieut. P. E. Traub, First Cavalry. Relieved.
 First Lieut. Edgar Russel, Seventh Artillery. Relieved.
 First Lieut. E. E. Winslow, Corps of Engineers.
 First Lieut. Charles P. Echols, Corps of Engineers.
 First Lieut. W. A. Bethel, Third Artillery (captain of volunteers).
 First Lieut. P. E. Pierce, Thirteenth Infantry.
 Second Lieut. J. T. Crabbs, Eighth Cavalry.
 Second Lieut. H. M. Reeve, Third Infantry. Relieved.
 Second Lieut. W. M. Cruikshank, First Artillery.
 Second Lieut. W. R. Smedberg, jr., Fourth Cavalry.
 Second Lieut. Samuel Hof, Sixth Cavalry. Relieved.
 Second Lieut. F. LeJ. Parker, Fifth Cavalry. Relieved.
 Second Lieut. Joseph Wheeler, jr., Fourth Artillery. Relieved.
 Additional Second Lieut. H. B. Ferguson, Corps of Engineers.

ON DUTY AT CAMPS.

Maj. A. C. Girard, surgeon, U. S. A. (lieutenant-colonel of volunteers). Relieved.
 Capt. James L. Lusk, Corps of Engineers (lieutenant-colonel of volunteers). Relieved.
 Capt. James Parker, Fourth Cavalry (major of volunteers).
 Capt. W. E. Wilder, Fourth Cavalry (colonel of volunteers). Relieved.
 Capt. J. B. Bellingher, assistant quartermaster, U. S. A. (lieutenant-colonel of volunteers). Relieved.
 Capt. F. A. Winter, assistant surgeon, U. S. A. Relieved.
 First Lieut. J. H. Beacom, Third Infantry (captain of volunteers).
 First Lieut. J. T. Thompson, Ordnance Department (lieutenant-colonel of volunteers). Relieved.
 First Lieut. H. C. Davis, Seventh Artillery (major of volunteers). Relieved.
 First Lieut. William Weigel, Eleventh Infantry. Relieved.
 Second Lieut. E. B. Cassatt, Fourth Cavalry. Relieved.
 Second Lieut. C. W. Castle, Sixteenth Infantry. Relieved.

RELIEVED ON ACCOUNT OF EXPIRATION OF TOUR OF DUTY.

Capt. Charles F. Mason, assistant surgeon, U. S. A.
 Capt. William B. Gordon, Ordnance Department.

B.

HEADQUARTERS UNITED STATES CORPS OF CADETS,
West Point, N. Y., September 18, 1898.

The ADJUTANT, UNITED STATES MILITARY ACADEMY.

SIR: In compliance with instructions in Circular No. 35, current series, headquarters United States Military Academy, I have the honor to submit the following report on the work of the department of tactics during the year ending September 1, 1898. This, in general terms, embraced instruction in drill and tactics, instruction in discipline, and instruction in military administration.

INSTRUCTION IN DRILL AND TACTICS.

(a) *Practical.*—The course of practical military instruction embraced the drill of infantry, cavalry, light and horse artillery, and siege and seacoast artillery; tactical and minor tactical exercises of infantry and cavalry; practice marches of infantry, cavalry, and light artillery; target practice with rifle and revolver, and with field,

siege, and seacoast guns; fencing with the foil, broadsword, and bayonet; gymnastics and swimming; instruction in castrametation; cavalry and artillery stable duties, and practice in some of the duties especially devolving upon these arms.

The effort was made, and I believe successfully accomplished, to widen the scope of the course of practical military instruction—especially that held during the summer encampment—and to place it upon a more practical basis; also to carry out the principal and most important aim of this department, the promotion of the self-reliance and confidence, sense of responsibility and development of character of cadets, in order to prepare them more fully for the performance of the duties devolving upon the young officer when he first joins his regiment or corps, and which he is expected to be able to enter upon at once.

To effect this, it was found necessary to rearrange the summer programme of military instruction so as to give more time for the work to be accomplished and to give more opportunities for cadets, especially the privates of the first class, to exercise the command and responsibilities devolving upon officers and noncommissioned officers. This was done by suspending troop parade, except on Sundays, and by postponing guard mounting until immediately after evening parade; by dividing the forenoon into two drill periods, first, from 7.10 to 8.30 a. m., and, second, from 9 to 10.45 or 11 a. m., or even later, if desirable or necessary to obtain the best results, and by making the instruction in these drill periods interchangeable; by reserving an entire day of each week for a practice march, and by placing the privates of the third class on the roster for corporal of the guard and those of the first class on the permanent roster for officer of the day and guard, and requiring the latter to frequently act as captains and lieutenants at the various drills and exercises of each arm.

More time and attention were given to exercises in applied tactics and minor tactics, on varied ground in and beyond the reservation, and the practice marches were generally combined with field exercises. These exercises and practice marches were as follows:

June 21.—Cavalry practice march of 11 miles, and exercises in minor tactics, stable duties performed on return (first class); duration about nine hours.

June 24.—Cavalry reconnaissance (first class); duration about nine hours. Exercise in infantry outpost duty (third class); duration about two hours and twenty-four minutes.

June 27.—Outpost duty and patrolling (third class); duration three hours and thirty-five minutes.

June 28.—Advance guard and rear guard duties (third class); duration three hours and thirty-five minutes.

June 29.—Infantry practice march (third class); about seven and one-half miles.

June 30.—Advance guard exercise and infantry attack (third class); duration two and one-third hours.

July 1.—Light-battery practice march of about 12 miles and target practice with projectiles (first class). All duties pertaining to harnessing, hitching, and care of horses (grooming, watering, feeding, and bedding down) were also performed by the first class. On this march the cadets acted as drivers, noncommissioned officers, and officers. Infantry practice march of three hours (third class).

July 8.—Infantry practice march, with exercise in advanced and rear guard (first and third classes); duration, four and three-fourths hours.

July 15.—Infantry practice march, with exercises in minor tactics and castrametation (first, third, and fourth classes); duration, seven and three-fourths hours.

July 22.—Infantry practice march and field exercises (first, third, and fourth classes); duration, four and one-half hours.

August 8.—Infantry practice march and field exercises (first, third, and fourth classes); duration, four and one-half hours.

August 21.—Infantry practice march to Camp Townsend, Peekskill, where a bivouac was established and field exercises carried out, consisting of an attack of three companies against one in an entrenched position and attack of a defile held by one company by three companies (first, third, and fourth classes); duration, twenty-seven hours.

As a preparation for practical field work, cadets had been given preliminary instruction in the duties of advanced guard, rear guard, outposts, etc., having been supplied with a manual of exterior guard duty, which they were required to read and study in camp.

Proper instruction in extended-order drill of infantry and in minor tactics has been attempted, with but little success, during the autumn and spring drill terms, on account of the insufficiency of time available and the lack of a suitable maneuver terrain in the vicinity of the post for this purpose; but the first-mentioned difficulty can be overcome by giving this instruction during the summer encampment, and the latter inconvenience be met in the future by the utilization of the ground formerly used as a cadet garden, which is now being put in order for this important instruction.

The course in rifle firing for all classes was extended and more systematically and progressively carried out than heretofore.

This instruction was facilitated by the preparation and issue to cadets of a small manual, *Outline of Instruction in Small-arms Firing*, based on *Small-arms Firing Regulations*.

Instruction in aiming, pointing, and gallery practice began and ended with the fourth class during the summer encampment; the third class had short and mid-range practice, and the first class mid-range practice only, the target range not having been yet prepared for long-range and group firing. Work on the range is now being done, however, and it will be ready for this practice during the autumn and spring terms.

The idea followed in this course was to give cadets a complete outline course of the target practice carried out in the service, and also some preparation for the duty of musketry instructors.

Revolver practice (dismounted) was given to cadets of the first class, it being impracticable to have mounted practice, on account of the limited time available for this purpose.

SPECIAL CAVALRY INSTRUCTION OF THE FIRST CLASS DURING THE SUMMER ENCAMPMENT.

Theoretical.—Saddles and saddling; bits and biting; the saddle packed; age of horses to 20 years; nomenclature of horse; points of the horse; blemishes and defects, etc.; the foot and its shoe (seven lessons—lectures and explanations).

Practical.—Manual of the carbine mounted; folding saddle blanket; rolling overcoat; making packs; packing saddle; troop inspection armed with carbine; saber and pistol practice; march from 9 a. m. till 4 p. m., 11 miles, and practical care of horses (grooming, watering, feeding, and bedding down) on return; outpost duty; fighting on foot; age of horses.

At each drill cadets were required to saddle and bridle their own horses and to unsaddle and unbridle on their return. All theoretical instruction was followed by such practical application as would impress the subject on their minds.

(b) *Theoretical.*—The theoretical instruction imparted in the department of tactics comprised recitations in the drill regulations of infantry, cavalry, and artillery, according to the following programme as laid down in the regulations United States Military Academy:

First class, fourth year, cavalry drill regulations. Every other week day, Saturdays excepted, from November 1 to March 31, alternating with drawing. Ten lessons each of one hour.

Second class, third year, infantry and artillery drill regulations. Every other week day, from November 8 to January 1, alternating with chemistry.

Ten lessons in infantry drill regulations and 10 lessons in artillery drill regulations, each of one hour.

The allotment of 10 lessons only for theoretical instruction in infantry, cavalry, and artillery drill regulations merely permits of hurried and insufficient instruction in these branches, and in my opinion is totally inadequate in comparison with the importance and extent of these subjects.

Some theoretical instruction in minor tactics to supplement that taught in the drill regulations was imparted during the summer encampment (on days not available for outdoor work) by means of lectures, by reading the *Manual of Outposts*, *Advanced and Rear Guards*, etc., prepared for this purpose for the use of cadets, and by the solution of simple tactical problems.

The theoretical artillery instruction imparted here is devoted entirely to field artillery, and the equally important subject of coast artillery is neglected. There is now an authorized manual of coast artillery, and this instruction should be considered as necessary for cadets as any other part of their military education.

The theoretical course is far from satisfactory in this department owing to the insufficiency of time for the work prescribed and the unsuitable time of the year designated for this instruction.

The text-books used are the *Drill Regulations of Infantry, Cavalry, and Artillery*, comprising matter much of which is duplicated in the department of military engineering. The theory and practice of tactics and minor tactics should go hand in hand; theory should precede practice, or at least not follow it, as is the case now.

It would seem to be a better and more logical arrangement, if the department that has entire charge of the practical work in these branches, should alone be intrusted with the theoretical work, and the advisability of transferring so much of the course of the art and science of war as embraces organization, tactics, and minor tactics and marches, to what is known as the course of infantry, cavalry, and artillery drill regulations, which course comprises the only text-books on those subjects really authorized by the War Department, for the information and guidance of the Army, is in my judgment worthy of consideration.

Some little knowledge of the theory of musketry instruction is also a necessary preliminary to target practice, and this has been acquired by cadets by means of a little pamphlet ("*Outline of instruction in target practice*") prepared for their use.

GYMNASTICS, SWIMMING, AND FENCING.

GYMNASTICS.

The physical training of cadets consisted, as usual, of a progressive and systematic series of exercises and combinations, in which all movements of questionable value are eliminated, and in the execution of which the chance of bodily injury and over-exertion are minimized.

The course for the fourth class was arranged as follows:

First period, October 1 to December 31.

Second period, January 1 to April 1, three lessons weekly, each of forty-five minutes duration.

The members of the upper classes received no physical training, except those who at the annual anthropometric measurements failed to reach the required standard and were given anthropometric deficiency cards. Of these, 16 were members of the first class, 25 of the second class, and 18 of the third class.

In my opinion, all cadets should be required to attend a physical drill of from ten to fifteen minutes daily, as soon after reveille as practicable before the beginning of the day's work. That this would be of great benefit, particularly to those cadets who take no exercise whatever, is beyond question.

The master of the sword, in his report to me upon the advisability of a short daily physical drill for cadets of all classes, says:

"The fact that cadets of the upper classes do not receive sufficient physical exercise to offset the drain on their mental faculties has often been commented upon.

"Probably at no time are cadets in better physical condition than at the close of their first year. This, together with the fact that it requires but little exercise to keep men who are in sound physical condition in that condition, is a strong argument in favor of the instruction of this drill.

"The main object, then, of a drill of this kind is a hygienic one rather than one of physical development. To obtain the best results the drill should be conducted in such a manner that its effect will be stimulating and exhilarating, but never fatiguing.

"Though but of short duration, it is long enough to accelerate the circulation, stir up the organs of secretion, quicken the mind, and bring relief to a brain made heavy by an evening's close application to study. Furthermore it is believed that it would materially decrease the number of slight, yet annoying ailments, which are directly traceable to sluggish circulation and stagnant secretory organs."

SWIMMING.

Instruction in swimming was given to the entire fourth class, and to 9 members of the third class and 3 members of the first class who had failed to qualify in their first and third years.

FENCING.

Instruction in fencing was imparted to the members of the fourth class only, as usual, according to the following programme:

First period (October 1 to December 31). Fencing with foils, three lessons weekly, each of forty-five minutes.

Second period (January 12 to March 15). Fencing with sabers, two lessons weekly, each of forty-five minutes.

Third period (March 15 to May 1). Fencing with bayonet, two lessons weekly, each of forty-five minutes duration; with foils, one lesson every other week, each of forty-five minutes duration; with saber, one lesson every other week, each of forty-five minutes duration.

Fourth period (May 1 to May 31). Fencing with foil, saber, and bayonet, each one lesson per week of forty-five minutes duration.

ADMINISTRATION.

The course in military administration consisted of—

Two lectures on instruction of recruiting officers and reports and returns pertaining to recruitment.

Two lectures on duties of post adjutant, post treasurer, and post exchange.

Two lectures on company records.

Two lectures on the ration.

Two lectures on duties pertaining to the Quartermaster's Department.

Two lectures on Subsistence and Ordnance Departments.

Two lectures on company organization.

One lecture on money accountability, etc.

One lecture on personal reports; or

One lecture on each subject to each half of the second class, divided into two sections for this purpose.

There is a pressing need for correct instruction to cadets in reference to the requirements of military etiquette, customs of the service, etc., which has hitherto not been given sufficient attention, but which will be imparted hereafter in a series of lectures to the first class. This work would be greatly facilitated if a reference manual could be prepared for this purpose, not only for use at the Military Academy, but also to assist the young graduate before and after he joins his corps or regiment.

ARTILLERY MATERIAL.

Field.—The field battery of 3.2-inch breech-loading rifle guns, used for the standing gun drill of the fourth class, has only four guns and should be increased by two guns, and at least four 3.6-inch breech-loading rifle field mortars should also be provided for use in the instruction of the fourth class.

Siege.—The two 5-inch breech-loading siege rifles on hand should be provided with proper platforms, and the carriages of these guns be completed by the addition of hydraulic recoil checks.

It is also recommended that the present siege armament be increased by two 7-inch breech-loading rifle mortars and by two 7-inch breech-loading rifle howitzers, in order that the instruction in siege artillery may be had with each type of siege guns.

The armament of the seacoast battery should be increased by one 8-inch breech-loading rifle mounted on a disappearing carriage, and one 12-inch breech-loading rifle mortar on a Gordon carriage, in order that cadets may receive instruction in all types of modern guns and mortars.

ARTILLERY HARNESS.

It is recommended that a set of artillery harness of leather of natural or russet color may be made for the field battery at this post. This leather is more easily kept clean and in proper condition than black leather, a matter of considerable importance here, on account of the very limited number of men and small amount of time at their disposal for such work.

HORSES FOR CAVALRY AND ARTILLERY INSTRUCTION.

The total number of horses at present available for cavalry instruction is 98, of which 48 are also required in order to furnish teams for the field battery of instruction. The system in vogue here, of using the same horses for saddle and draft purposes, is radically wrong and should be abandoned. This could be accomplished by providing 48 artillery (draft horses), and a small detachment of noncommissioned officers and enlisted men of the artillery arm, to care for and train these horses, and to furnish instructed noncommissioned officers and drivers for cadet drills, so that the light artillery instruction can be made more thorough than is possible under existing conditions.

My senior assistant in charge of artillery instruction, First Lieut. Granger Adams, Fifth Artillery, reports as follows on this subject, and I fully concur in his opinion:

“One great fault arising from the present system is the lack of instructed noncommissioned officers to teach individual drivers and act as chiefs of carriage at the drivers' drills. It is impracticable to instruct drivers at the same time as cadets, and at other drills there are at present no chiefs of section to control the drivers of the separate teams. It is impossible for one instructor to properly observe and control the 24 drivers of the battery, unassisted either by chiefs of platoon or noncommissioned officers. The duties of the men of the cavalry detachment are, and have always been, so heavy that the only separate instruction which can be given drivers is on the drill days for cadets, during the hour just preceding the cadet drill; and during those months when cadets do not receive artillery instruction neither men nor horses receive any artillery training whatever. Under such conditions properly trained drivers and horses are impossible.

“In service it requires months of continued practice, under the constant supervision of an instructed noncommissioned officer, to make what is considered a competent driver from a recruit.

“In the cadet instruction battery it is a common occurrence, unavoidable under existing conditions, for a man to appear mounted as a driver at a cadet drill, who never before sat in an artillery saddle, who knows nothing of artillery driving, and nothing even of the meaning of the commands he hears.

“Other plans may be formed whereby the present system may be changed without additional men and horses, but they are only makeshifts and not of real value, resulting either in separating the horses from the men who should care for and

drive them, or in using the horses for purposes foreign to their intended uses and for which they should be in constant training.

"The high state of efficiency attained by men and horses under proper conditions and training was well shown by a platoon of light artillery at the military tournament in New York last winter, an efficiency impossible except where men and horses both are trained continually for their proper work and not even imagined by cadets, whose only experience is with the improvised battery with which they are familiar.

"The matter of the increased expense is not worthy of consideration in comparison with the benefits to be gained.

"If this instruction is to be given to cadets, it should be of the best and on a par with that in other branches at the Military Academy.

"Under the present system cadets graduate from the Military Academy never having seen an artillery horse or an artillery driver. As already noted, they continually see recruits sent to drill as drivers, and because from extreme care and the slow gaits necessarily maintained no accidents occur, it follows naturally that they should get the opinion that no special training is necessary; that any horse which will work in a collar is good enough for an artillery team horse, and any man who can ride fully capable of driving a pair in an artillery team.

"It is needless to say that such impressions formed by cadets, and carried away with them, are hurtful to the service, since many do not have the opportunity later to observe how untrue were the object lessons in field artillery which were presented to them as cadets."

DISCIPLINE.

The discipline of the corps of cadets was strictly enforced, in accordance with the requirements of the Regulations, United States Military Academy, and though there have been but very few serious breaches of discipline, and though there was a marked improvement in discipline in general, still the highest standard has not yet been reached, in my opinion.

Its proper maintenance depends in no small degree upon the conscientious cooperation of the cadet officers, noncommissioned officers, and privates of the first class (who are more frequently required to act as officers than heretofore) with the officers of the department of tactics; and in fact the discipline of the corps has been placed more in the hands of the former than has formerly been the case, but the increase in responsibilities has been properly attended with increased privileges.

The discipline has also been improved by intrusting the preliminary instruction of the new cadets entirely to the officers of the first class, best qualified to carry out this most important work under the constant and ever-watchful supervision of the tactical officer in charge, and their preparatory physical training has been handed over to the master of the sword, who is best qualified to impart it.

The very considerable license permitted cadets for many years in certain entertainments, known as the "Color-line entertainment," "Hundredth-night performance," etc., has been very properly curtailed, by excluding at such entertainments all reference, either in disapprobation or praise, to commissioned officers on duty at the Academy or elsewhere, all of which has been very injurious to discipline.

Vigorous measures have been taken to repress any and all attempts at any form of hazing.

After many years of experience at the Military Academy as a cadet, tactical officer, commandant of cadets, and Acting Superintendent, and careful study and observation of the system of discipline enforced here, I am of the opinion that there is an urgent necessity for a careful revision of the schedule of punishments now in force, and that the cancellation of punishment by means of pledges should be abolished. By the present system some of the punishments awarded for offenses are so mild as to be even nondeterrent; and many, especially those adjudged for the most serious offenses against discipline—as disrespect, hazing, insubordination, disobedience, neglect of duty, etc.—are entirely inadequate, and give the cadet a wrong impression of their gravity. In my opinion cadet officers and privates of the first class, acting as assistant instructors or officers at drill and other practical instruction, ceremonies, etc., as officer of the day and officer of the guard, *should be marked for their efficiency, attention to duty, and soldierly qualities. Proper credit, based on marks, should be given them in their class standing, and this, together with the value given to discipline in the general merit roll and to the drill regulations of the three arms, should be raised to at least the relative value of mathematics.*

CONCLUSION.

In conclusion, I wish to express my highest appreciation of the earnest, intelligent, and faithful assistance I have received from the officers of the department of tactics, more especially First Lieut. Granger Adams, Fifth Artillery; First Lieut. J. H. Beacom, Third Infantry; First Lieut. S. L. Faison, First Infantry; Second Lieut. J. R.

Lindsey, Ninth Cavalry, and Second Lieutenant George Blakely, Second Artillery, in charge of instruction in practical military engineering during the summer encampment.

I am, sir, very respectfully, your obedient servant,

O. L. HEIN,
Lieutenant-Colonel, and Commandant of Cadets.

C.

WEST POINT, N. Y., *September 8, 1898.*

The ADJUTANT, UNITED STATES MILITARY ACADEMY,
West Point, N. Y.

SIR: I have the honor to submit the following report upon the different branches of work in this department during the year from September 1, 1897, to August 31, 1898, as far as it came under my cognizance. This work was under the charge of Capt. James L. Lusk, Corps of Engineers, detached from the Military Academy August 31, with me as his assistant. As we both left the post with Company E, Battalion of Engineers, for service in the field, April 30, 1898, and continued absent during the remainder of the period covered by this report, it, in all matters except those relating to the company, pertains only to the time prior to April 30, 1898.

COMPANY E, BATTALION OF ENGINEERS.

This company until April 30, 1898, furnished a daily guard detail of 10 men, kept its barracks and vicinity in repair and police, cultivated its garden, kept the ponton trains and cadet boats in repair, constructed two new ponton boats, and kept the siege, seacoast, and mortar batteries with Fort Clinton and Battery Knox in good order and repair. In connection with the waterworks and filter, it furnished field parties for the surveys and construction, and two noncommissioned officers as overseers of civilian working parties; and at critical times the company furnished fatigue parties to prevent overflow of jetties and to repair breaks and stoppages in pipe lines.

It furnished three teachers for the post school for soldiers' children and the same number for the post school for enlisted men.

The company left this post with 3 officers and 100 enlisted men on April 30, 1898, for duty in the field. Joined the Fifth Army Corps at Tampa, and as a part of that corps participated in the entire Santiago campaign, embarking at Santiago to return to the United States on August 22, and returned to this post September 4, 1898.

PRACTICAL MILITARY ENGINEERING.

During October, 1897, and April, 1898, the classes of 1898 and 1899 were under instruction and received instruction in the following classes of work:

Signaling with flag and heliograph.
Ponton bridge by successive pontons.
Making fascine.
Making brush gabion.
Making hoop-iron gabion.
Making hurdle.
Abatis.
Making and planting palisade.
High and low wire entanglements.
Barrel revetment.
Brush gabion revetment.
Hoop-iron gabion revetment.
Sand-bag revetment.
Breech-loading gun epaulement, full scale.
Breech-loading gun epaulement, scale of one-sixth.
Flying trench, full scale.
Flying trench, full scale, one-sixth.
Shelter trenches, various forms.
Double sap, scale one-sixth.
Single sap, scale one-sixth.
Siege-gun platform.
Howitzer platform.
Mortar platform.
Profile and defilade.

NEW FILTER BEDS.

Work on these was in operation September 1, 1897, and was continued until stopped by cold weather, December 18, 1897; however, during this period masonry work was much delayed by the slowness of the contractors in delivering cement. Work was resumed March 18, 1898, and continued until stopped, April 28, by orders requiring the departure for the war of all the officers and overseers connected with the work. At that date all excavation had been completed. The north, west, and south walls were completed. The foundation of valve chambers and clear-water wells and the walls around them had been laid, and these walls commenced, and the valves and piping of these chambers placed in position. Part of the filling had been placed against outside of walls.

Owing to the cessation of the work when in full operation, for the reasons mentioned above, about \$7,200 of the appropriation of \$25,000 for the fiscal year ending June 30, 1898, remained on June 30 unexpended, and will have to be turned back into the Treasury. To complete these filters a reappropriation of this amount will be necessary and also an additional amount of about \$800 for the care and preservation of the unfinished work during the coming winter.

NEW SUPPLY MAIN.

Work on this was in operation September 1, 1897, under charge of post quartermaster, and was soon completed.

NEW CROW-NEST PIPE LINE.

Work on this was commenced upon completing the above, and was completed before cold weather. This line connects the new Crow-Nest reservoir and the old Crow-Nest pipe line, joining the latter near Sinclair pond.

Both these lines have been covered for their entire length with a frost protection of not less than 4 feet of earth. This required, in the case of the new supply main, considerable work at the creek crossing below the new reservoir, along the banks of this creek, through the Kinsley orchard, and at the descent to the main road near the Kinsley gate.

NEW RESERVOIR.

On September 1, 1897, the height of water in new reservoir was 324.4. During the early part of this month the waste valve was kept open a few turns to lower the water so as to be out of the way of work on siphon pipe and spillway, and it was until October 1 kept open a little at nights so as to about balance the inflow. Height October 1, 320.8; November 1, 320.5; December 1, 322.6.

The water rose to height of weir of spillway 326 and overflowed for the first time December 20, and continued to overflow until March 20, reaching the maximum overflow of 4 inches deep February 20. After the reservoir cleared of ice, samples of the water were taken from different depths. All samples were free from taste or odor and clear and transparent except those from extreme bottom, which contained a small amount of matter in suspension; accordingly the waste valve was opened and kept open so as to waste water from the bottom rather than the top. As the water ceased to overflow, the waste valve was partly closed, and was for the remainder of the period until April 28 kept so as to about balance inflow and keep water a few inches below weir. Upon cessation of work this valve was left closed. The water in reservoir at that date was apparently in the finest condition and fit for use.

During the period September 1 to April 30 the work on the reservoir and vicinity consisted in—

The completion of spillway, the unfinished masonry work being laid and pointed and the slopes sodded.

The completion of paving of dam and the arrangements for draining at the ends. The grading of west approach to dam and the road over spillway culvert and the sodding of banks at this point.

The construction of a siphon pipe line to draw water from different depths and its connection with service main. The connections of this siphon within reservoir for drawing water at low levels have not yet been placed, as it was not considered desirable to draw water down for this purpose only.

The grading of slopes below dam and the arrangement of a channel to carry off swamp drainage and waste from spillway without washing away earth covering of service main.

Replacing the temporary jetty channel through old swamp site by a permanent

channel under which the swamp drainage is carried in a pipe culvert, connecting this new jetty channel with reservoir by a masonry entrance basin.

Raising the grade of road along west side of reservoir where it was but little above flow line.

The work still to be done at reservoir consists in the erection of fences and parapet walls over dam and in dangerous places, grading of east approach, and the removal of shallow flowage along east side.

WATER SUPPLY.

During the period from September 1 to April 30, owing to abundant rains, it was not necessary to draw on Round Pond, the supply of water being obtained from Cascades and Crow-Nest streams with the slight assistance during part of September and October of a small amount from the new reservoir.

A new reservoir of small capacity, with dam, culverts, spillway, intake, valve chamber, etc., complete, has been constructed on the Crow-Nest stream about a quarter of a mile above the old one; this in order to get above the flow line of new reservoir and thus to be able to turn this, the best water on the post, into the new reservoir. This has been connected by a new 8-inch pipe line with the old pipe line, and hence is now available for use.

During the month of February the intake at Cascades, which had been injured by stones and bowlders, became stopped by leaves and sticks in the heavy flow after a sudden thaw. After vain attempts to clear it at the spot Round Pond was turned on for a few hours and the back pressure apparently cleared away the obstruction by pushing it back into the Cascades stream. However, as was afterwards discovered, part of the matter in the pipe was washed down the pipe and lodged in the branch leading to new reservoir. While the Cascades was kept running into Delafield no further trouble was experienced, but upon attempting to turn it into the new reservoir the material which had lodged in that pipe jammed and the increased pressure burst the Cascades pipe line, opening an old crack about 1,000 feet west of Delafield Pond. This break was first repaired and then attention was given to the jam which, by alternating pressure and heat, was washed down through the old filter house and was found to consist of leaves, sticks, trash, and lumps of ice. Both of these operations were performed by the enlisted men of the engineer company.

During March and April work was in operation on the frost protection for the line from new reservoir to Delafield and the pipe lines westward. The retaining walls for this fill were nearly completed, and considerable earth had been put in place when work was stopped.

Very respectfully, your obedient servant,

E. EVELETH WINSLOW,
*Lieutenant of Engineers, U. S. A.,
Instructor Practical Military Engineering.*

WEST POINT, N. Y., *August 27, 1898.*

The ADJUTANT, UNITED STATES MILITARY ACADEMY,
West Point, N. Y.

SIR: I have the honor to submit the following report of the instruction in practical military engineering, signaling, and mechanical maneuvers conducted by me during the summer encampment of the corps of cadets of 1898.

Instruction was given in practical military engineering and signaling to the first and third classes, and in mechanical maneuvers to the first class only. The ponton train was not available, nor were tools for field work at hand during the early part of the summer. Lectures and work with models were resorted to therefor, that the course of instruction might be carried through on the usual lines.

PRACTICAL MILITARY ENGINEERING AND SIGNALING.

The following is a detailed account of the instruction given in these branches:

June 24.—The entire first class was taken on a mounted reconnaissance. The purpose of the reconnaissance was to select defensive positions, and locate sites for camping and maneuvers. One-half the class reconnoitered on the right bank of the Hudson River for a radius of from 12 to 15 miles from West Point; the other half crossed the river and examined the left bank. Each half of the class was subdivided into four parties, which operated independently, under charge of a cadet selected for

his skill in topographical drawing. The work on the West Point side of the river was under the direction of Lieut. W. R. Smith, First Artillery, and I supervised the work on the Garrison side. Each cadet made his own sketch of the road, and the leaders of parties turned in written reports in addition to sketch. The parties set out at 7.45 a. m., and returned at 5 p. m.

July 5.—Lecture to first and third classes (separately) in Academic building on shelter trenches. Profiles of trenches given on blackboard (one hour to each class).

July 6.—Examined first class on foregoing lecture, and explained regular field works (in Academic building). (One hour.)

July 12.—Third class in cordage. The cadets were individually instructed and examined in the more important knots, lashings, and splicings. (Time, three and a half hours.)

July 13.—First class in cordage. Instruction on same lines as above. (Time, three and a half hours.)

July 18.—Third class in engineering. The class was taken to engineer storerooms and instructed by models in the character, dimensions, and construction of revetments used in field works, in the obstacles employed, and in the profile of the trenches used in siege work. This was supplemented by an explanation of trenches, revetments, and obstacles from the material in Fort Clinton.

The ponton bridge of the United States advance-guard train and United States reserve train was constructed from models. Spar bridges were also constructed by cutting sticks and using cord for lashings. (Time, three and a half hours.)

July 26.—The first class was instructed in advance-guard formations, and simple problems were set and worked out by sections of the class using the Kriegspiel map and blocks. Instruction also given in signaling, assisted by Lieut. C. H. Paine, Thirtieth Infantry. (Time, three and a half hours.)

July 27.—The third class was instructed on precisely the same subjects and in the same manner as the above (July 26). (Time, three and a half hours.)

August 2.—First class in signaling, with Lieutenant Paine assisting. (Time, three and a half hours.)

August 3.—Third class in signaling, with Lieutenant Paine assisting. (Time, three and a half hours.)

August 15.—One-half third class in intrenchments. The shelter trench for one rank kneeling was thrown up, using the intrenching tools which had been furnished the corps. (Time of drill, one hour and forty minutes.)

August 16.—The second half of third class in intrenchments. The trench already constructed was widened to 5 feet to accommodate two ranks kneeling. (Time of drill, one hour and forty minutes.)

August 17.—Entire first class in intrenchments and in signaling. Shelter trenches were constructed for one rank kneeling, two ranks kneeling, one rank standing, and one rank lying down. (Time of drill, one hour and forty minutes.)

August 22.—While in camp at Peekskill during a practical march, Company A of the battalion under my direction threw up a trench for one rank kneeling at one extremity of the State camping grounds, making the trench about 125 feet in length. This trench was defended against an attack by the other three companies of the battalion, the attacking companies starting near the other end of the grounds, about three-quarters of a mile distant. The trench was constructed in three-quarters of an hour with the intrenching tools carried by the cadets as part of their equipment. In constructing this trench the fourth class, though without previous instruction, was employed along with the other classes. The trench was 1½ feet deep and 2½ feet wide, a berm of 1 foot was left, and the mound made 1½ feet high. The side towards the enemy was covered with green weeds, branches, and sods, to make the line of intrenchments indistinguishable at a distance. This device succeeded.

MECHANICAL MANEUVERS.

Instruction in mechanical maneuvers was given to the first class only. This work was conducted in Fort Clinton, and, besides instruction in cordage, blocks, and tackle, it included the practical use of the siege and garrison gin, hydraulic jacks, gun lift, truck, and way planks.

The time given to these maneuvers was as follows: July 7, three and one-half hours; July 14, three and one-half hours; July 21, three and one-half hours; July 29, three and one-half hours; August 4, three and one-half hours; August 12, one hour and forty minutes; August 18, one hour and forty minutes.

Very respectfully, your obedient servant,

GEORGE BLAKELY,
Second Lieutenant, Second Artillery.

D.

LIBRARY UNITED STATES MILITARY ACADEMY,
West Point, N. Y., August 31, 1898.

The ADJUTANT, UNITED STATES MILITARY ACADEMY.

SIR: I have the honor to submit the following report in accordance with the provisions of Circular No. 35, Headquarters United States Military Academy, West Point, N. Y., August 11, 1898.

The increase of the library during the past year is exhibited in the following statement:

Number of volumes in library August 31, 1897.....	40,098
Number of volumes purchased up to August 31, 1898	822
Number of volumes presented to the library to August 31, 1898.....	838
<hr/>	
Making a total of.....	41,758
Number of duplicate Government publications returned to Superintendent of Public Documents	120
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Number of volumes added by binding pamphlets and periodicals.....	41,638 300
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Making a total of bound volumes of.....	41,938
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Number of pamphlets in library August 31, 1897.....	6,509
Number of pamphlets added during year.....	380
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Making a total of pamphlets.....	6,889

The card cataloguing of the books and pamphlets of the library has been continued, especial attention having been paid to the Government publications, which had heretofore received but little attention.

The attention of the Superintendent is respectfully called to the pressing necessity of the renovation of the library building in accordance with the plans proposed and already prepared. The defects of the present building have been specified in my last report, to which I respectfully refer. At present, with the very limited force of two attendants—the assistant librarian and the private soldier—it is difficult to carry on the work successfully so that all the benefits of the library may be properly utilized by cadets and officers. I renew my recommendation for an increase in the compensation for the assistant, Dr. Otto Plate, and recommend that the soldier attendant be made a noncommissioned officer. The attendance required of the latter is ten hours daily for the whole year, excluding Sundays only.

Very respectfully, your obedient servant,

PETER S. MICHIE,
Professor, United States Military Academy, Librarian.

E.

OFFICE OF TREASURER,
QUARTERMASTER, AND COMMISSARY OF CADETS,
West Point, N. Y., September 1, 1898.

The ADJUTANT, UNITED STATES MILITARY ACADEMY, *West Point, N. Y.*

SIR: In compliance with instructions contained in Circular No. 36, C. S., headquarters United States Military Academy, I have the honor to make the following report of the work done in the departments under my charge, viz, (1) treasurer United States Military Academy, (2) quartermaster of cadets, (3) commissary of cadets, during the fiscal year ending June 30, 1898.

On the 6th of May last, in compliance with special order No. 70, paragraph 7, C. S., headquarters United States Military Academy, I relieved Maj. William F. Spurgin, Twenty-third Infantry, of his duties as treasurer and quartermaster and commissary of cadets, Major Spurgin having performed the duties from the beginning of the fiscal year up to that time.

UNITED STATES MILITARY ACADEMY.

TREASURER UNITED STATES MILITARY ACADEMY.

During the fiscal year the work of the office has consisted in keeping the separate accounts shown in Statement No. 1, and rendered necessary for the proper accounting for the very large sum of money, amounting approximately to \$200,000, received and disbursed by the treasurer.

In addition to all these accounts the treasurer is required "to keep an account with each cadet, in which he shall credit him with his monthly pay and charge him with the sums paid to his creditors." The financial standing of each cadet can thus be seen from his account at any time.

Accounts Nos. 2, 4, 6, 10, 12, 14, 16, 20, 22, 23, 25, and 28 show the total amounts received and expended under each out of the pay of the corps of cadets for its support and authorized expenses.

All of the accounts are settled by the treasurer every two months and afterwards inspected by an officer detailed for the purpose. The books of the office are kept by Mr. J. E. Wilson, who for twenty-six years has performed the work in the most creditable manner and to the satisfaction of all interested.

Statement No. 1.

	Disbursements.	Receipts.
1. Assistant treasurer	\$174,094.42	\$171,224.22
2. Athletic association	1,132.22	1,242.22
3. Balances paid	20,429.72	20,546.67
4. Barber	571.55	571.55
5. Cadet cash	11,792.09	11,773.59
6. Hospital	3,047.78	3,047.78
7. Cadet laundry	10,471.76	10,545.81
8. Cadet quartermaster department	72,926.20	70,214.93
9. Cadet subsistence department	60,557.58	62,059.13
10. Confectioner	219.00	219.00
11. Corps of cadets	197,302.21	195,805.24
12. Damages, ordnance	37.97	37.97
13. Dancing	521.37	521.37
14. Dentist	885.00	885.00
15. Deposits	14,541.88	14,737.38
16. Dialectic Society	426.57	272.00
17. Equipment fund	12,684.00	13,998.00
18. Expressage	22.15	22.15
19. Gas fund	1,062.75	1,217.00
20. Hops and german	1,740.01	1,648.84
21. Miscellaneous fund50	28.75
22. Miscellaneous items	210.75	440.85
23. Oath	25.25	24.75
24. Paymaster	174,094.42	174,094.42
25. Periodicals	26.04	52.64
26. Photographer	67.00	67.00
27. Policing barracks	5,373.66	5,373.66
28. Young Men's Christian Association	170.79	167.00

The following statement, No. 2, was the last one made in the treasurer's office for the fiscal year 1896-97, and shows financial condition at the time of inspection, May 20, 1897.

Statement No. 2.

Assistant treasurer	\$33,859.24	Cadet laundry	\$1,366.84
Athletic association	61.09	Cadet quartermaster	10,373.93
Cadet cash	152.50	Cadet subsistence department	453.16
Trust funds	20,000.00	Corps of cadets	10,254.68
Cash on hand	1,155.38	Deposits	490.00
		Young Men's Christian Association	176.75
		Equipment fund	31,840.00
		Dialectic Society	271.61
		Miscellaneous fund	1.24
	55,228.21		55,228.21

The following statement, No. 3, shows the condition of the treasurer's accounts at date of last inspection for the fiscal year 1897-98, and was made July 26, 1898.

Statement No. 3.

Assistant treasurer	\$2,870.20	Athletic association	\$15.14
Cadet cash	118.50	Balances paid	76.95
Hops and german	91.17	Cadet laundry	1,365.29
Oath50	Cadet quartermaster	8,364.12
Paymaster	12,353.35	Cadet subsistence department	2,197.05
Trust funds	20,000.00	Corps of cadets	2,094.45
Cash on hand	1,008.63	Deposits	195.50
		Equipment fund	21,564.00
		Dialectic Society	103.90
		Gas fund	154.25
		Miscellaneous fund	20.94
		Miscellaneous items	230.10
		Periodicals	7.40
		Young Men's Christian Association ..	53.26
	36,442.35		36,442.35

Owing to the breaking out of the war with Spain it became necessary to graduate the members of the first class on the 26th of April last, and they were paid at settlement of accounts the sum of \$15,718.45, an average to the 59 graduates of \$266.42 each; the 60 members of the furlough class were paid, prior to departure, the sum of \$5,750, an average of \$95.83.

Ninety-three new cadets entered at the commencement of this academic year, of this number 89 deposited \$7,978.63, an average of \$85.79 each; four cadets made no deposit. The smallest individual deposit made was 60 cents and the largest, \$196. This class was in debt on settlement of accounts June 30 last, \$4,520.21.

I desire to call attention to the fact that the requirement of a deposit of \$100 with the treasurer before a candidate is admitted to the Academy has not been complied with in all cases. The impression seems to prevail with many that this deposit is not necessary, and many instances are known where cadets believed to be well able to make the deposit have not done so.

I respectfully recommend that the treasurer be instructed to insist upon the deposit being made, and that no candidate be admitted without it unless under special instructions.

During the year there was paid to discharged cadets and to those resigned the sum of \$1,055.53, of which \$448.50 was for travel pay and \$180.33 for transportation, the latter amount having been received from the Quartermaster's Department for the purpose.

CADET QUARTERMASTER'S DEPARTMENT.

During the year this department has fully supplied the articles required by the corps of cadets, and, it is believed, to the satisfaction of all.

The following list shows the large number of articles manufactured and repaired in the department:

Articles.	Manu- factured.	Repaired.
Dress coats	258	319
Overcoats	184	256
Fatigue coats	513	774
White jackets	276	20
Gray trousers	578	1,014
White trousers	1,012	1,457
Flannel trousers	195	96
Riding trousers	80	50
Officers' trousers	72	80
Officers' white trousers	19	
Officers' blouses	52	24
Officers' riding trousers	8	
Civilian dress coats	1	
Civilian dress vests	1	
Civilian dress trousers	1	
Officers' overcoats	2	4
Officers' dress coats	1	4
Officers' cape	1	
Waiver jackets	30	24
Chevrons sewed on		504
Civilian suits repaired		63
Shoes repaired		1,024

CADET SUBSISTENCE DEPARTMENT.

I believe the quantity and quality of the food furnished during the year have been satisfactory in all respects. Since I assumed charge I have endeavored, as far as possible, to vary the bill of fare and to improve the service.

The cost of subsistence at the mess has been 53.5 cents per cadet per day. The cost to each cadet for the subsistence of cadets in hospital has been 2.786 cents. The total cost of subsistence in both mess and hospital has been 56.286 cents per cadet per day; the same cost for the fiscal year ending June 30, 1897, was 52½ cents. The increased cost this year has been caused by the great advance in the cost of flour, etc., during the late war.

CADET LAUNDRY.

The following statement exhibits the articles laundered during the year for individuals:

Bathing suits	10	Pillowcases	13, 141
Belts, shoulder	18, 987	Sheets	21, 857
Belts, sword	3, 171	Shirts, white	29, 666
Belts, waist	21, 073	Shirts, night	11, 406
Blankets, single	223	Shirts, under	33, 349
Blouses	5	Socks, pairs	34, 618
Clothes bags	1, 809	Towels	62, 145
Collars	106, 604	Trousers, gray	131
Comfortables	117	Trousers, white	30, 608
Cuffs, pairs	72, 596		
Drawers	31, 189	Total pieces	602, 096
Gloves, pairs	40, 933	Total pieces, year 1896-97	567, 575
Handkerchiefs	67, 148		
Jackets, white	1, 309	Increase over last year ...	34, 521

The following shows the articles laundered for the cadet hospital during the year:

Bandages	36	Shirts, hospital	379
Blankets, single	8	Towels	4, 712
Napkins	3, 533		
Sheets	3, 054	Total pieces	15, 341
Tablecloths	326	Total pieces last year	12, 842
Bedspreads	681		
Mattress covers	5	Increase over last year	2, 499
Pillowcases	2, 607		

No account has been kept of the articles laundered for the cadet mess.

The working capacity of the laundry is now taxed to its limit, and in order to properly care for the immense wash received each week and to turn the same out promptly, it will be necessary to make improvements in some of the machinery and also in the drying room. The latter is in very bad condition and does not quickly perform the labor required of it. In consequence the weekly work of the laundry is very much delayed.

The number of pieces received for laundry is increasing yearly, as will be seen from report. Steps are being taken to ascertain the cost of putting the drying room in satisfactory condition.

On account of the very large and increasing number of white trousers received weekly for laundry, I respectfully recommend that white trousers be worn by cadets at parade, guard mount, and inspection only.

Very respectfully, your obedient servant,

CHAS. B. HALL,
*Captain, Nineteenth Infantry, Treasurer of the Military Academy,
 Quartermaster and Commissary of Cadets.*

F.

OFFICE OF THE QUARTERMASTER AND DISBURSING OFFICER,
West Point, N. Y., August 31, 1898.

THE ADJUTANT, UNITED STATES MILITARY ACADEMY,
West Point, N. Y.

SIR: In compliance with instructions from your office, per circular No. 35, dated the 11th instant, I have the honor to submit herewith the following report in triplicate of the operations in the quartermaster's department of the Military Academy and as director of the gas works for the fiscal year ending June 30, 1898.

QUARTERMASTER'S DEPARTMENT, UNITED STATES ARMY.

The duties pertaining to this department are enumerated in paragraph 972, Army Regulations, 1895.

The amounts received, disbursed, etc., under the various heads of appropriation are shown in accompanying statement, marked "A."

The following contracts for furnishing fuel, forage, and straw were entered into and satisfactorily fulfilled:

- Gertrude Harnden, 150 cords hard and 60 cords soft pine wood.
- Dickson & Eddy, 600 tons egg, 1,100 tons stove, and 300 tons chestnut coal.
- O'Brien & Kellogg, 700,000 pounds oats and 40,000 pounds bran.
- William E. Dante, 460 tons hay.
- Chas. L. Rickerson, 40,000 pounds middlings and 110 tons straw.

DETACHMENT ARMY SERVICE MEN, QUARTERMASTER'S DEPARTMENT.

This organization is composed of men employed on extra-duty to perform labor as mechanics, laborers, and teamsters.

These men are enlisted to do specific work, for which, at time of enlistment, they expected to receive additional compensation, known as extra-duty pay, which pay they received up to April 26 last, when it was discontinued under provisions of section 6, act of Congress, published in General Orders, No. 29, A. G. O., April 29, 1898, abolishing extra-duty pay.

The men of this detachment are, in my opinion, deserving of extra compensation. When required to do so they work in all kinds of weather, and much more is expected of them than of enlisted men elsewhere.

In view of the requirements imposed on them, I earnestly recommend that efforts be made to have the extra-duty pay restored, not only for the future, but for the period of the war with Spain, during which time it was discontinued.

QUARTERMASTER'S DEPARTMENT OF THE UNITED STATES MILITARY ACADEMY.

My duties in this branch are defined in paragraph 15 of the United States Military Academy Regulations, 1894.

Contracts entered into during the year, and made in previous years and remaining in force in the fiscal year to which this relates, were as follows:

No.	Contractor.	Date.	Purpose.
1	Probst Construction Co.	May 22, 1896	Memorial hall.
2	Westmoreland Coal Co.	May 22, 1897	2,000 tons of gas coal.
3	Dickson & Eddy.	do	4,600 tons coal.
4	Trenton Iron Co.	July 28, 1897	Pier for coal-handling plant and wire rope.
5	Tacony Iron and Metal Co.	May 13, 1898	Iron stairs, Engineer Barracks.
6	B. F. Jones.	June 3, 1898	New dock and ferry slip.

The contract of the Probst Construction Company, for Memorial Hall, is being completed by its bondsmen, the American Surety Company; the contract has been extended to November 1st next. All other contracts, with the exception of that for new dock and ferry slip, have been completed. It was originally contemplated to have the new dock and ferry slip constructed by July 1 of the current year, but owing to the construction interfering with the steamboat traffic at the south wharf during part of the summer, and upon the request of the steamboat lines interested, contract was, with approval of the Superintendent, made to take effect September 23 next, work to be completed by December 5, this year.

The erection and completion of the following public works were made:

- New guardhouse at south gate.
- Public latrine.
- Coal cableway.
- Ordnance boathouse.
- Iron stairway at engineer barracks.

The following improvements and repairs have been made by special appropriations or from appropriations proper for such purposes:

Continuing breast-high wall, maintaining and improving post cemetery, repairing interior cadet mess building, cadet laundry and store, cadet barracks, exterior and interior, cadet hospital, soldiers' hospital, hospital steward's quarters, ordnance laboratory, new leg guard for riding hall, repainting riding hall, feed boxes for cavalry stable, interior and exterior of cavalry barracks, removing rock for distance of 25 feet north of same; quartermaster's stables, roof and gutters of gymnasium; new granolithic sidewalk on east and north side of cadet mess hall, also south and west side of Academic building.

Repairs were made to the following buildings: Nos. 1, 3, 4, 5, 7, 8, 10, 10 A and 10 B, 13, 15, 19, 21, 22, 22½, 23, 24, 25, 27, 31, 32, 33, 34, 36, 37, 39, 40, 63, 65, and officers' mess.

The steam heating apparatus in all public buildings was overhauled and necessary repairs were made.

Six hundred feet water pipe, 6-inch, were laid from quarters No. 40 to the south gate guardhouse, near which point a culvert was constructed to protect pipes from freezing.

Stone walls were built at the following places:

West end of quartermaster's stables, 1,000 feet long, 6 to 20 feet high, and 5 feet in thickness.

South end of cemetery, 300 feet long, 10 feet high, and 3 feet in thickness.

At south gate guardhouse, 400 feet in length, of same dimensions as walls adjoining.

An arched culvert, 42 feet long, composed of stone and brick, was constructed under the road at Goose Pond.

Two thousand five hundred cubic yards granite stone were crushed for repairs to roads and for concrete pavements.

Roads were drained and macadamized at the following places:

From headquarters to southern boundary of the reservation, quarters No. 45 to the Goose Pond, and from Library Hill to the riding hall.

Statement of the receipts and disbursements for the fiscal year ending June 30, 1898, accompany this report, marked "B."

GAS WORKS, UNITED STATES MILITARY ACADEMY.

As director of the gas works, I am charged with providing the necessary illuminating gas for the needs of the post.

Officers and the civilians residing on the post, connected with the Academy, pay 75 cents per thousand feet for the gas they consume, which charge is taken as the cost of the manufactured gas. Each cadet pays 35 cents per month for the use of gas, which is taken as the cost of the manufacture of the gas.

The quartermaster's department pays 75 cents per thousand feet for gas consumed in lighting buildings devoted strictly to the use of that department.

The sums received, added to the appropriation of Congress for gas coal, sustain the gas works.

During the year 16,405,900 cubic feet gas were manufactured; 3,974,700 pounds Westmoreland gas coal and 4,732 gallons oil were used for this purpose.

One bench of six retorts was renewed.

The receipts and disbursements are shown in statement of special contingent fund, marked "C."

SPECIAL CONTINGENT FUND, UNITED STATES MILITARY ACADEMY.

This fund is derived from the rent of certain buildings, etc., on the post.

Expenditures for the repairs of the buildings which pay rent are made, under direction of the Superintendent, out of funds derived from rental.

This fund is also used for subscription to periodicals and for incidentals not provided for otherwise.

Statement of the receipts and disbursements under this head are included in statement marked "C."

Very respectfully, your obedient servant,

WM. F. SPURGIN,
Major, Twenty-third Infantry, Quartermaster, Disbursing Officer,
and Director of Gas Works, United States Military Academy.

A.—Statement of funds pertaining to the Quartermaster's Department, United States Army, for the fiscal year ending June 30, 1898.

Balance on hand July 1, 1897.....	\$1,020.70
Received since:	
Regular supplies.....	24,323.86
Incidental expenses.....	10,989.34
Army transportation.....	5,666.00
Sales to officers.....	4,493.32
Sales at auction.....	463.95
Total to be accounted for.....	<u>46,897.17</u>

Disbursed:		
Regular supplies.....	\$17,426.51	
Incidental expenses.....	10,093.87	
Army transportation.....	5,140.71	
Deposited.....	4,897.27	
Balance on hand June 30, 1898.....	9,338.81	
Total.....	46,897.17	

B.—Statement showing receipts and disbursements, etc., of funds pertaining to the appropriations for the support of the United States Military Academy, for the fiscal year ending June 30, 1898.

Date.		Current and ordinary expenses.	Miscellaneous and incidental expenses.	Buildings and grounds.	Memorial Hall.	Total.
	Cr.					
July 1, 1897..	Balance on hand, fiscal year—					
Do.....	1896.....	\$3,675.62	\$434.01	\$742.01		\$4,851.64
Do.....	1897.....	4,213.40	1,164.67	2,687.80		8,065.87
Do.....	1897-98.....			10,000.48		10,000.48
Do.....	Memorial Hall.....				\$32,190.41	32,190.41
June 30, 1898.	Received since fiscal year—					
Do.....	1896.....	11.00		65.05		76.05
Do.....	1897.....	3,379.00	894.00	26,770.00		36,043.00
Do.....	1897-98.....			25,000.00		25,000.00
Do.....	1898.....	73,502.50	17,720.00	32,244.00		123,466.50
Do.....	1898-99.....		1,675.00	10,000.00		11,675.00
Do.....	Memorial Hall.....				85,000.00	85,000.00
	Total.....	89,781.52	21,887.68	107,509.34	117,190.41	336,368.95
	Dr.					
June 30, 1898.	Disbursed, fiscal year—					
Do.....	1896.....	925.30	1.00	800.00		1,726.30
Do.....	1897.....	7,561.62	1,945.53	20,900.60		30,407.75
Do.....	1897-98.....			26,586.02		26,586.02
Do.....	1898.....	65,804.52	14,665.05	26,914.19		107,383.76
Do.....	1898-99.....			1,240.56		1,240.56
Do.....	Memorial Hall.....				95,559.66	95,559.66
Do.....	Balance on hand, fiscal year—					
Do.....	1896.....	2,761.32	433.01	7.06		3,201.39
Do.....	1897.....	5,030.78	113.14	8,557.20		13,701.12
Do.....	1897-98.....			8,414.46		8,414.46
Do.....	1898.....	7,697.98	3,054.95	5,329.81		16,082.74
Do.....	1898-99.....		1,675.00	8,759.44		10,434.44
Do.....	Memorial Hall.....				21,630.75	21,630.75
	Total.....	89,781.52	21,887.68	107,509.34	117,190.41	336,368.95

C.—Statement of receipts and expenditures pertaining to the special contingent fund, United States Military Academy, from July 1, 1897, to June 30, 1898.

	Gas works.	Rents, etc.	Total.
Balance on hand July 1, 1897.....	\$450.40	\$373.32	\$823.72
Received since:			
By rent of—			
West Point Hotel.....		2,250.00	2,250.00
Post-office.....		87.50	87.50
Stables.....		109.38	109.38
Store (retiring house).....		350.00	350.00
By sale of—			
Gas.....	5,317.47		5,317.47
Coke.....	655.06		655.06
Coal tar.....	430.56		430.56
Junk.....		66.27	66.27
Miscellaneous.....		366.17	366.17
Total to be accounted for.....	6,853.49	3,602.64	10,456.13
Disbursed.....	5,042.51	2,771.15	7,813.66
On hand June 30, 1898.....	1,810.98	831.49	2,642.47
Total to be accounted for.....	6,853.49	3,602.64	10,456.13

G.

SURGEON'S OFFICE, UNITED STATES MILITARY ACADEMY,
West Point, N. Y., August 25, 1898.

The ADJUTANT, UNITED STATES MILITARY ACADEMY.

SIR: In compliance with the requirements of Circular No. 35, United States Military Academy, August 11, 1898, I have respectfully to submit the following statement of the work done in the medical department of the post of West Point, N. Y., during the fiscal year ending June 30, 1898.

The strength of the command is shown in the following table:

Officers	47.98
Cadets	288.67
Enlisted men	313.95
Civilians, officers' families, etc	208
Civilians, soldiers and employees' families	514.75

The number of sick treated during the year is as follows:

Officers in quarters	19
Cadets in hospital	1,149
Cadets in quarters	2,481
Enlisted men in hospital and quarters	379
Civilians and officers' families who have received treatment from the cadet hospital	1,049
Civilians and soldiers' families who have received treatment from soldiers' hospital	2,625
Number of recruits examined	162
Number of recruits accepted	125
Number of recruits rejected	37
Births	18
Discharged for disability	4
Deaths:	
Officers	0
Cadets	0
Enlisted men	3
Civilians	8

The cases reported as having been treated from the cadet and soldiers' hospital represent only those for whom prescriptions were written. The unrecorded calls for attention and observation have been very much more numerous than those of which note is made. There was a daily average of 1,300 persons entitled to medical treatment.

Under the supervision of the Superintendent the medical officers have had a care to the whole sanitary condition of the post. Generally speaking, the health of the command has been excellent. Cases of diphtheria, scarlet fever, measles, and mumps have all been treated during the year. These cases of contagious diseases have been rigidly quarantined. This precaution has prevented any spread of the disease. Malarial fever, generally of the tertian intermittent type, has prevailed at certain seasons. The fever has yielded readily to treatment. The luxuriant growth of underbrush throughout the reservation is being cut away wherever practicable. It is probable that this will diminish the amount of malarial disease. The water supply for West Point has been carefully and scientifically studied; it is excellent in quality and of ample quantity.

Lectures to the first class have been given by the surgeon on duty at the cadet hospital. The lectures were strictly practical. The subjects discussed were: The anatomy and physiology of the circulating and respiratory systems; hemorrhage; antiseptic surgery; the use of the first-aid packet; fractures and dislocations; also, the emergencies calling for prompt nonmedical attention.

Very respectfully,

WILLIAM L. KNEEDLER,
Captain and Assistant Surgeon, U. S. A.