

ANNUAL REPORT  
OF THE  
SUPERINTENDENT OF THE  
UNITED STATES  
MILITARY ACADEMY

1907



Washington :: Government Printing Office

1907



ANNUAL REPORT  
OF THE  
SUPERINTENDENT OF THE  
UNITED STATES  
MILITARY ACADEMY

1907



Washington :: Government Printing Office

1907



ANNUAL REPORT  
OF THE  
SUPERINTENDENT UNITED STATES MILITARY ACADEMY.

---

HEADQUARTERS UNITED STATES MILITARY ACADEMY,  
*West Point, N. Y., August 31, 1907.*

SIR: I have the honor to submit the following report of the Military Academy for the year ending August 31, 1907:

I assumed the office of Superintendent August 31, 1906, and have performed the duties thereof throughout the year, except for short periods of time when absent on leave or in connection with the affairs of the academy.

PERSONNEL.

The number of officers and instructors on duty here at the present time is as follows:

Professors .....	9
Associate professors.....	2
Other commissioned officers.....	83
Librarian .....	1
Master of the sword.....	1
Chaplain .....	1
Contract dental surgeons.....	2
Teacher of music.....	1
Civilian instructors of languages.....	4
Civilian instructors in fencing, broadsword exercises, and other military gymnastics .....	3
Contract surgeon (on temporary duty).....	1
Total.....	108

The total August 31, 1906, was 104.

The difference in total between this year and last is accounted for by the increase of 1 dental surgeon, by the retention of 1 officer on temporary duty, and by carrying on the rolls 2 officers whose successors have arrived but whose dates of relief occur September 1 and September 15.

The accompanying roster (Appendix A) gives the names of all officers and the particular duties they perform.

The authorized strength of the Corps of Cadets is 523, and 4 foreign cadets receiving instruction under the provisions of joint resolutions of Congress:

Costa Rica.....	1
Venezuela.....	1
China.....	2
Total.....	4

The academic year opened with 451 cadets on the rolls of the academy, divided among the four classes as follows:

First class.....	109
Second class.....	108
Third class.....	92
Fourth class.....	142
Total.....	451

The number of cadets discharged, resigned, and graduated during the year is as follows:

Discharged for deficiencies in studies.....	37
Discharged for physical disability.....	4
Resigned.....	15
Withdrew.....	1
Graduated.....	111
Total.....	168

The usual examination of candidates for admission was held at various army posts beginning May 1. For this examination there were appointed 378 candidates, including principals and alternates, and including also 8 former cadets. Subsequent to the examination in May, 3 former candidates (alternates) who qualified in 1906, for whom there were then no vacancies, and 3 ex-cadets were reappointed.

This number was disposed of as follows:

Failed to report.....	79
Failed to complete the examination.....	18
Rejected by the medical board, being qualified mentally.....	48
Rejected mentally, being qualified physically.....	41
Rejected both mentally and physically.....	20
No vacancies for qualified alternates.....	34
Qualified alternate declined.....	1
Qualified and admitted.....	143
Total.....	384

Admissions were as follows: In June, 192, including 1 foreigner for instruction; in July, 1, and in August, 10—a total of 143, 2 of whom (reappointed third-class cadets) joined the third class. The

following table gives the number of those admitted on examination, on certificate, etc.:

Admitted on certificate (101 principals and 16 alternates).....	117
Admitted on examination (13 principals and 4 alternates).....	17
Ex-cadets admitted (physical examination only).....	8
Foreign cadet.....	1
Total.....	143

The recommendation made by my predecessor, General Mills, that provision be made for the appointment of 3 alternates instead of 2, under the same conditions as now authorized by law, thereby insuring a slightly larger percentage of vacancies being filled at the annual entrance examination and giving the academic board a wider field in the selection of the best qualified alternates, is renewed.

In this connection attention is invited to the large and increasing number of appointees in recent years who have failed to report (79 this year); to the fact that the Corps of Cadets is 73 below its authorized strength, and to the increasing number of resignations from the Army (9 of this year's graduates, it is understood). In the matter of trained young soldiers, the output of the Military Academy can not with safety be permitted to fall below the rate of consumption of those who have gone before, plus the increased requirements of a great and growing nation. It is believed that the more lucrative pursuits and greater fields for promotion of private life are diverting young men from these careers of small pay and slow promotion in our country's service.

#### HEALTH.

The report of the surgeon is inclosed, marked "Appendix B." The surgeon and his assistants have been most careful, prompt, and skilful. The health of the cadets has been unusually good. Although various epidemic diseases have occurred in the post, such as chicken pox, mumps, scarlet fever, and measles, often brought in by the large number of workmen engaged in construction work, yet no case of any of these occurred among the cadets. The malarial cases have been fewer than usual, owing partly to a dry summer and partly, no doubt, to the incessant war made upon mosquitoes on the reservation. Many mosquitoes, however, are undoubtedly blown from the swamps about Constitution Island across the river, which are not under military control. Four cases of typhoid fever occurred upon the return of the cadets from the Jamestown Exposition, undoubtedly contracted there from food and water taken outside their camp in violation of orders. The cases are all convalescent. No deaths have occurred among the cadets during the year. There has been a gain of 5,232 days of study over the number reported lost last year from sickness.

The report of the dental surgeon is inclosed, marked "Appendix C." The work of the dental surgeon, Doctor Oliver, had greatly fallen behind, owing to the volume of work being too great for him to manage. Through the assistance of the Surgeon General, Congress was brought to see the necessity of more help in this direction, and an extra dental surgeon was provided for in the army bill. This officer has been appointed and is now at work with greatly beneficial results. New and suitable dental offices will be provided in the new scheme of buildings.

#### CADET ALLOWANCES AND SUPPLIES.

The report of Captain Franklin, the treasurer and quartermaster and commissary of cadets, is inclosed, marked "Appendix D." The cadet mess, cadet store, and cadet laundry have been kept to the high standard of efficiency reached by Capt. Thomas Franklin, treasurer. The cadet mess hall has been improved by the flooring and wainscoting with tile of the north serving room, the north hall way, the north scullery, and butcher shop. The corresponding rooms in the south wing are now being treated in the same manner, making them cleaner and more sanitary. A dough-dividing machine, a potato peeler, and a steam oven have been added, lessening the cost and improving the sanitation of the preparation of the food. The cost of the food has averaged 61 cents per day for the past year, the variety and amount of which are ample and the preparation most sanitary and tasteful.

As an example of the strict supervision exercised over all articles of the cadets' diet, attention is invited to the following specifications, which form part of the contract with the dairyman, governing the milk supply for the Military Academy:

1. The milk required to be delivered by the terms of the annexed agreement shall be produced entirely from one dairy, and the expense of establishing, maintaining, and operating the dairy farms shall be borne entirely by the party of the second part.

2. The cows shall be of good average dairy breed, shall be perfectly healthy, and the milk shall at all times pass the tests prescribed by the New York State board of health and the New York State department of agriculture. The cows shall at all times be fed on clean, wholesome food, and be supplied with pure drinking water. No brewers' grains, slop, or swill food shall be used. The cows shall be subjected to the tuberculin test at any time when required by the Superintendent of the Military Academy, and any animal found diseased shall at once be removed from the dairy.

3. The barns in which the cows are stabled shall be well constructed, with sufficient floor space to prevent crowding, and shall be properly lighted, kept dry and well ventilated at all times.

4. The milk shall be thoroughly aerated as soon as milked and quickly and thoroughly cooled in ice water.

5. The milk cans and all vessels used in handling the milk must at all times be kept scrupulously clean, and all water used in cleaning the vessels must be

sterilized by boiling or by steam if required, and the vessels themselves must be also sterilized by steam if required.

6. All means of transportation used in hauling the milk must be kept clean.

7. The buildings and plant itself must be kept in proper hygienic condition. The employees shall observe strict cleanliness in their persons and clothing, and use the utmost care at all times to prevent any contamination of the milk.

8. Sickness of any of the employees at the dairy shall be at once reported to the surgeon of the post of West Point, so that the nature of the illness may be investigated and measures taken accordingly.

9. The entire plant is to be subjected at all times to the inspection of the Superintendent of the Military Academy, or of such person or persons as he may designate for that purpose, and any suggestions that may be made by such authorities regarding the general conditions of sanitation or the handling of the milk shall be observed by the party of the second part to said agreement.

The law referred to in paragraph 2 of these specifications is the agricultural law of New York (Heydecker's, vol. 3, p. 2700). It provides a penalty for the sale of adulterated milk (sec. 22). The term "adulterated milk" is defined (sec. 20) as follows:

1. Milk containing more than 88 per centum of water or fluids.
2. Milk containing less than 12 per centum of milk solids.
3. Milk containing less than 3 per centum of fats.
4. Milk drawn from cows within fifteen days before and five days after parturition.
5. Milk drawn from animals fed on distillery waste or any substance in a state of fermentation or putrefaction or on any unhealthy food.
6. Milk drawn from cows kept in a crowded or unhealthy condition.
7. Milk from which any part of the cream has been removed.
8. Milk which has been diluted with water or any other fluid, or to which has been added or into which has been introduced any foreign substance whatever.

#### DISCIPLINE.

The discipline of the Corps of Cadets is generally satisfactory. There have been a small number of minor infractions which were promptly checked and offenders punished, with salutary results. The practice of the past few years of drilling and disciplining the new cadets by the first-classmen has most beneficial results, and it is a matter of wonder that this method has not been in vogue from the beginning. The commandant of cadets, Lieutenant Colonel Howze, and his assistants are entitled to much credit for the rapid and efficient manner in which the new cadets were made ready to enter the corps.

The schedule of hours of study and attendance at recitations recommended by the academic board and put in operation by my predecessor, General Mills, and referred to in his last annual report, continues to be very satisfactory.

There were but two cadets tried by court-martial during the year.

Since the arrival of the new cadets this year I have convened at different times two boards under paragraph 128, Regulations United States Military Academy. The instructions to the boards were to

make a careful investigation to determine whether or not the regulations of the United States Military Academy referring to hazing are being strictly observed by cadets, and to this end they were directed to summon all persons who might be necessary and submit a written report of the result of the investigation. These investigations are thorough and will be ordered from time to time.

Responding to the invitation of the president of the Northfield conference, and in accordance with the custom of late years, a delegation composed of 12 cadets was permitted to go to Northfield. It is gratifying to note that the presence of West Point cadets was a source of inspiration to other delegations and their conduct was so satisfactory, as indicated in the following letter received from J. R. Mott, president of the International Student Conference:

As the president of the International Student Conference, which has just closed at Northfield, I write to express to you our deep appreciation of your kind action in permitting the delegation to come from the academy to the conference. They made a splendid impression on the delegations from the one hundred and more universities and colleges that we had in attendance. The character and spirit of your entire delegation were such as to make them a very helpful factor in their intercourse with the students. Coming, as they did, from our national institution, in which we are all so deeply interested, they helped to strengthen the patriotic spirit of the conference. In every way it has seemed to me a fine idea to have such a representation at Northfield. I trust that the results will so commend themselves to your best judgment that you will look with sympathetic favor on continuing to send such a fine representation.

#### CADET CLUB.

It has long been my opinion that the discipline of the Corps of Cadets should be more efficiently looked after by the first class. These young gentlemen have had the benefit of three years' training in the academy and should have outgrown their schoolboy ideas, and should recognize the fact that they are a part of the Government and feel their responsibility as such; it is believed that many do this, but that some do not. Anything which will tend to increase the feeling of responsibility and pride in their profession should be most carefully fostered, and the members of the first class should be in the Corps of Cadets as the first sergeant is in the company—in close touch with the enlisted men as well as with the company commander, and invariably on the side of discipline and order. As a step to this end a club has been provided, easily accessible and solely for the first class, and privileges given this class alone, which segregates it and gives it a prestige it has never had before. It has been carefully watched during the short time it has been in operation, and so far has had no deleterious effect on the prosecution of the academic course, but on the other hand results are being obtained in discipline which it is hoped will increase with time.

## PRACTICAL INSTRUCTION.

The usual instructive visits by the first class to Gettysburg, Water-vliet, and Sandy Hook, and by the second class to the Metropolitan Museum of Art, New York City, were made this year.

## BATTERIES.

It has been customary in recent years to send the first class to a seacoast fort for instruction in coast artillery, target practice, and submarine mining. These visits are made on account of the want of adequate facilities at West Point. The cadets have not been able to get the maximum benefit of the visit, because they go without having had the requisite preliminary instruction with modern guns, for want of proper batteries here. An appropriation of \$7,000 was secured at the last session of Congress to erect a suitable battery, and through the kindness of the Chief of Ordnance two modern 6-inch guns with disappearing carriages have been designated for transfer to the Military Academy, and they have been ordered sent here. The construction of the emplacements has been begun. This will permit sub-caliber practice under present-day conditions, instruction in drill and manipulation of the modern seacoast battery, fire control, range and position finding, and vessel tracking. The cadets of the first class made the usual visit to Fort H. G. Wright, and upon their return the following gratifying letter was received from Col. C. D. Parkhurst, Coast Artillery Corps, commanding Fort H. G. Wright:

1. It affords me especial pleasure to express my hearty appreciation of the hard and zealous work and gentlemanly behavior of the cadet class while here in camp during the week ending to-day; in every class of duty, zeal and intelligence were very marked, and manliness in all the hard work they performed was the especial characteristic.

2. The officers with the class were zealous and active in their various duties, and did everything possible to make the tour of duty a success; everything passed off smoothly and rapidly, without any incident to mar the harmony of the occasion.

3. The week just passed will ever be a pleasant memory, and I hope that next year the then first class may come here for a similar tour of duty.

Thanks to the courtesy and interest shown by Colonel Parkhurst and the members of his command at Fort Wright, the cadets received great benefit from their sojourn.

## TARGET PRACTICE.

The following summary of the result of the prescribed course of target practice this season by the cadets shows creditable progress in this important branch of practical instruction:

Individual figure of merit, 105.83; last year it was 87.43.

*Expert riflemen.*—Cadets Sturdevant, Bailey, Williams, J. C., Shephard, Cotton, Gordon, Muhlenberg, Peterson, Hickam, Garey, Beavers, Williams, S. M., Stockton, Nulsen, and Matile.

*Sharpshooters.*—Cadets Woodbury, Hughes, E. S., Ayres, Barker, Dixon, Edgerton, Deans, Donovan, Sumner, Baird, Crea, Erwin, Drennan, Hester, and Coulter.

*Marksmen.*—Cadets Loustalot, Cummins, Hill, R. A., Higley, James, Johnson, Dickinson, Bowen, G. C., Shiverick, Weeks, Peyton, Hall, H. W., Marshall, Lyon, Avery, Lonergan, Burns, Wilbourn, Dougherty.

*First-classmen.*—Cadets Hartman, Groninger, Goethals, Parrott, O'Brien, Hall, C. L., Fitzmaurice, Chaney, Miller, Jacobs, Muncaster, Coiner, Curry, Kennedy, Glover, Sneed, Schulz, Oakes, Sward, Hazlehurst, Slaughter, Bonesteel, Cullum, Meredith, Garrison, Baker, Elting, Geiger, Spencer, Smith, R. H., Lykes, Hobley, Cutrer, Marks, Y. M., Newman, McIntosh, Buckner, Cunningham, Hayes, E. S.

*Second-classmen.*—Cadets Atkisson, Gottschalk, Jackson, Dunn, Weaver, Grisell, Rodgers, Brown, Terry, Pendleton, Watson, Fletcher, Jarman, Putney, Whitley, Hanlon, Ellis.

*Third-classmen.*—Cadets Smith, T. J., Desobry, Bouton, A. E.

*Absent (sick).*—Cadet Ricker.

The following cadets of the third class qualified as marksmen in special course "A:" Cadets Harmon, Dunn, W. K., Pullen, Odell, Muir, Heard, Davies, J. A., Richart.

The target range is small, narrow, and inconvenient at present. Negotiations are under way with the West Shore Railroad Company looking to the moving of their tracks so as to improve and enlarge the target grounds. Space for gallery practice is contemplated in the new gymnasium, which will permit of shooting during the entire winter.

#### DEPARTMENT OF TACTICS.

The accompanying report of the commandant of cadets (Appendix E) describes the work accomplished in this department during the year.

I desire to renew the recommendation made by my predecessor, General Mills, that an additional artillery officer be provided. Two officers are not enough to command the artillery detachment of enlisted men and to properly carry on the practical instruction of the cadets in artillery, which, at certain seasons of the year, includes simultaneous instruction in coast, field, siege, and mountain artillery and standing gun, howitzer, and mortar drill. This year and last an additional artillery officer was sent here on temporary duty during July and August to assist in these duties. This should be made a permanent detail.

The battalion of cadets, accompanied by details from the Military Academy detachments of engineers, cavalry, and artillery and a detachment of the signal corps, was sent out on the usual practice march August 19 to 24. Problems in minor tactics, involving the use of the combined arms—cavalry, field and mountain artillery, infantry, signal, engineer, and hospital troops—were solved daily, and instruction given on the subjects of castrametation, pack and wagon transportation, under the supervision of the tactical department, and in reconnaissance and military map making by the practical military engineering department.

#### DEPARTMENT OF PRACTICAL MILITARY ENGINEERING.

The accompanying report of the instructor of practical military engineering (Appendix F) describes the work accomplished in this department.

#### DETACHMENTS.

The inspector general reports, after his recent inspection, "the improved conditions of the artillery and cavalry detachments are very noticeable and deserve especial mention, as the detachment commanders have had many difficulties to contend with." The small pay, compared with that received by civilians at work in the improvements on the post, and the extra duty imposed by the instruction of cadets have caused dissatisfaction always in the past, especially in the cavalry. Last winter it was suggested by The Adjutant General that the cavalry detachment be changed so as to be composed of colored men. This was done with very good results. The men are better satisfied, the equipments and horses are in better condition than when the detachment was composed of white men, and no desertions have occurred among the colored men as compared with 13 desertions among the white men from September 1, 1906, to date of change, March 7, 1907.

It is recommended (estimates have been submitted) that the organization of the artillery detachment be that of a regular field battery, with an electrician sergeant, first class, and a master gunner in addition to assist in caring for the electrical apparatus and valuable instruments provided for the coast artillery fire-control system and the service of the guns, and the instruction of cadets in their use. Only trained and skilled men can handle the equipment, and they can not be obtained unless they are given the pay and rank allowed such men in the service. The equipment of the field artillery here is much greater than that of a regular field battery, and it has but an authorized strength of 75 men to take care of it, as compared with 133 authorized for a regular battery at present and 160 enlisted men provided by the field-service regulations. This equipment consists

of 2 batteries of 3-inch field guns with 76 horses, 1 battery mountain guns with packs, 1 battery siege guns, 1 battery siege howitzers, 1 battery siege mortars. In addition there is a complete fire-control system for coast artillery, and a battery of 6-inch guns on disappearing carriages will be mounted in the near future. As a single 4-gun field battery in the service is allowed 133 men, it is apparent that 75 men, even if all were present, which they never are, can not perform all the duties required of the artillery detachment at the Military Academy.

Estimates have been submitted for the construction of permanent buildings of the standard type for the primary station, the secondary station, the battery commander station, the searchlight station, and emplacement booths for the fire-control system coast artillery, as well as for a searchlight with a 48 or 60 inch projector, with the necessary operating machinery to teach the use of the position-finding service in night work. It is recommended that an allowance of ammunition for field and coast artillery be authorized for the Military Academy. At present there is no authorized allowance of artillery ammunition for the Military Academy. A request is made each year for authority to expend coast-artillery ammunition. Such quantities of field-artillery ammunition are expended as are allowed on requisitions. This is very unsatisfactory, and a regular allowance should be fixed.

The following amounts are considered necessary for the Corps of Cadets:

*Coast artillery.*

Guns.	Full service charges.	Subcaliber.	Additional primers.	
			Service.	Drill.
15-pounder rapid-fire gun.....	13	500	50	500
6-inch Ordnance Department rapid-fire gun.....	13	1,000	100	1,000
8-inch rifle.....		800		400
10-inch rifle.....	9	200		200

*Field artillery.*

Guns.	Shrapnel.	High explosive shell.	Common shell.	Subcaliber.	Blank cartridges.	Primers.
5-inch siege gun.....	100	50	50			500
3-inch field gun.....	400	100		3,000	1,000	
2.95-inch Vickers-Maxim mountain gun.....	400		100	2,000	500	

The subcaliber ammunition and primers for the 6-inch gun and the 3-inch rifle will be used during the drills at West Point, as a 6-inch battery is to be constructed this year.

The 5-inch siege gun will continue to be used till a new model siege gun is constructed. Target practice is held at the fortifications

with the 15-pounder, the 6-inch gun, and the 10-inch guns, and at West Point with the 5-inch, the 3-inch, and the 2.95-inch field guns.

The following allowance is necessary for the detachment of field artillery:

	Shrapnel.	Common shell.	Subcaliber.	Blank cartridges.
3-inch field gun.....	240	20	2,000	300

The members of the detachment are drilled as a battery and are instructed in gunnery. There are now 38 qualified gunners on the rolls.

In order to complete their instruction they must be given the same course in target practice as is prescribed for a battery.

UNITED STATES MILITARY ACADEMY BAND.

The United States Military Academy band has maintained its high standard of excellence under the able direction of Mr. Essigke. In point of numbers, however, the band is weak, it being impossible to attract the required number of musicians at the present rates of pay. It is recommended that this band have a membership commensurate with the importance of this station, as follows: One leader, with pay and allowances of first lieutenant; 1 assistant leader (enlisted band sergeant), \$75 per month; 30 first-class musicians (enlisted), \$60 per month; 30 second-class musicians (enlisted), \$50 per month.

The band sergeant and assistant leader and the enlisted musicians to be also entitled to the clothing, fuel, rations, and other allowances of musicians of cavalry, and the said leader, the band sergeant and assistant leader and the enlisted musicians to be entitled to the same benefits in respect to pay, emoluments, and retirement arising from longevity, reenlistment, and length of service as are or may hereafter become applicable to other officers or enlisted men of the Army.

DETAIL OF OFFICERS AND DETACHMENTS FROM THE MILITARY ACADEMY DURING THE SUMMER TO ASSIST AT MANEUVERS, STATE CAMPS, ETC.

Under the authority from the War Department, the Military Academy detachment of engineers, under command of Capt. Charles W. Kutz, Corps of Engineers, with the necessary boats for ponton instruction, was sent to the New York State camp, near Peekskill, from June 15 to 22, for the purpose of assisting in the instruction of the Twenty-second Regiment, National Guard, State of New York.

Under instructions from the War Department this command furnished a detail of 14 officers for duty with the National Guard, State of New York, during the maneuvers from June 8 to 15 at Forts

Hamilton, Wadsworth, Schuyler, and Totten, N. Y. The purpose of detailing these officers was in order that the National Guard might have with it regular officers capable of devising simple maneuvers, beginning with outpost and patrol duty by companies, and ending with exercises with the various companies combined in repelling attacks of landing parties, etc., the object being to keep the militia busy and interested during its participation in the artillery maneuvers. Each of these officers was furnished from these headquarters with the following instructions relative to this duty:

1. This duty should not be regarded lightly, but looked upon as of importance and worthy of your best efforts.
2. Only by the exercise of tact, patience, and consideration can this duty be efficiently performed.
3. The members of the National Guard are particularly quick to resent harsh criticism or slighting remarks, and every endeavor should be made to give them no cause for such resentment.

It is gratifying to report that the efforts of the officers from West Point were so successful, as evidenced by most enthusiastic appreciation on the part of all the National Guard regiments participating in the maneuvers, that the ties between the National Guard and the Regular Army were cemented more strongly than ever.

Under authority of the War Department the officers and noncommissioned officers of the Eighth Massachusetts Infantry were also permitted to accompany the corps on its practice march and to join in the maneuvers. Their presence added interest to the problems by increasing the numbers engaged, and the privilege was greatly appreciated by them.

#### ACADEMIC INSTRUCTION.

The academic board has recognized for some years past the need of a revision of the curriculum, and began to work on the question in 1904. In the fall of 1906 it concluded that an effort should be made through the War Department or Congress to increase the length of the course by three months, and made the following argument therefor:

The congestion of the courses was severely felt over fifty years ago when, in 1854, the academy adopted a five-years' course, which was abandoned in 1858, was reestablished in 1859, to be abandoned again under the pressure of war necessities. This lack of time, recognized as detrimental to best results for certain portions of the classes, has been brought about and continued by two, in general, laudable aims: First, that the requisites for admission to the academy should be within the reach of the industrious youths of the entire country, so that these requisites have always been very moderate; second, that the general and professional education of our officers should be as full as possible and every graduate cadet should reach a minimum proficiency over as large a part of all the courses of study as possible.

It is the conviction of the committee that these two aims are incompatible with the best educational results for a large portion of the cadets in certain subjects

of study. Any very material elevation of the requisites for admission is probably beyond the power of the academic board, but even if it were not, it is believed that a higher proficiency and a more thorough and practical knowledge of a less extent of several of the courses would be of far more educational and professional value to many cadets of every class. The great progress in technical knowledge and its varied applications to military affairs in recent years has greatly increased the amount of scientific information demanded of all officers. The academy has attempted to meet the increasing demands of undergraduate instruction, but it finds itself now, as heretofore, hampered by lack of time for the best methods and best educational results in all the various subjects taught and deemed necessary to this instruction.

The committee are convinced that this addition of three months to the course, as suggested, will permit the arrangement of a far more desirable programme than can possibly be contrived for the term limited strictly to four years. The time asked for would be sufficient to provide for the elementary matter necessarily retained in the present curriculum, and enable a readjustment to be made with general advantage to the whole course, with diminutions in some subjects and additions to others, and without injury to any. A preliminary three months also has some intrinsic advantages. It gives a period in which the newcomer can become accustomed to our academic methods and learn proper habits of study, thus making his work during the remaining four years more effective. It distributes the period of preparation for entrance into the battalion through three months of spring instead of crowding it into a few weeks of the heated term, and gives the battalion its normal size for the full summer. It affords a period in which the hopelessly deficient can be eliminated, and in many ways accomplishes a good deal of what could be effected in a preparatory school, which has been thought by many to be a desideratum, and which was suggested by General Scott, in 1860, as "a proper and effectual remedy."

The committee wish to emphasize the fact that in asking added time for the course they do not desire to attempt any increase in the extent of those subjects now traversed by cadets and in which unsatisfactory results are observed, but on the contrary, they hope to arrive at more satisfactory results, by greater thoroughness, a higher standard in fundamentals, and a more practical and professional knowledge in these subjects by the devotion of more time to the *same*, or even a *less extent* of the subjects. In some of the nonscientific subjects, as history, law, languages, etc., these results are looked for both by slight extension and greater thoroughness. The accomplishment of the results aimed at is also to depend upon a strictly defined limitation of the extent of the adopted courses that shall be taught in each department, and to different portions of the class, as determined by the academic board itself. This important intention has always been approved by the board, but it has not been fully executed, and this failure has been one of the causes of unsatisfactory instruction and acquirement. This limitation of the amount of the subjects taught to the aptitude of the students will permit extensions in all directions where such extension is warranted by thorough mastery of the subjects; but it is mainly to improve educational results to that class of students which is not able, in the time available, to acquire a beneficial mastery of these subjects. These results will be attained by explanation, illustration; and application of principles until a clear apprehension is gained; by a wise sacrifice of the amount attempted, to a more thorough understanding. A better coordination of the branches of study, which will be possible by added time, will also be instrumental in securing better results.

In conclusion, it is desired to place on record the statement that in seeking to accomplish better results in the academy's work, any criticisms made have not

been made in a spirit of derogation of past efforts or a lack of appreciation of past results. These are fully and proudly recognized, but such criticism and suggestions as have been made only embody our admission that our academic system is not perfect, but susceptible of material improvement. It should furthermore be stated that there are a great many other sources of difficulty in the operation of our academic system—as those connected with the detail of instructors, the proper apportionment of assisted and unassisted labor of cadets, etc.—which have not been referred to, but these difficulties are in every case mitigated rather than increased by more academic time. Again, in every academic system, there are mechanical difficulties of operation relating to recitation rooms, hours of study, recitations, exercises, etc., but it is confidently believed that an academic schedule of great perfection in this regard can be arranged with the added three months, and that it can be put in effective operation as soon as the building construction now in progress has sufficiently advanced. These questions of minor detail have been given much consideration, but as they need not be finally determined until the fundamental question of the time addition is approved, they are not here referred to.

This recommendation received the sanction of the War Department, and Congress made the following proviso: "*Provided, That cadets appointed to the Military Academy at West Point, New York, for admission after the year nineteen hundred and seven, may be admitted on the first day of March in place of the first day of June;*" and made the necessary appropriation for their pay and subsistence during these extra three months.

This action taken, the way was paved for the revised schedule which was adopted by the academic board and forwarded to the War Department with the following letter, July 31, and returned by The Adjutant General, approved by the War Department, August 10, 1907, and is now being gradually put in force:

HEADQUARTERS UNITED STATES MILITARY ACADEMY,  
*West Point, N. Y., July 31, 1907.*

SIR: I have the honor to forward herewith copies in duplicate of the revised schedule of studies at the Military Academy, which was adopted by the academic board at its meeting on June 23, 1907. The new schedule provides for the following:

1. For the instruction of the class of new cadets for the period from the date of their admission, March 1, to the date of the following annual examination in June.
2. It provides for the teaching of Spanish in the first-class course and materially increases the time to be devoted to this subject. It is thought that, being one of the last subjects studied, the graduate will be more proficient in the use of the language than heretofore, and there will be a tendency to fix it permanently in his mind by its practical use in case he is ordered soon after graduation to duty in a Spanish-speaking country.
3. Provision is made for the establishment of a separate department of English and history. In the estimates heretofore submitted an item has been inserted providing for the pay of a head for this new department. Should Congress not take favorable action upon this prior to March 1 next, it is recommended that the department be established by Executive order and an officer selected and detailed in charge of it. The reasons for the establishment of this department

are, briefly, that the department of modern languages is as large as can properly be supervised by one officer when it includes the two subjects of French and Spanish; that the subjects of English and history are so related as to lend themselves to coordination in teaching; that the subjects of history and law are not so related, and that, as a rule, the head of the department of law will be an officer having devoted many years of his life to specialization in law, and therefore not generally an individual who will bring to the teaching of history the interest and special qualifications deemed desirable and even necessary to secure the best results from the study of this important subject.

4. Other less radical and less important changes in the schedule of studies will be readily understood from the diagram itself and need no special mention.

With a view to a full understanding of the action of the board in adopting this schedule, there are inclosed herewith various reports from the committee considering the subject, which have been adopted from time to time during the last two years, together with letters from this office bearing upon the subject. These papers show that the present schedule is the result of serious, thorough, and painstaking effort, and that the important questions which have been raised in the consideration of this subject have been thoroughly considered and discussed by the academic board. The documents supplement the brief explanation given above of the general features of the revised scheme. The reports are perhaps so voluminous and involve the consideration of so many questions as to make it an effort to even give them thorough perusal, but it would hardly be right to submit the final action of the board without attaching thereto this complete record of its labors.<sup>a</sup>

It is a pleasure to make special mention of the sincerity and seriousness with which the individual members of the board, as well as the entire body, approached the subject of the revision of the curriculum; and the broadmindedness and liberality with which each member has accepted changes or limitations in his own particular department which have been agreed upon by the entire board indicate the fact (which is recognized by those who have been in contact with the board during its deliberations) that the welfare of the institution as a whole, rather than that of any separate or distinct department, has been kept constantly in view.

The board still has under consideration and is giving much thought and study to a more explicit definition and restriction of the separate courses of study. It is believed that each course should be outlined in very great detail, and that the board, as a whole, should make a study of each course and decide whether the ground which is covered by the outline is sufficient in extent to accomplish the purposes of the course, and that when this decision has been reached there should be a rigid limitation of the subject-matter taught to that prescribed and laid down. In accomplishing this the board has been divided into as many subcommittees as there are courses, and these subcommittees are now engaged in preparing their reports for presentation to the board for its consideration. Particular attention will be given to the subject of mathematics by the subcommittee in charge of that subject, with a view to so prescribing and limiting the course that the fundamentals of this subject may be thoroughly acquired and understood by the student without being obscured by the harder but relatively less important details. It is not believed that the time devoted to this subject at present can be materially altered with benefit to the graduate, but it is believed that a more limited scope with greater thoroughness will result to its advantage. When the reports of the subcommittees are eventually adopted by the academic

---

<sup>a</sup> The documents referred to in this letter as inclosures were not received with this report.

board they will be submitted to the War Department for final action, with the necessary recommendations for changes in the present regulations to carry them into effect.

There are also inclosed herewith minority report of the professor of law and history upon the resolution of the academic board expressing the opinion that the department of law and history should be divided and history placed in the third class year, together with the report of the committee on revision of curriculum on the above minority report.<sup>a</sup>

I recommend the approval of the schedule submitted. It is impracticable at the present time to make this schedule a part of the regulations, because for the next two or three years it will be necessary to vary from it in many ways in order to adjust the differences which exist between the present schedule and the one submitted. It is, therefore, further recommended that the Superintendent be authorized to put the schedule in operation as expeditiously as may be practicable without disrupting the instruction in any department.

Very respectfully,

H. L. SCOTT,

*Colonel, United States Army, Superintendent.*

THE ADJUTANT GENERAL, UNITED STATES ARMY,

*War Department, Washington, D. C.*

#### MARKING.

The system long in vogue of marking cadets upon their daily recitations has been under discussion for some time past. In the olden time the cadet received but little instruction and was left to acquire what he could by his own unaided efforts. This made a strong and active student, but it has been felt that more and better results could be obtained by a combination. It has been believed by many graduates that at least a portion of the time in the recitation room should be given up to instruction. If this is carried out, it will not be possible for the instructor to examine every cadet every day. On the other hand, if too much instruction is given, the cadet is made to rely too much upon the instructor to teach him and is apt to relax his own efforts. The experiment was carried out in the fourth class for one year with partial results, as shown forth in the resolution adopted by the academic board December 7, 1906:

The committee on the revision of the curriculum, to which was referred by resolution of the academic board the subject of marking of cadets in academic courses of instruction, has the honor to submit the following report:

All papers submitted to the committee bearing on the subject were carefully considered, and all instructors charged with conducting the modified system of marking pursued last year were examined by the committee. The professor of mathematics was invited to be present during the examination of the instructors, and also expressed his views on the questions considered. The consensus of opinion of the instructors in the department of mathematics, the department in which the modified system was tried, and of Captain Blakely, the acting head of the department during the year, is that the experiment as

---

<sup>a</sup>The documents referred to in this letter as inclosures were not received with this report.

tried was a success in so far as the acquisition of a better understanding of the subjects taught was concerned. This benefit was especially noticeable in the lower sections. There was more difference of opinion as to the influence of no marks upon the effort made by the cadets themselves, but the consensus of opinion on this point also seemed to be that the majority of cadets made a proper and reasonable amount of personal effort, as much, perhaps, as under the system of daily marks, while a minority did not. After a careful consideration of the views of all the officers of the department, both oral and written, in which the experiment of modified marking was tried and all supposed results therefrom, and after a full discussion among the members of the committee, the conviction reached is that the old method generally employed at the academy in all departments of limiting the recitation period of personal examination, with little or no general explanation, is not the best: that this system should be combined with full and clear explanation of all subjects and points which are beyond the power of the student to master by the proper amount of honest effort. This course should be pursued both because it is necessary for the acquisition of a proper knowledge of the subjects, and because the study of a subject brings no proper return for the labor expended unless it be understood. The explanation stated should be given on all necessary occasions to accomplish the aims intended, at whatever expense of personal recitation and marks. However, the difficulty of accomplishing this desirable result includes several of the most persistent and universally recognized problems involved in education, to wit: The proper apportionment of value between mental training and discipline, and the acquisition of knowledge; the relative worth of conscious power secured by successful effort in overcoming difficulties, and the benefits of information secured by less strenuous effort; the value of subordinating inclination to effort in securing an end by unhesitating work rather than reaching that end by easier means. While these difficulties are all involved in properly apportioning the assisted and unassisted labor of cadets, it is beyond question that a great improvement can be and has been made in the former methods of the academy by ready and willing general explanation on the part of the instructors of all those portions of the courses which experience shows are beyond the reasonable and conscientious efforts of their sections. To this end it is believed that omission of recitation, and consequently of marks, should be made whenever the requirements of the course are as above stated. It is thought that in all courses the experience of the head of a department and of the older instructors can, with fair accuracy, decide those portions of each course that can not be satisfactorily mastered by the proper individual efforts of the cadets. This committee accordingly recommends that the head of each department, assisted by his instructors, shall decide upon the portions of each subject that come under the above head, and that full explanation of such portions be made to the class; the explanations preferably being made to each section, or at least to numbers so small as to accomplish the desired results. In the greater proportion of the matter considered to require explanation, the explanations should be given whether asked for by the cadets or not, and the heads of departments should assure themselves that all sections receive full explanations and that the members thereof be made to feel free to ask questions and to have explanations repeated until understood. This method carried out would probably, in some of the more difficult subjects, prevent all recitations on many days and permit only a small number on other days, so that the maximum mark for the week would not be determined at all by the number of recitation periods but by the maximum number of recitations by any one cadet; this maximum being made as nearly as possible the same for all members of the section. If this system be properly carried out, it is hoped and believed that the cadets

will avail themselves of the privilege to freely ask questions, and that they will receive all proper assistance on the points of the course requiring it, and that there will be little temptation for the cadets to neglect to do the proper amount of honest and conscientious work. The result of such a system would be a large decrease in the number of individual recitations and marks, with a corresponding increase in general explanation and instruction.

The success of this method would depend, of course, upon the thoroughness with which it is carried out, and this in turn depends, to a large degree, upon the efficiency of the instructors. In this respect the Military Academy is under a considerable handicap owing to the impossibility of having at all times equally and thoroughly competent instructors, and this handicap exists with any method of instruction attempted at the academy; but under the method just proposed the head of the department and his more experienced assistants could manage to make the more difficult explanations and see that all sections were properly assisted. It is believed by the committee that the aim of our instruction can be more nearly obtained by the system thus generally outlined than by any other, and that it can be made to retain the advantages of the old system of the academy (simple examination, recitation, and marks) and combine with it a greater interest in and a more thorough understanding of the subjects of study without material discouragement to individual effort; this last-named element is of great importance and should be most carefully preserved, and an objection in addition to those already suggested to the system of not marking at all on advance in any subject is, that the marks received in advance through the unassisted efforts of the cadets are believed by most instructors to be the best test of capacity when equal preparation of all is assumed, and accordingly very important in grading the cadets. With the system above recommended for adoption in our instruction the committee believes that there should be introduced a greater familiarity of the head of each department with the work and methods of every other. This familiarity with the work of other departments has been greatly diminished by the general elimination of oral examinations at the end of the academic term. The committee recommends that it be made the duty of each head of department to be present frequently at the recitation exercises of other departments.

This system is now in practice, and it is believed that it will be fruitful of good results.

#### ADMISSION ON CERTIFICATES IN LIEU OF THE MENTAL ENTRANCE EXAMINATION.

The admission of candidates on certificates from local schools and colleges (frequently secured after brief and inadequate attendance) in lieu of the entrance examinations, after having been given an exhaustive test for six years, was, with the authority of the Secretary of War, discontinued this year, the class entering in 1907 having been made the last one to enter on certificates. The certificate system gave very unsatisfactory results and a great number of candidates admitted by this method were found to have been poorly grounded in the entrance requirements, which deficiency often resulted in a very laborious career at the Military Academy and not infrequently in ultimate failure to master the course. It was found that the classes would be much better grounded if reasonable and uniform entrance examinations were required.

## METHOD OF DETAILING INSTRUCTORS.

Attention is invited to the method of detailing instructors at the Military Academy reported on by my predecessor in 1904, 1905, and 1906, by the Board of Visitors last year and this. It is recommended that all assistant professors and instructors be placed on the same footing as members of the detailed staff, and that officers thus detailed who show especial proficiency be kept here for longer periods. It is believed that the time has come to acknowledge the superiority of specialists in the art and science of war as well as in other professions, such as law, medicine, surgery, etc. When an officer, after having made the sacrifices incident to the attainment of recognition as an authority on some particular branch of the science of war at the Military Academy, is taken off his work and exchanged (before the service gets the full benefit of his labors) for a novice, it is certain there is a loss of efficiency and contentment. By the system of filling the place of the officer when detached from his regiment or corps for duty as an instructor here, his tour of duty, or an extension of his tour, will neither cripple his company nor require double duty of another in his absence; while his unrestricted service at the Military Academy will benefit his classes of cadets and at the same time permit him to advance himself still further in that branch of the science of war in which he particularly excels, and thereby benefit the service at large.

## THE LIBRARY.

The accompanying report of the librarian (Appendix G) describes the work accomplished during the past year in the library.

## WATER SUPPLY.

Attention is invited to the inclosed report of the officer in charge of the water supply of the Military Academy (Appendix H).

The storage capacity of the various reservoirs is as follows:

	Gallons.
Lusk Reservoir -----	92, 000, 000
Round Pond -----	48, 000, 000
Delafield Pond -----	9, 000, 000
Sinclair Pond -----	1, 300, 000
Cro' Nest Reservoir -----	300, 000
Total -----	150, 600, 000

As the daily consumption is 800,000 gallons, it will be noted that there is on hand six months' supply in case of drought or other reason operating to cut off the flow. In case the water supply of any one reservoir is cut off, the others, or any one of the others, can be turned on. Rules and regulations for the protection from contamination of the West Point water supply have been enacted by the New York

State commissioner of health, under chapter 661 of the laws of 1893; chapter 251 of the laws of 1899; chapter 484 of the laws of 1904, and chapter 582 of the laws of 1906. As soon as these regulations are put in force, it is believed that the water supply can be maintained in a very healthy condition; the necessary funds are on hand to carry out the purpose. In the meantime the filter bed surface is being doubled and the following order has been issued:

Weekly bacterial tests of the water supply of the post will be made by the surgeon and reports rendered to this office.

The officer in charge of the water supply will cooperate with the surgeon and furnish for analysis such samples as the surgeon may require.

The reports of the examination by the surgeon have heretofore all been favorable.

#### BUILDINGS AND GROUNDS.

The completion of the buildings under construction has been considerably delayed by the failure of contractors, whose work is now being performed by their bondsmen. Sixteen sets of captains' and lieutenants' quarters are now occupied and give great satisfaction. The steam and light tunnels, also cavalry and artillery barracks, stables, and gun shed, are rapidly approaching completion, as are the cadet barracks and the power house, and it is believed that all these buildings will be occupied by January 1. The foundations for the new gymnasium and headquarter building have been completed, and those for the bachelor officers' quarters and the new chapel are under way. A new proposition for making the contracts for construction was submitted to, and received the sanction of, the War Department. This provides for competition only among first-class builders who are able to do the work for a percentage of the cost of construction under the rigid supervision of the quartermaster, who, knowing the market price of material and labor, visés all orders for material and labor. A small bonus is given for early and a corresponding penalty for lateness in completion. It is believed that this method will greatly facilitate the future construction. Divisions of the old barracks have been overhauled, putting in new electric and gas fixtures whose location has been made according to the advice of the expert for the best advantage of the eyes of cadets. Attention is invited to the report (Appendix I) of Major Carson, constructing quartermaster, whose services have been most valuable.

#### ORDNANCE AND GUNNERY.

The report of the professor of ordnance and gunnery is inclosed. (Appendix J.)

## FORESTRY.

The report of the forester, Prof. Roy L. Marston, is inclosed herewith. (Appendix K.) Professor Marston serves purely for his love of the Army and without pay, and I hereby extend to him the thanks of the Military Academy for his valued assistance in his special science during the year.

## ESTIMATES.

As directed, the estimates for the next fiscal year were forwarded in advance of this report, together with full notes explaining the necessity for the few new items submitted.

## OFFICERS OF THE WAR DEPARTMENT AND THE MILITARY ACADEMY.

On behalf of the Military Academy I take pleasure in recording appreciation of the many courtesies extended by the officers of the War Department. The achievements of the academic board and the corps of officers and instructors at the Military Academy during the year deserve high commendation. I wish to invite especial attention to the capable and faithful services of Capt. Frank W. Coe, Coast Artillery Corps, whose tour of duty as adjutant of the Military Academy ended to-day. In no office has the growth of the academy made heavier demands than in that of the adjutant, which demands were met by Captain Coe in a most capable and efficient manner.

Very respectfully,

H. L. SCOTT,

*Colonel, United States Army, Superintendent.*

THE ADJUTANT GENERAL, UNITED STATES ARMY,

*War Department, Washington, D. C.*



## APPENDIX A.

### ROSTER OF OFFICERS AND TROOPS.

#### SUPERINTENDENT.

Col. Hugh L. Scott, major, Fourteenth Cavalry.

#### MILITARY STAFF.

Capt. Joseph S. Herron, Second Cavalry, adjutant of the Military Academy and of the post, recruiting officer.

Maj. John M. Carson, jr., quartermaster, quartermaster of the Military Academy and of the post, disbursing officer, in charge of construction.

First Lieut. William S. Browning, First Field Artillery, commissary.

Capt. Thomas Franklin, commissary, treasurer of the Military Academy, and quartermaster and commissary of the battalion of cadets.

Lieut. Col. Charles M. Gandy, Medical Department, United States Army, surgeon.

Capt. Charles B. Hagadorn, Twenty-third Infantry, on duty at Headquarters Military Academy.

Capt. Frank W. Coe,<sup>a</sup> Coast Artillery Corps, on duty at Headquarters Military Academy.

First Lieut. Richard M. Thomas, Fifteenth Cavalry, on duty at Headquarters Military Academy.

Capt. Sam F. Bottoms, Coast Artillery Corps, in charge of post exchange.

Capt. Horton W. Stickle, Corps of Engineers, assistant to the officer in charge of construction.

Capt. Robert C. Foy, Tenth Cavalry, assistant to quartermaster.

First Lieut. Walter D. Smith, Fourteenth Cavalry, assistant to quartermaster.

First Lieut. John W. Hanner, assistant surgeon, United States Army.

First Lieut. Robert C. Loving, assistant surgeon, United States Army.

First Lieut. Lloyd L. Smith,<sup>b</sup> assistant surgeon, United States Army.

#### ACADEMIC STAFF.

Professors whose service at the academy, as professor, exceeds ten years have the rank, pay, and allowances of colonel, and all other professors the rank, pay, and allowances of lieutenant colonel. The academic departments are arranged in the order in which they were created by law.

<sup>a</sup> To be relieved September 1, 1907.

<sup>b</sup> Absent on detached service since April 1, 1907.

## DEPARTMENT OF TACTICS.

Lieut. Col. Robert L. Howze, United States Army (captain, Sixth Cavalry), commandant of cadets and instructor of tactics.

Capt. Francis C. Marshall, Fifteenth Cavalry, senior instructor of cavalry tactics.

Capt. Morton F. Smith, Twentieth Infantry, senior instructor of infantry tactics.

Capt. Oscar J. Charles, Seventeenth Infantry, assistant instructor of tactics, commanding company of cadets.

Capt. Merch B. Stewart, Eighth Infantry, assistant instructor of tactics, commanding company of cadets.

Capt. Charles P. Summerall, Third Field Artillery, senior instructor of artillery tactics.

Capt. Herman J. Koehler, United States Army, master of the sword, instructor of military gymnastics and physical culture.

Capt. Llewellyn W. Oliver, Twelfth Cavalry, assistant instructor of tactics, commanding company of cadets.

Capt. George S. Simonds, Twenty-second Infantry, assistant instructor of tactics, commanding company of cadets.

First Lieut. Alfred A. Maybach, Coast Artillery Corps, assistant instructor of tactics, commanding company of cadets.

First Lieut. Guy Kent, First Cavalry, assistant instructor of tactics.

Second Lieut. Francis H. Farnum, Eleventh Infantry, assistant instructor of tactics, commanding company of cadets.

Second Lieut. Benjamin E. Grey, Twenty-ninth Infantry, assistant instructor of tactics and gymnastics.

Civilian instructors: Francis Dohs, Louis Vauthier, Thomas Jenkins, in fencing and military gymnastics.

## DEPARTMENT OF CIVIL AND MILITARY ENGINEERING.

Col. Gustav J. Fiebeger, United States Army, professor.

Capt. Lewis H. Rand, Corps of Engineers, assistant professor.

Capt. Francis A. Pope, Corps of Engineers, instructor.

First Lieut. Edward N. Johnston, Corps of Engineers, instructor.

First Lieut. William A. Mitchell, Corps of Engineers, instructor.

First Lieut. Laurence V. Frazier, Corps of Engineers, instructor.

## DEPARTMENT OF NATURAL AND EXPERIMENTAL PHILOSOPHY.

Lieut. Col. William B. Gordon, United States Army, professor.

Capt. John B. Christian, Ninth Cavalry, assistant professor.

First Lieut. William S. Browning, First Field Artillery, instructor.

First Lieut. Joseph F. Barnes, First Field Artillery, instructor.

First Lieut. Adam F. Casad, Coast Artillery Corps, instructor.

First Lieut. William F. Morrison, Second Field Artillery, instructor.

Second Lieut. Frederick E. Shnyder, Second Cavalry, instructor.

## DEPARTMENT OF MATHEMATICS.

Lieut. Col. Charles P. Echols, United States Army, professor.

Capt. George Blakely, Coast Artillery Corps, associate professor.

Capt. Archibald H. Sunderland, Coast Artillery Corps, assistant professor.

First Lieut. Frank O. Whitlock, Fourteenth Cavalry, instructor.

First Lieut. Willis V. Morris, Sixth Cavalry, instructor.

First Lieut. James F. Bell, Corps of Engineers, instructor.

First Lieut. Wade H. Carpenter, Coast Artillery Corps, instructor.

First Lieut. Samuel Frankenberger, Third Field Artillery, instructor.

First Lieut. Charles R. Alley, Coast Artillery Corps, instructor.

First Lieut. Chauncey L. Fenton, Coast Artillery Corps, instructor.

First Lieut. Francis W. Honeycutt, Fifth Field Artillery, instructor.

Second Lieut. Charles Telford, Twelfth Cavalry, instructor.

Second Lieut. Vaughn W. Cooper, Twelfth Cavalry, instructor.

#### DEPARTMENT OF CHEMISTRY, MINERALOGY, AND GEOLOGY.

Col. Samuel E. Tillman, M. A., United States Army, professor.

Maj. Wirt Robinson, Coast Artillery Corps, assistant professor.

Capt. Thomas W. Darrah, Twenty-seventh Infantry, instructor.

Capt. Milton L. McGrew, Eleventh Infantry, instructor.

Capt. William F. Nesbitt, Fourth Infantry, instructor.

Capt. Charles B. Clark, Fourteenth Infantry, instructor.

First Lieut. Julian A. Benjamin, Third Cavalry, instructor.

First Lieut. Henry C. Jewett, Corps of Engineers, instructor.

#### DEPARTMENT OF DRAWING.

Col. Charles W. Larned, United States Army, professor.

Capt. Charles H. Paine, Twenty-ninth Infantry, assistant professor.

Capt. Frederick W. Lewis, Twenty-ninth Infantry, instructor.

First Lieut. Pelham D. Glassford, Sixth Field Artillery, instructor.

Second Lieut. Henry M. Nelly, Twentieth Infantry, instructor.

Second Lieut. Richard J. Herman, Twenty-third Infantry, instructor.

#### DEPARTMENT OF MODERN LANGUAGES.

Col. Edward E. Wood, United States Army, professor.

Capt. Peter E. Traub, Thirteenth Cavalry, associate professor.

Capt. William O. Johnson, Thirtieth Infantry, assistant professor of the Spanish language.

Capt. Charles R. Lawson, Coast Artillery Corps, assistant professor of the French language.

Capt. Grayson V. Heidt, Eleventh Cavalry, instructor.

First Lieut. George M. Russell, Fifteenth Cavalry, instructor.

First Lieut. Stephen Abbot, Coast Artillery Corps, instructor.

First Lieut. Owen G. Collins, <sup>a</sup> Coast Artillery Corps, instructor.

Second Lieut. Edward J. Moran, Twenty-seventh Infantry, instructor.

Second Lieut. George A. Lynch, Seventeenth Infantry, instructor.

<sup>a</sup> Not yet joined.

Second Lieut. Robert C. Richardson, jr., Fourteenth Cavalry, instructor.

Second Lieut. Joseph W. Stilwell, Twelfth Infantry, instructor.

Second Lieut. Martin C. Wise, Twentieth Infantry, instructor.

Civilian instructors: A. Marin La Meslee and Georges Castegnier, in French; Jose M. Asensio and N. T. Quevedo, in Spanish.

DEPARTMENT OF LAW AND HISTORY.

Col. Edgar S. Dudley, LL. B., LL. D., judge-advocate, United States Army, professor. (By assignment under act June 6, 1874.)

Capt. Daniel G. Berry, Twenty-second Infantry, assistant professor.

Capt. Irvin L. Hunt,<sup>a</sup> Sixth Infantry, instructor.

Capt. Samuel T. Ansell, Eighth Infantry, instructor.

Capt. Clement A. Trott, Fifth Infantry, instructor.

First Lieut. Marion W. Howze, Third Field Artillery, instructor.

Second Lieut. Henry E. Mitchell, Third Cavalry, instructor.

Second Lieut. Grayson M-P. Murphy,<sup>b</sup> Seventeenth Infantry, instructor.

Second Lieut. Harry S. Grier, Twenty-fifth Infantry, instructor.

Second Lieut. John de B. W. Gardiner,<sup>c</sup> Eleventh Cavalry, instructor.

DEPARTMENT OF PRACTICAL MILITARY ENGINEERING, MILITARY SIGNALING, AND TELEGRAPHY.

Capt. Charles W. Kutz, Corps of Engineers, instructor.

First Lieut. Mark Brooke, Corps of Engineers, senior assistant instructor.

DEPARTMENT OF ORDNANCE AND SCIENCE OF GUNNERY.

Lieut. Col. Ormond M. Lissak, United States Army (major, Ordnance Department), professor. (By detail March 6, 1907, under act of March 2, 1907.)

Capt. Edward P. O'Hern, Ordnance Department, senior assistant instructor.

First Lieut. William P. Ennis, Second Field Artillery, instructor.

First Lieut. Thomas E. Selfridge,<sup>d</sup> Fifth Field Artillery, instructor.

First Lieut. Ned B. Rehkopf,<sup>e</sup> Second Field Artillery, instructor.

DEPARTMENT OF MILITARY HYGIENE.

Lieut. Col. Charles M. Gandy, United States Army (major, Medical Department), professor. (By detail July 5, 1906, under act June 28, 1906.)

LIBRARIAN.

Edward S. Holden, M. A., Sc. D., LL. D. (July 1, 1902.)

CHAPLAIN.

Edward S. Travers. (December 1, 1905.)

<sup>a</sup> To be relieved September 15, 1907.

<sup>b</sup> Absent with leave, awaiting action on tender of resignation.

<sup>c</sup> Not yet joined.

<sup>d</sup> To be relieved September 1, 1907.

## EXAMINING AND SUPERVISING DENTAL SURGEON.

Robert T. Oliver. (January 16, 1905.)

DENTAL SURGEON.

William H. Chambers. (June 30, 1907.)

CONTRACT SURGEON.

George T. Tyler. (April 14, 1907.)

TEACHER OF MUSIC.

George Essigke. (October 15, 1895.)

FORESTER.

Roy L. Marston, M. F. (April 1, 1905.)

TROOPS.

BATTALION OF CADETS.

Lieut. Col. Robert L. Howze, United States Army (captain, Sixth Cavalry), commanding.

Company A, First Lieut. Alfred A. Maybach, Coast Artillery Corps, commanding.

Company B, Capt. Oscar J. Charles, Seventeenth Infantry, commanding.

Company C, Capt. George S. Simonds, Twenty-second Infantry, commanding.

Company D, Capt. Merch B. Stewart, Eighth Infantry, commanding.

Company E, Capt. Llewellyn W. Oliver, Twelfth Cavalry, commanding.

Company F, Second Lieut. Francis H. Farnum, Eleventh Infantry, commanding.

## UNITED STATES MILITARY ACADEMY BAND AND DETACHMENT OF FIELD MUSIC.

Capt. Joseph S. Herron, Second Cavalry, commanding.

## DETACHMENT OF HOSPITAL CORPS.

Maj. Charles M. Gandy, surgeon, commanding.

First Lieut. John W. Hanner, assistant surgeon.

First Lieut. Robert C. Loving, assistant surgeon.

First Lieut. Lloyd L. Smith, assistant surgeon.

## UNITED STATES MILITARY ACADEMY DETACHMENT OF ENGINEERS.

Capt. Charles W. Kutz, Corps of Engineers, commanding.

First Lieut. Mark Brooke, Corps of Engineers.

## UNITED STATES MILITARY ACADEMY DETACHMENT OF ORDNANCE.

Maj. Ormond M. Lissak, Ordnance Department, commanding.

Capt. Edward P. O'Hern, Ordnance Department.

## UNITED STATES MILITARY ACADEMY DETACHMENT OF CAVALRY.

Capt. Francis C. Marshall, Fifteenth Cavalry, commanding.  
First Lieut. Guy Kent, First Cavalry.

## UNITED STATES MILITARY ACADEMY DETACHMENT OF ARTILLERY.

Capt. Charles P. Summerall, Third Field Artillery, commanding.

## UNITED STATES MILITARY ACADEMY DETACHMENT OF ARMY SERVICE MEN.

Capt. Robert C. Foy, Tenth Cavalry, commanding.  
First Lieut. Walter D. Smith, Fourteenth Cavalry.

*List of officers at the United States Military Academy.*

Name.	Corps or regiment.	On duty at academy since—
<b>SUPERINTENDENT.</b>		
Scott, Hugh L.....	Colonel, United States Army (major, Fourteenth Cavalry).	Aug. 31, 1906
<b>PROFESSORS.</b> (With rank and pay of colonel.)		
Larned, Charles W.....	Professor (July 25, 1876).....	Aug. 28, 1874
Tillman, Samuel E.....	Professor (December 21, 1880).....	Aug. 28, 1879
Wood, Edward E.....	Professor (October 1, 1892).....	Aug. 28, 1889
Dudley, Edgar S.....	Colonel and judge-advocate, professor (July 31, 1901)	July 31, 1901
Fieberger, Gustav J.....	Professor (May 4, 1896).....	May 30, 1896
 (With rank and pay of lieutenant colonel.)		
Gordon, William B.....	Professor (March 27, 1901).....	May 2, 1901
Echols, Charles P.....	Professor (June 29, 1904).....	Dec. 27, 1898
Gandy, Charles M.....	Lieutenant-colonel (major, Medical Department), professor (July 5, 1906).	June 20, 1906
Lissak, Ormond M.....	Lieutenant-colonel (major, Ordnance Department), professor (March 6, 1907).	July 1, 1904
<b>LIEUTENANT COLONEL.</b>		
Howze, Robert L.....	Captain, Sixth Cavalry, commandant of cadets (June 15, 1905).	June 15, 1905
<b>MAJORS.</b>		
Carson, John M., jr.....	Quartermaster's Department.....	July 8, 1908
Robinson, Wirt.....	Coast Artillery Corps.....	Dec. 30, 1906
<b>ASSOCIATE PROFESSORS.</b>		
Traub, Peter E.....	Captain, Thirteenth Cavalry.....	July 1, 1907
Blakely, George.....	Captain, Coast Artillery Corps.....	Jan. 24, 1908
<b>CAPTAINS.</b>		
Hagadorn, Charles B.....	Twenty-third Infantry.....	Aug. 20, 1902
Johnson, William O.....	Thirtieth Infantry.....	Aug. 22, 1904
Marshall, Francis C.....	Fifteenth Cavalry.....	July 5, 1904
Paine, Charles H.....	Twenty-ninth Infantry.....	Aug. 22, 1904
Darrah, Thomas W.....	Twenty-seventh Infantry.....	Aug. 22, 1907
McGrew, Milton L.....	Eleventh Infantry.....	Aug. 22, 1905
Franklin, Thomas.....	Subsistence Department.....	Jan. 8, 1902
Smith, Morton F.....	Twentieth Infantry.....	Feb. 26, 1906
Charles, Oscar J.....	Seventeenth Infantry.....	Nov. 14, 1906
Coe, Frank W.....	Coast Artillery Corps.....	July 2, 1903
Stewart, Merch B.....	Eighth Infantry.....	Aug. 22, 1904
Lewis, Frederick W.....	Twenty-ninth Infantry.....	Aug. 22, 1905
Summerall, Charles P.....	Third Field Artillery.....	Do.
Bottoms, Sam F.....	Coast Artillery Corps.....	July 12, 1906
Herron, Joseph S.....	Second Cavalry.....	Jan. 3, 1907
Kutz, Charles W.....	Engineers.....	Oct. 13, 1906
Christian, John B.....	Ninth Cavalry.....	Aug. 22, 1905
Nesbitt, William F.....	Fourth Infantry.....	Aug. 22, 1907
Berry, Daniel G.....	Twenty-second Infantry.....	Do.
O'Hern, Edward P.....	Ordnance Department.....	Aug. 22, 1905
Stickler, Horton W.....	Engineers.....	Aug. 22, 1904
Koehler, Herman J.....	Captain, United States Army.....	Feb. 1, 1885
Rand, Lewis H.....	Engineers.....	Aug. 1, 1904

*List of officers at the United States Military Academy—Continued.*

Name.	Corps or regiment.	On duty at academy since—
CAPTAINS—continued.		
Heidt, Grayson V.....	Eleventh Cavalry.....	Aug. 22, 1907
Foy, Robert C.....	Tenth Cavalry.....	Sept. 1, 1904
Oliver, Llewellyn W.....	Twelfth Cavalry.....	Aug. 22, 1906
Clark, Charles B.....	Fourteenth Infantry.....	Do.
Hunt, Irvin L.....	Sixth Infantry.....	Aug. 1, 1908
Simonds, George S.....	Twenty-second Infantry.....	Aug. 22, 1904
Ansell, Samuel T.....	Eighth Infantry.....	June 14, 1906
Trott, Clement A.....	Fifth Infantry.....	Aug. 22, 1906
Lawson, Charles R.....	Coast Artillery Corps.....	Aug. 22, 1904
Sunderland, Archibald H.....	do.....	Do.
Pope, Francis A.....	Engineers.....	Aug. 22, 1906
FIRST LIEUTENANTS.		
Whitlock, Frank O.....	Fourteenth Cavalry.....	Aug. 29, 1905
Morris, Willis V.....	Sixth Cavalry.....	Aug. 22, 1904
Benjamin, Julian A.....	Third Cavalry.....	Aug. 22, 1905
Thomas, Richard M.....	Fifteenth Cavalry.....	Aug. 22, 1907
Hanner, John W.....	Medical Department.....	May 19, 1906
Johnston, Edward N.....	Engineers.....	Aug. 22, 1907
Loving, Robert C.....	Medical Department.....	Nov. 23, 1906
Smith, Lloyd L. <sup>a</sup> .....	do.....	Aug. 25, 1906
Jewett, Henry C.....	Engineers.....	Aug. 22, 1907
Mitchell, William A.....	do.....	Aug. 28, 1907
Brooke, Mark.....	do.....	Aug. 1, 1907
Frazier, Laurence V.....	do.....	Aug. 22, 1905
Bell, James F.....	do.....	Do.
Browning, William S.....	First Field Artillery.....	Aug. 20, 1904
Barnes, Joseph F.....	do.....	Aug. 22, 1907
Ennis, William P.....	Second Field Artillery.....	Aug. 19, 1904
Smith, Walter D.....	Fourteenth Cavalry.....	Aug. 22, 1905
Russell, George M.....	Fifteenth Cavalry.....	Aug. 28, 1906
Maybach, Alfred A.....	Coast Artillery Corps.....	Aug. 22, 1907
Kent, Guy.....	First Cavalry.....	Feb. 4, 1907
Carpenter, Wade H.....	Coast Artillery Corps.....	Aug. 22, 1904
Frankenberger, Samuel.....	Third Field Artillery.....	Aug. 22, 1907
Casad, Adam F.....	Coast Artillery Corps.....	Aug. 22, 1905
Abbot, Stephen.....	do.....	Aug. 22, 1904
Morrison, William F.....	Second Field Artillery.....	Oct. 29, 1906
Rehkopf, Ned B. <sup>b</sup> .....	do.....	Do.
Collins, Owen G. <sup>b</sup> .....	Coast Artillery Corps.....	Do.
Howze, Marion W.....	Third Field Artillery.....	Aug. 22, 1905
Selfridge, Thomas E. <sup>c</sup> .....	Fifth Field Artillery.....	Aug. 22, 1906
Alley, Charles R.....	Coast Artillery Corps.....	Do.
Fenton, Chauncey L.....	do.....	Do.
Glassford, Felham D.....	Sixth Field Artillery.....	Aug. 22, 1907
Honeycutt, Francis W.....	Fifth Field Artillery.....	Do.
SECOND LIEUTENANTS.		
Moran, Edward J.....	Twenty-seventh Infantry.....	Aug. 22, 1906
Mitchell, Henry E.....	Third Cavalry.....	Aug. 22, 1907
Nelly, Henry M.....	Twentieth Infantry.....	Do.
Telford, Charles.....	Twelfth Cavalry.....	Do.
Shnyder, Frederick E.....	Second Cavalry.....	Do.
Lynch, George A.....	Seventeenth Infantry.....	Aug. 22, 1905
Murphy, Grayson M-P. <sup>d</sup> .....	do.....	Mar. 9, 1907
Farnum, Francis H.....	Eleventh Infantry.....	Aug. 22, 1907
Grey, Benjamin E.....	Twenty-ninth Infantry.....	Aug. 22, 1906
Grier, Harry S.....	Twenty-fifth Infantry.....	Aug. 22, 1907
Cooper, Vaughn W.....	Twelfth Cavalry.....	Do.
Richardson, Robert C., jr.....	Fourteenth Cavalry.....	Nov. 1, 1906
Stillwell, Joseph W.....	Twelfth Infantry.....	Aug. 22, 1906
Herman, Richard J.....	Twenty-third Infantry.....	Aug. 22, 1907
Wise, Martin C.....	Twentieth Infantry.....	Do.
Gardiner, John de B. W. <sup>b</sup> .....	Eleventh Cavalry.....	Do.

<sup>a</sup>Absent on detached service.<sup>b</sup>Not yet joined.<sup>c</sup>To be relieved September 1, 1907.<sup>d</sup>Absent with leave, awaiting action on tender of resignation.

HEADQUARTERS UNITED STATES MILITARY ACADEMY,

*West Point, N. Y., August 31, 1907.*

Official :

**J. S. HERRON,**  
*Captain, Second Cavalry, Adjutant.*

## APPENDIX B.

## REPORT OF THE SURGEON.

OFFICE OF THE SURGEON,  
UNITED STATES MILITARY ACADEMY,  
*West Point, N. Y., July 31, 1907.*

SIR: In compliance with instructions contained in Memorandum No. 74, dated Headquarters United States Military Academy, July 5, 1907, I have the honor to submit the following report of the work of the medical department for the fiscal year ending June 30, 1907:

## CORPS OF CADETS.

The general health of the cadets has been excellent. During the summer and autumn of 1906 there were many cases of malaria. Some of these occurred in newly admitted cadets who gave a history of malarial attacks shortly before admission. A greater number were in patients who had been at West Point for a considerable time, and were undoubtedly of local origin. During the present summer the admissions to sick report on account of the malady under consideration have been fewer in number, and have been confined largely to men having a previous malarial history, either here or at their homes. There have been one or two cases in which no previous history of malaria could be obtained.

During the autumn, winter, and spring, there were many cases of catarrhal troubles of the respiratory tract. These varied in severity from a slight "cold in the head" (*coryza*) to a bronchitis of moderate severity. None were of sufficient gravity to occasion any misgivings as to the possibility of speedy and permanent recovery. The cold and humid climate affords a sufficient explanation of the frequency of such cases.

During the winter there was an epidemic of influenza of a mild type. None of the cases developed any serious complication.

Several cadets suffered from articular rheumatism, and one case was particularly obstinate, being of an ambulatory type with successive involvement of practically all the large joints of the body. The humidity and chill of the climate was undoubtedly an important factor in the development of this disease.

Three days before the close of the fiscal year two cases of suspected typhoid fever were admitted to sick report. While chronologically not belonging to this report, I deem it wise, in order to make it more complete, to say that a positive diagnosis of typhoid fever was subsequently made, and that on July 1 a third case was admitted. At the present writing these patients are well on the road toward convalescence. The infection in all cases has been traced to the Jamestown Exposition, where the Corps of Cadets was in camp from June 4 to 12. It is almost positive that the source of infection was not in the camp, where every precaution was taken as to food, drink, and sanitation, but was from external and forbidden sources. One patient drank freely of water which appears to have been drawn from the mains of the exposition grounds; the second indulged in ice cream, an article which was prohibited at the cadet tables, and the

third drank frequent ice-cream sodas at fountains outside of camp. All the cases occurred in members of the then fourth class, a class which was away from the academy for the first time and which might be expected not to have acquired the habit of implicit obedience to orders of men of longer military training. Neither had they received the instruction in military hygiene which is given to the upper classes, and consequently would not appreciate the necessity for sanitary precautions as would the older men.

Throughout the year there have been many cases of acute indigestion, often attended by headache, dizziness, nausea, and vomiting. These cases have almost invariably been traced to constipation, usually due to the carelessness of the sufferer. In the attempt to save time during the busy days of the academic year the average cadet almost involuntarily falls into habits of rapid eating and the violation of other laws of personal hygiene to the detriment of his physical well being.

There have been a considerable number of accidents and injuries resulting from drills, athletics, and athletic sports. These have ranged in severity from slight contusions and sprains to fractures and dislocations. In no case has permanent injury resulted.

Considerable surgical work has been done during the year for members of the corps.

One case of fulminant appendicitis developed on the transport returning from Jamestown. This was promptly operated on and the cadet is now well on the way toward a perfect recovery. This case and the three cases of typhoid fever previously referred to may be said to be the only serious cases of illness occurring in the Corps of Cadets during the year.

Corns, callosities, and abrasions of the feet have been of frequent occurrence; these in the majority of instances have been due to imperfectly fitting shoes. The Superintendent, commandant of cadets, the treasurer, and the surgeon are now endeavoring to secure a more practical uniform shoe, and it is hoped that before the next annual report is rendered there will be a marked improvement in this respect.

There have been no deaths in the Corps of Cadets, and with the exception of the cases of typhoid fever previously referred to, no contagious or infectious diseases.

There has been a decided decrease since last year, both in the number of admissions to the cadet hospital, and in the number of days lost to cadets in study through sickness.

#### OFFICERS AND ENLISTED MEN.

The general health of the officers and enlisted men has been good. The largest number of admissions to sick report have been on account of catarrhal diseases of the air passages. Included in these are a number of cases of epidemic influenza.

There have been the usual proportion of accidents and injuries which occur among troops, and particularly in mounted commands.

There have been no deaths among officers. Seven enlisted men have died during the year.

Finger prints and photographs have been made of the entire enlisted portion of the command as prescribed by Circular No. 44, War Department, August 6, 1906.

#### CIVILIAN POPULATION.

This post probably has a proportionately, if not actually, larger civilian population than any military post in our service. It includes the families and guests of officers and enlisted men, a large proportion of the latter being married, civilian employees of the various departments, and artisans and laborers employed on the extensive construction work now in progress. While the latter are not entitled to the services of the medical department, they are so far removed from the possibility of civilian medical advice that in the interests of humanity they have received no inconsiderable amount of treatment. In fact they, in common with others, have sometimes almost demanded as a right what they have been accorded as a courtesy, and such demands are not always made with the consideration for the convenience of medical officers that the circumstances would seem to warrant. Taking everything into consideration, it is probable that more professional work is done among civilians than among the strictly military population of the post. Among this class of persons there have been most of the diseases ordinarily met with by the civil practitioner, and in addition accidents and injuries incident to blasting and excavation for foundations and for conduits of various kinds, and to the construction of buildings of heavy masonry.

Various epidemic diseases have occurred, among which may be mentioned chicken pox, mumps, scarlet fever, and measles. With the large number of laborers who are constantly coming from New York and other cities it is rather remarkable that the conditions have been so good.

There has been a considerable amount of surgical work done for the civilian residents, the operations ranging in importance from paring of corns to abdominal section.

There have been two deaths among civilians during the year. Nineteen births have occurred on the post during the same period.

#### SANITATION.

The sanitary condition of the post is generally good. The completion of the 20-inch pipe line from Popolopen Creek has added something like 30 square miles of water shed to the water supply, and will provide for the needs of the post for a long time to come, almost indefinitely. Bacterial examinations of the water from this source have given favorable results.

Efforts have been and are still being made, by drainage and the liberal use of oil, to exterminate the mosquito and with it the malarial plasmodium. Thus far these efforts have not been attended with entire success, although much has undoubtedly been accomplished. Unfortunately mosquitoes are still with us, and vigorous specimens of anopheles are by no means uncommon. This variety of mosquito

has not been found so frequently as last summer and autumn. There are places on both sides of the river, but off the reservation, where mosquitoes undoubtedly breed. While observers fix the limit of flight of the insect at from 200 to 600 yards, instances have been recorded where swarms have been involuntarily carried by favorable winds for considerable distances, and across rather extensive bodies of water. It is possible that the breeding places referred to may furnish their quota of pests to this post. Railroad transportation is spoken of as a not uncommon method of carrying the insect; it is not improbable that the numerous trains from Weehawken, which daily land passengers at the post, may also contribute their proportion of the famous New Jersey production to supplement our local supply.

Attention is invited to the appended statistical table, which furnishes more detailed information concerning the work of the medical department.

In closing I desire to commend the work of my assistants and to invite particular attention to the valuable surgical and ophthalmological work of the senior, First Lieut. J. W. Hanner, assistant surgeon, United States Army.

Very respectfully,

CHAS. M. GANDY,  
*Lieutenant Colonel, Surgeon,  
United States Military Academy.*

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

TABLE A.—*Sickness in command, etc.*

Admissions to cadet hospital, fiscal year 1905-6.....	1,739
Admissions to cadet hospital, fiscal year 1906-7.....	1,136
Decrease in number of admissions for present year.....	603
Number of days lost to cadets in study through sickness during the fiscal year 1905-6.....	11,089
Number of days lost to cadets in study through sickness during the fiscal year 1906-7.....	5,857
Gain in days of study over last year.....	5,232
Admission to soldiers' hospital during the fiscal year.....	558
Number of prescriptions filled at the cadet hospital dispensary (exclusive of routine ward prescriptions).....	6,709
Number of prescriptions filled at the soldiers' hospital dispensary (exclusive of routine ward prescriptions) and subdispensary.....	4,528
Recruits examined.....	102
Accepted.....	96
Rejected.....	6
Number of births on post.....	19
Number of enlisted men discharged on surgeon's certificate of disability.....	8

TABLE B.—Classification of admissions to hospital, with reference to cause, and ratio per thousand of mean strength.

Causes.	Cadets.		Officers and enlisted men.	
	Admissions.	Ratio per 1,000 of mean strength.	Admissions.	Ratio per 1,000 of mean strength.
Abrasions	18	37.34	2	4.14
Abscesses	14	29.02	9	18.67
Adenitis	0		2	4.14
Alcoholism	1	2.07	10	20.07
Appendicitis	3	6.22	7	14.52
Arthritis	0		1	2.07
Asthenopia	1	2.07	0	
Asthma	0	0.00	1	2.07
Atony of sphincter of bladder	3	6.22	0	
Auto-intoxication	1	2.07	0	
Blisters	2	4.14	0	
Bovy cyst	0		1	2.07
Bronchitis	96	199.19	43	89.21
Bubo	0		2	4.14
Bunions	1	2.07	3	6.22
Bursitis	0		1	2.07
Burns	2	4.14	0	
Colic	23	47.71	5	10.36
Constipation	17	35.26	18	37.34
Corns	5	10.36	4	8.29
Contusions	45	93.36	46	95.43
Cystitis	5	10.36	1	2.07
Conjunctivitis	9	18.67	2	4.14
Convalescent	2	4.14	1	2.07
Coryza	93	192.94	1	2.07
Carcinoma	0		2	4.14
Cellulitis	1	2.07	7	14.52
Concussion of brain	4	8.29	1	2.07
Chilblain	1	2.07	1	2.07
Caries	0		1	2.07
Chaneroid	0		3	6.22
Concussion of spine	1	2.07	0	
Cholecystitis	0		1	2.07
Dermatitis (rhus toxicodendron)	23	47.71	7	14.52
Diarrhea	7	14.52	3	6.22
Dislocations	15	31.12	4	8.29
Dyspepsia	0	0.00	5	10.36
Dysentery	2	4.14	1	2.07
Eczema	4	8.29	2	4.14
Enderteritis	0		3	6.22
Endocarditis	0		1	2.07
Enucleation of nail	1	2.07	0	
Enuresis	0	0.00	2	4.14
Epilepsy	0	0.00	2	4.14
Epididymitis	1	2.07	2	4.14
Epistaxis	1	2.07	0	
Exhaustion	0		1	2.07
Eye affections (not diagnosed)	0		1	2.07
Fever, malarial, nonmalignant infection, intermittent	48	99.79	68	141.07
Fever, intermittent, double tertian	3	6.22	0	
Fever, malarial, cachexia	0		1	2.07
Fevers, simple, continued	21	43.54	0	
Fractures	9	18.67	4	8.29
Furuncles	19	39.41	14	29.02
Foreign body in eye	1	2.07	0	
Gastritis	9	18.67	12	25.10
Gastritis, alcoholic	0		1	2.07
Ganglion	0		1	2.07
Glaucoma	0		1	2.07
Gonorrhoea	4	8.29	1	2.07
Headache	46	96.43	10	20.07
Heat exhaustion	0		1	2.07
Hemorrhage	0		1	2.07
Hemorrhoids	8	16.58	3	6.22
Hematoma of rectum	0		1	2.07
Hepatitis	0		1	2.07
Hernia	2	4.14	4	8.29
Herpes zoster	1	2.07	1	2.07
Hordeolum	1	2.07	0	
Hydrocele	0		1	2.07
Hypermetropia	2	4.14	0	
Hysteria	1	2.07	0	
Indigestion	159	329.87	10	20.07

TABLE B.—Classification of admissions to hospital, with reference to cause, and ratio per thousand of mean strength—Continued.

Causes.	Cadets.		Officers and enlisted men.	
	Admissions.	Ratio per 1,000 of mean strength.	Admissions.	Ratio per 1,000 of mean strength.
Infection.....	0	.....	2	4.14
Influenza.....	48	99.79	20	41.49
Ingrowing toe nail.....	2	4.14	2	4.14
Insanity.....	0	.....	1	2.07
Insomnia.....	1	2.07	0	.....
Laryngitis.....	3	6.22	3	6.22
Lead poisoning.....	0	.....	2	4.14
Lichen, ruber.....	2	4.14	0	.....
Lichen, simplex.....	1	2.07	0	.....
Lumbago.....	1	2.07	1	2.07
Lymphadenoma.....	0	.....	1	2.07
Migraine.....	0	.....	1	2.07
Mumps.....	0	.....	12	25.10
Myalgia.....	6	12.44	0	.....
Mydriati, recovering from effects of.....	1	2.07	0	.....
Necrosis, alveolar process.....	1	2.07	1	2.07
Nephritis.....	0	.....	1	2.07
Neurasthenia.....	0	.....	1	2.07
Neuralgia.....	18	37.34	1	2.07
Neuritis.....	1	2.07	2	4.14
Nasal spur.....	0	.....	1	2.07
Oedema of eyelid.....	1	2.07	0	.....
Odontalgia.....	3	6.22	1	2.07
Orchitis.....	1	2.07	0	.....
Otitis.....	0	.....	3	6.22
Paresis of muscles, left shoulder.....	1	2.07	0	.....
Paronychia.....	0	.....	1	2.07
Paralysis.....	0	.....	2	4.14
Palpitation of heart.....	0	.....	1	2.07
Pharyngitis.....	14	29.02	2	4.14
Phimosis.....	7	14.52	10	20.07
Periostitis.....	0	.....	1	2.07
Pleurisy.....	1	2.07	1	2.07
Polypus.....	0	.....	1	2.07
Proctitis.....	0	.....	1	2.07
Ptomaine poisoning.....	1	2.07	0	.....
Preputial sore, venereal.....	0	.....	1	2.07
Rheumatism.....	8	16.58	18	37.34
Rhinitis.....	0	.....	1	2.07
Septum, nasal, deflection of.....	1	2.07	1	2.07
Scabies.....	0	.....	2	4.14
Sprains.....	63	130.70	36	74.68
Strains, muscular.....	13	26.97	1	2.07
Suppuration.....	0	.....	1	2.07
Subluxation of joint.....	0	.....	1	2.07
Syncope.....	2	4.14	0	.....
Synovitis.....	12	25.10	2	4.14
Syphilis.....	0	.....	5	10.36
Tonsillitis.....	152	315.27	16	33.10
Tenia solium.....	0	.....	1	2.07
Trachoma.....	2	4.14	0	.....
Trauma.....	0	.....	1	2.07
Tuberculosis.....	0	.....	1	2.07
Tumor, hepatic.....	0	.....	1	2.07
Undetermined.....	0	.....	2	4.14
Under observation.....	1	2.07	1	2.07
Urethritis, nonvenereal.....	2	4.14	7	14.52
Urticaria.....	4	8.29	2	4.14
Vaccinia.....	0	.....	1	2.07
Varicocele.....	2	4.14	3	6.22
Vertigo.....	1	2.07	0	.....
Warts, venereal.....	0	.....	2	4.14
Wounds.....	16	33.10	22	45.64

TABLE C.—Deaths.

## ENLISTED MEN.

Carcinoma of the pylorus and colon.....	1
Carcinoma of the rectum.....	1
Carcinoma of the throat.....	1
Cardiac syncope from fatty heart.....	1
Drowning.....	1
Nephritis, chronic.....	1
Paralysis of left side and tongue.....	1
<b>Total.....</b>	<b>7</b>

(Two of the above were on the retired list.)

## CIVILIANS.

Senility (guest of an enlisted man).....	1
Asphyxiation, accidental (newly born infant).....	1
<b>Total.....</b>	<b>2</b>

TABLE D.—Surgical operations.

OPERATIONS PERFORMED BY CAPT. THOMAS L. RHOADS, ASSISTANT SURGEON, UNITED STATES ARMY.

Nature of operation.	Officers.	Cadets.	Enlisted men.	Civilians.	Total.
Circumcision.....		1			1
Varicocele.....			1		1
<b>Total.....</b>		1	1		2

OPERATIONS PERFORMED BY FIRST LIEUT. JOHN W. HANNER, ASSISTANT SURGEON, UNITED STATES ARMY.

Nature of operation.	Officers.	Cadets.	Enlisted men.	Civilians.	Total.
Appendectomy.....		1	1	1	3
Circumcision.....		6	1		7
Cyst (bony), of nose, excision of.....			1		1
Cystotomy.....			1		1
Corns, excised.....		2			2
Extirpation of cervical glands (tubercular).....			1		1
Extirpation of inguinal glands.....				1	1
Hematoma of rectum.....			1		1
Hemorrhoids, operation for.....		3	1		4
Hernia, inguinal.....		1	3	1	5
Hernia, inguinal, bilateral.....				1	1
Ingrowing toe nail.....			1		1
Nasal septum, deviated, surgically fractured and replaced.....		1	1		2
Oophorectomy and resection of ovary.....				1	1
Panhysterectomy.....				1	1
Resection of cartilage of right shoulder.....			1		1
Salpingo-oophorectomy.....				1	1
Septal spur, removal of.....	1	1		1	3
Urethrotomy.....			1		1
Varicocele.....		1			1
Wound, lacerated, severe, left heel, suture of.....			1		1
Uvula, clipped.....	2	1			3
<b>Total.....</b>	<b>3</b>	<b>17</b>	<b>15</b>	<b>8</b>	<b>43</b>

TABLE D.—*Surgical operations—Continued.*

## OPERATIONS PERFORMED BY FIRST LIEUT. ROBERT C. LOVING, ASSISTANT SURGEON, UNITED STATES ARMY.

Nature of operation.	Officers.	Cadets.	Enlisted men.	Civilians.	Total.
Abscess, alveolar, incision of .....			1		1
Amputation of second finger right hand .....			1		1
Circumcision .....			5	1	6
Hemorrhoids, operation for .....			1		1
Inguinal glands, excision of .....			1		1
Infected wound, enlarging and draining of .....				1	1
Total .....			9	2	11

## OPERATIONS PERFORMED BY FIRST LIEUT. LLOYD L. SMITH, ASSISTANT SURGEON, UNITED STATES ARMY.

Nature of operation.	Officers.	Cadets.	Enlisted men.	Civilians.	Total.
Abscess, inferior maxilla, incision of .....			1		1
Cellulitis, suppurative, incision and drainage for .....			1		1
Circumcision .....			4		4
Corns, excision of .....			2		2
Uterine curettage .....				1	1
Total .....			8	1	9

## OPERATIONS PERFORMED BY CONTRACT SURG. MICHAEL A. REBERT, UNITED STATES ARMY.

Nature of operation.	Officers.	Cadets.	Enlisted men.	Civilians.	Total.
Circumcision .....			3		3
Dissection of bursa, left foot .....			1		1
Meotomy .....			2		2
Total .....			6		6

## SUMMARY OF SURGICAL OPERATIONS PERFORMED AT WEST POINT, N. Y., FOR PERIOD FROM JULY 1, 1906, TO JUNE 30, 1907.

Officers.	Cadets.	Enlisted men.	Civilians.	Total.
3	18	39	11	71

TABLE E.—*Diseases of the eye treated by First Lieut. J. W. Hammer, assistant surgeon, United States Army.*

Anisometropia .....	1
Astigmatism .....	14
Astigmatism, hyperopic .....	37
Astigmatism, mixed .....	3
Astigmatism, myopic .....	24
Blepharitis, acute .....	3
Conjunctivitis, acute .....	3
Conjunctivitis, follicular .....	4
Corneal ulcer .....	3
Esophoria .....	5
Foreign bodies, imbedded in cornea, removed .....	7
Glaucoma .....	1
Hyperopia .....	4
Keratitis .....	1
Myopia .....	6
Presbyopia .....	4
Presbyopia and astigmatism .....	2
Retinitis .....	1
Trachoma .....	15
Total .....	138

## APPENDIX C.

## REPORT OF THE DENTAL SURGEON.

OFFICE OF THE DENTAL SURGEON,  
 UNITED STATES MILITARY ACADEMY,  
*West Point, N. Y., July 25, 1907.*

SIR: I have the honor to present the following report concerning dental surgery at the academy and post for the year ending June 30, 1907:

Number of cases presented.....	1, 167
Number of operations performed.....	1, 640
Number of different persons treated.....	889
Number of sittings recorded.....	4, 936

The personnel of the post being officially represented in the following proportions:

	Per cent.
Officers.....	25. 76
Cadets.....	56. 47
Enlisted men.....	17. 77

## CHARACTER OF SERVICE.

The character of service has been directed along the line that would give greatest benefit to the greatest number of persons; therefore it will be observed from the following tables that the number of operations requiring a considerable period of time for their accomplishment are comparatively small, while the number of operations of a temporary character, emergency operations and treatment cases, are correspondingly large.

In this respect it has been the endeavor to give greatest consideration to officers and upper classmen for insertion of permanent fillings and the longer operations, in view of their probable temporary attachment. Cadets of the lower classes, who will ordinarily be under continuous observation for some years were operated upon with the less permanent materials, as a temporary expedient requiring less time, trusting to take them at a later date for permanent operations.

The number of sittings per person has averaged about five, an indication of the conservatism practiced in the treatment and care of cadets, who compose the greatest number of those attended.

The additional dental surgeon provided for under the appropriation bill passed by last Congress reported for duty June 30, 1907, and it is expected this department will make a much better showing during the following year in the matter of permanent operations, such as gold fillings, gold inlays, crowns, bridges, porcelain restorations, inlays, etc. The assignment of patients to the two dental surgeons will permit of such distribution of cases between them as will enable each to accomplish more of the lengthier operations.

Long-continued treatment cases among the enlisted personnel again seems to prevail, probably due to their neglect to report for treatment until compelled to for relief of pain.

The mouths and teeth of the new fourth-classmen were examined and recorded soon after they joined (June 20 to 25). This is the first

time any tangible information has been obtained relating to the oral conditions of new cadets. It was found that about 60 per cent of those examined had recently called upon their local dentist for the purpose of having their teeth placed in good enough condition to pass the physical examination. As a consequence a large number had only received temporary attention; hence early treatment for them will be necessary. About 25 per cent either had good teeth (two being found with absolutely perfect sets) or had been in the habit of having them properly cared for, and 15 per cent were found to be in bad condition from the ravages of caries, putrescent pulp, dento-alveolar abscess, necrosis, etc. One cadet had such a deformed jaw from "saddle arch" that it is a wonder he keeps up physically with only about one-tenth masticatory function. Each member of this class was instructed as to date he should report back for examination, treatment, or operation, as per his individual requirement.

By this method of obtaining a complete record of the requirements of each cadet, the dental surgeon secures better command of the situation and may plan his work during the year that no one requiring his services will be neglected.

#### RECOMMENDATIONS.

It is recommended that a thorough examination, by an army dental surgeon, of the mouths and teeth of all candidates be made a part of the physical examination for admission to the academy.

This would establish a desirable precedent of causing all candidates to have their teeth placed in first-class condition before coming to the academy, instead of putting that additional expense upon the Government for the correction of physical defects not contracted "in the line of duty." At the same time it would prove of value as a diagnostic factor in determining upon the physical fitness of candidates. (See paragraphs 1, 3, 4, and 7, under "Recommendations," of the last annual report.)

That the members of each class be directed to report at a specified time, to be later determined upon, for the purpose of having their teeth and mouths examined and recorded, for the reasons heretofore mentioned.

That regular examinations of the teeth of cadets, every six months, be established, and thorough oral prophylaxis with brush and anti-septic abrasive be required as part of their daily toilet.

That adequate provision be made for temporary offices for the two dental surgeons on duty here, where they can be together for purposes of ready assignment of cases, consultation, administration, and the cooperative use of many expensive laboratory appliances and supplies.

That subsequent provision be made for permanent offices, either in the new cadet administration building now contemplated, where a sufficient number of rooms could be assigned to give an administrative office, waiting rooms, two dental operating rooms, a room for treatment cases, and a laboratory with the necessary north operating light, supply lockers, running water, electric current, lavatories, etc., or, better still, the construction of a dental hospital, to be located in the yard of cadet hospital, between the north end of said building and the

north retaining wall. This location would give an unobstructed north light, plenty of room for all above-cited requirements, and a small surgery for oral surgical operations, a stock room, an additional waiting room for enlisted men, a squad room for enlisted assistants, and a room for the noncommissioned officer in charge. Being adjacent to the cadet hospital, with which it could be connected, would solve the question of the treatment of cadets on sick report for dental ailments, the rationing of enlisted assistants at the cadet hospital detachment mess, and the use of certain medicines and supplies furnished for use of both the surgeon and dental surgeon.

A building of sufficient size, beginning about 8 feet from the north wall and on a line with the front wall of hospital, extending to the retaining wall across the front, and back to the rear line of hospital, with front elevation of pressed brick with stone trimmings (like officers' mess) in harmony with front elevation of hospital, could be erected with comparatively little expense, and not only would effectually settle the matter of dental offices for the future, but would permit of a needed development of dental surgery at this institution and insure every graduate a perfect set of masticatory organs and normal mouth conditions at the time of entering upon the arduous duties of the service, a health gift the Government owes each of them along with the diploma and education.

Offices of this description would no doubt be fully equipped with all modern electrical and other appliances by the Surgeon General and would become one of the integral exhibits of the Military Academy, and a demonstration to foreign representatives of the consideration given by our Government to the physical welfare of its future officers.

#### SPECIAL DUTIES.

In addition to the duties of dental surgeon for the Military Academy and post, the undersigned has, by direction of the Surgeon General and War Department, represented the Medical Department of the Army at a conference of the executive council of the National Dental Association, held at Washington, D. C., December, 1906; has been directed to pass upon requisitions for dental supplies from the medical supply officer in Manila and from dental surgeons; is frequently directed to act upon technical matters forwarded from the Surgeon General's Office, and has conducted the examination of two classes of candidates (9 men) for admission to the army dental corps (November 19 and December 3, 1906).

#### ORAL SURGICAL CASES.

There have been several cases during the year requiring oral surgical operation, such as fractured jaws, chronic alveolar abscess, necrosis of jaw, necrosis of alveolar process, caries of jaw, trismus, and caries of alveolar process.

#### STATISTICS.

The following tables of cases presented and operations performed give a comprehensive idea of the amount of professional service rendered during the period.



It will be observed there are a greater number of operations and sittings than of cases presented or individuals treated. This is explained from the fact that an individual may present two or more cases and frequently a single case may require two or more operations for its completion, the accomplishment of which may require several sittings.

Very respectfully,

ROBT. T. OLIVER,  
*Examining and Supervising Dental Surgeon,*  
*United States Army.*

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

APPENDIX D.

REPORT OF THE TREASURER, QUARTERMASTER, AND  
COMMISSARY OF CADETS.

OFFICE OF THE TREASURER,  
UNITED STATES MILITARY ACADEMY,  
*West Point, N. Y., August 3, 1907.*

SIR: I have the honor to make the following report of the operations of the departments under my charge for the fiscal year ending June 30, 1907:

TREASURER, UNITED STATES MILITARY ACADEMY.

The treasurer of the academy being "charged with all matters relating to the pay and accounts of the cadets," it is necessary to open an individual account with each cadet, also to keep 29 different accounts under the heads given in the following statement, which also shows the disbursements and receipts under each account during the fiscal year:

	Dr.	Cr.
Assistant treasurer.....	\$281, 731. 51	\$292, 590. 08
Athletic association.....	1, 888. 00	1, 888. 00
Balances paid.....	54, 782. 45	54, 798. 87
Barber.....	1, 137. 59	1, 137. 59
Cadet cash.....	30, 697. 90	30, 903. 36
Cadet hospital.....	3, 347. 16	3, 347. 16
Cadet laundry.....	19, 690. 56	18, 374. 07
Cadet store.....	126, 271. 77	129, 307. 54
Cadet mess.....	109, 044. 14	106, 320. 12
Confectioner.....	162. 00	162. 00
Corps of Cadets.....	363, 054. 41	363, 066. 50
Damages, ordnance.....	106. 40	106. 40
Dancing.....	737. 80	737. 80
Dentist.....	251. 00	239. 00
Deposits.....	24, 147. 25	23, 726. 90
Dialectic society.....	468. 52	683. 79
Equipment fund.....	50, 260. 64	54, 066. 43
Expressage.....	37. 85	39. 25
Hops and german.....	1, 953. 82	2, 413. 36
Miscellaneous fund.....	85. 53	236. 17
Miscellaneous items.....	7, 571. 88	7, 586. 77
Oaths (notary public).....	6. 75	6. 75
Paymaster.....	226, 287. 01	226, 287. 01
Purchasing commissary.....	49, 626. 00	49, 626. 00
Periodicals.....	53. 13	54. 75
Photographer.....	11. 00	11. 00
Travel pay.....	3, 844. 45	3, 844. 45
Washstand, etc., fund.....	254. 41	.....
Young Men's Christian Association.....	514. 36	636. 07

The accounts of the treasurer are inspected every two months by an officer of the academy detailed by the Superintendent, to whom the result of the inspection is reported, together with a statement of all debits and credits on different accounts. The last inspection was made July 31, 1907, and reported as follows:

Assets.		Amount.	Liabilities.		Amount.
Assistant treasurer .....		\$15,252.49	Balances paid .....		\$172.83
Cadet cash .....		898.14	Cadet laundry .....		1,487.52
Cadet store .....		25,169.49	Corps of Cadets .....		5,285.62
Cadet mess .....		12,745.69	Deposits .....		531.24
Reserve fund .....		10,000.00	Dialectic society .....		120.51
Periodicals .....		1.62	Equipment fund .....		75,358.76
Miscellaneous items .....		14.89	Miscellaneous fund .....		85.53
Young Men's Christian Association .....		19.01			
Hops .....		459.54			
Cash on hand .....		13,481.14			
Total .....		83,042.01	Total .....		83,042.01

I append herewith a statement which shows the volume of business transacted by this office for the fiscal years ending June 30, 1906 and 1907, respectively:

Total Dr., fiscal year—		
1906 .....		\$1,282,674.29
1907 .....		1,358,025.29
Balance in favor 1907 .....		75,351.00
Total Cr., fiscal year—		
1906 .....		1,264,010.03
1907 .....		1,372,197.19
Balance in favor 1907 .....		108,187.16

Concerning the financial condition of the cadets, some data given below may be of interest.

*Amounts paid to the cadets of the graduating class.*

Year.	Total amount.	Highest.	Lowest.	Average.
1897 .....	\$18,200.07	\$466.71	\$129.73	\$267.74
1898 .....	15,218.45	338.80	162.87	257.92
1900 .....	12,669.87	395.82	96.45	222.27
1901 .....	14,083.27	340.89	49.61	196.28
1906 .....	30,125.33	533.88	199.04	386.22
1907 .....	51,211.60	614.33	353.48	465.56

It will be noted that the amounts paid in 1907 are materially larger than last year. The cadet who received the smallest amount this year got \$154.44 more than the lowest man in 1906. The highest man this year got \$80.45 more than the highest man last year, while the average for 1907, which is more to the point, was \$79.34 more than in 1906.

The cash disbursed to cadets to be used in paying their expenses while on leaves of absence, in purchasing articles such as athletic goods, photographic material, confectionery—in fact, for all things purchased for their personal pleasure or profit for the year ending June 30, 1907, amounted to \$30,697.90, the average amount so

disbursed during this year amounting to \$69. In 1898 the amount disbursed for this purpose amounted to only \$40.94 per cadet.

On May 1, 1907, the Corps of Cadets was out of debt \$9,726.01.

#### QUARTERMASTER OF CADETS.

The business of the cadet store has increased during the past year. The sale of uniforms to the members of the graduating class again shows a satisfactory increase. The old store building has been repaired and repainted from garret to basement, and the steam heating apparatus, which went all to pieces last spring, has been thoroughly overhauled, but the building is so entirely inadequate for the present needs and is so poorly arranged that the new building in which the cadet store will be eventually housed is looked forward to with eagerness.

The high standard of quality of the goods issued to cadets has been maintained, but the price of nearly every article kept in stock has been advanced by the manufacturers during the year in spite of the closest possible buying. Every article the cadet wears or requires for his use, from clothing to text-books, costs more than last year, and a great deal more than it did six years ago.

The following table will show the amount of clothing manufactured and repaired during the past year:

	Manufac- tured.	Re- paired.
Dress coats.....	255	1,159
Overcoats.....	175	766
Blouses.....	484	1,605
Trousers:		
Gray.....	814	1,600
White.....	1,127	2,130
Riding.....	98	29
Line officers'.....	91	59
Staff officers'.....	16	
Officers' service.....	155	
Riding breeches, officers'.....	187	21
Dress coats, officers'.....	112	33
Overcoats, officers'.....	3	19
Blouses, officers'.....	293	97
Capes, officers'.....	9	7
Miscellaneous, including "cits," etc.....		1,395
Chevrons sewed on.....		297
Service stripes sewed on.....		1,534
Socks tagged, pairs.....		3,396
Shoes.....		2,708
Total.....	3,819	16,855

#### THE CADET LAUNDRY.

The amount of work done at the cadet laundry during the past year has increased, as is shown by the following comparative statement. The laundry plant is in excellent condition, all of the machinery having been thoroughly overhauled and put in repair during the past year, in addition to which a large new modern mangle of enormous capacity has been purchased but not yet delivered. The building is in even better condition than it was last year except the roof, which is in bad shape. It seems a waste of money to have to spend annually quite a sum in repairing and repainting this building to make it serviceable, but as the erection of the new laundry building has been so greatly delayed nothing else can be done. The personnel of the laundry is better than ever and the output per number of employees is greater this year than last.

*For cadets.*

Belts, shoulder	43, 822	Shirts, under	56, 725
Belts, sword	4, 032	Socks, pairs	61, 105
Belts, waist	22, 565	Supporters	44
Bathing suits	2	Towels, bath	11, 266
Blankets, single	34	Towels, face	75, 384
Coats, fatigue	6	Fencing suits	8
Clothes bags	7, 920	Trousers, gray	208
Collars	123, 384	Trousers, white	43, 874
Cuffs, pairs	99, 455	Ties	16
Drawers	53, 293	Union suits	745
Gloves, pairs	40, 607	Vests	11
Handkerchiefs	101, 204	Wash cloths	225
Pajamas, suits	9, 972		
Pillowcases	18, 446	Total	845, 788
Sheets	31, 811	Total 1905-6	806, 457
Shirts, white and negligee	28, 884		
Shirts, night	8, 838	Increase during year	39, 331
Shirts, gray	1, 892		

*For cadet hospital.*

Aprons	58	Shirts, hospital	325
Bedside rugs	44	Tablecloths	379
Bedspreads	300	Towels, bath	1, 088
Blankets, single	11	Towels, dish	337
Gowns, operating	54	Towels, hand	15, 495
Jackets	2	Towels, roller	23
Mattress covers	8		
Mosquito bars	72	Total	28, 719
Napkins	1, 285	Total 1905-6	19, 669
Pajamas, suits	1, 503		
Pillowcases	3, 711	Increase during year	9, 050
Sheets	4, 024		

*For cadet mess.*

Aprons	9, 477	Sheets	3, 255
Bags, canvas	32	Tablecloths	18, 213
Bedspreads	93	Table felts	2, 099
Blankets, single	75	Towels, bath	12
Caps	460	Towels, dish	7, 397
Curtains	189	Towels, face	18, 953
Jackets	8, 709	Towels, glass	6, 514
Jumpers	439	Towels, roller	1, 135
Locker cloths	166		
Meat cloths	237	Total	236, 881
Mattress covers	56	Total 1905-6	236, 533
Napkins	156, 801		
Overalls	967	Increase during year	348
Pillowcases	1, 602		

*For soldier hospital.*

Aprons	50	Shirts, hospital	131
Bandages	5	Tablecloths	118
Bedspreads	346	Towels, bath	518
Blankets, single	53	Towels, dish	55
Caps	13	Towels, hand	3, 176
Gowns, operating	69	Towels, roller	25
Mattress covers	31		
Mosquito bars	3	Total	9, 341
Napkins	17	Total 1905-6	5, 182
Pajamas, suits	738		
Pillowcases	1, 836	Increase during year	4, 159
Sheets	2, 157		

*For officers and others.*

Aprons .....	196	Shirts, white and negligee.....	2, 975
Bath robes .....	2	Shirts, night.....	25
Bedspreads .....	214	Shirts, under.....	1, 730
Blankets, single.....	25	Skirts, white.....	3
Blouses, white and khaki.....	130	Socks, pairs.....	1, 917
Caps.....	1	Tablecloths.....	261
Bedside rugs.....	2	Table felts.....	7
Cap covers.....	1	Ties.....	223
Collars.....	12, 854	Towels, bath.....	704
Cuffs, pairs.....	6, 915	Towels, face.....	7, 631
Drawers.....	1, 872	Towels, roller.....	767
Gloves, pairs.....	322	Trousers, white and khaki.....	871
Gowns, butcher.....	78	Union suits.....	16
Gowns, dressing.....	165	Vests.....	83
Handkerchiefs.....	3, 138	Towels, glass.....	81
Jackets.....	25	Wash cloths.....	41
Napkins.....	968	Supporters.....	9
Pajamas, suits.....	677	Curtains.....	8
Pillowcases.....	1, 168		
Sheets.....	1, 515	Total.....	47, 620
Grand total of pieces laundered.....			1, 168, 350
Grand total of pieces laundered, 1905-6.....			1, 067, 841
Increase during year.....			100, 509

## COMMISSARY OF CADETS.

Many very important improvements have been made in the cadet mess during the past year. The north serving room, the north hall way, the north scullery, and the butcher shop have been floored with tile and wainscoted with the same material, which has not only greatly improved the appearance of these rooms but has made them much easier to keep in a perfectly clean and sanitary condition. The funds are now available for making similar improvements in the corresponding rooms in the south wing, which it is expected will be shortly begun. The bakery plant has been improved by the addition of a large dough-dividing machine, so that now the entire process of bread making is mechanical and almost automatic. A steam oven and an improved vegetable peeling machine have been added to the kitchen equipment.

It is hoped that Congress will appropriate the necessary funds with which to install a small garbage incinerator, so as to do away with the necessity of collecting the garbage and storing same in cans for transportation elsewhere. The incinerator will permit of the garbage and other refuse being destroyed at once as it is made instead of accumulating it.

The continuous advance in the cost of all food supplies must be again noted. Practically every article used in the mess, with the exception of milk and coffee, costs more than ever before. In some instances, as in flour, butter, and canned goods, these advances have been radical. In addition, the numerous trips away from West Point which the various classes make to Gettysburg, Watervliet, Sandy Hook, New York City, and the coast-defense forts add a great deal to the cost of operating the mess, as it bears the entire cost of subsisting them on these trips, which are much more expensive per capita

than if the cadets were subsisted in the mess. In addition to the increased charges above mentioned, it has also been necessary to increase the wages of the employees of the mess very materially. These increased costs have been offset, however, by a very extensive application of machinery in the mess so as to decrease the labor bill, and by improving the system so as to reduce waste as much as possible and lessen the cost of preparing and serving food.

The cost of board for cadets during the past year has been 61 cents per day, 2 cents less than the cost per day for the preceding year.

The cadet mess furnished to others than cadets and employees of the mess 244 meals during the year. These were to visiting athletic teams, preachers, and relatives and friends of cadets and in a few instances official guests of the academy, also to officers in charge and other officers accompanying cadets on trips away from West Point.

The food furnished the cadets has not suffered in quality or quantity in order to obtain this result.

Very respectfully,

THOS. FRANKLIN,

*Captain and Treasurer, United States Military Academy.*

The ADJUTANT, *Present.*

---

#### APPENDIX E.

### REPORT OF THE COMMANDANT OF CADETS.

HEADQUARTERS UNITED STATES CORPS OF CADETS,  
*West Point, N. Y., July 30, 1907.*

SIR: In compliance with Memorandum No. 74, Headquarters United States Military Academy, dated July 5, 1907, I have the honor to submit the following report:

The usual programme of exercises for the year was carried out to successful completion. The field training given on the reservation and on the practice march to the east of the river proved, as before, entirely satisfactory. The instruction was carefully given, the problems well handled, officers, cadets, and enlisted men entering keenly and intelligently into the spirit of the work. The march was made under service conditions; problems, carefully thought out, were had each day, and the camps were made according to regulations. The results were satisfactory. A similar practice march will take place this year, August 19 to 24, inclusive. It is believed that, as heretofore, this march will be successful and that the cadets will receive valuable instruction in marching, construction of camps, camp sanitation, making of route sketches, solution of problems in minor tactics, etc. This practice march is the termination of the practical work of the summer, the preliminary work prior to it being conducted in a progressive way and leading up to this week's field work.

From August 12 to August 19, 1906, the whole first class visited Fort Wright and received instructions at the fortifications and in submarine defense. The actual practice in firing was satisfactory,

and fully justified the preliminary work we are able to give here since the installation of proper coast artillery equipment. The commanding officer of Fort Wright, Col. G. N. Whistler, did everything he could to make the visit of the cadets successful and pleasant, and he succeeded so well that we are very much indebted to him. Arrangements have been made to send the present first class to Fort Wright August 11 to 18. Each class of cadets should certainly have this instruction during its first class summer.

A decided advance has been made in teaching cadets practical gunnery and artillery target practice, although the ammunition allowance is inadequate. All members of the first class will have a knowledge of the drill of a battery and of the methods of obtaining firing data and utilizing it at the guns.

There has been no change in the instruction in riding since my last report. A new method of securing remounts for the use of cadets has just been adopted, and although it is too new to give an accurate opinion, I feel sure that it will prove to be the correct one from every point of view. This method is to secure mounts from the horses trained at the school of application at Fort Riley. The first installment gives promise of success. They are of excellent conformation, gentle, sound, young, and accustomed to the saddle. As compared with the ungainly, unbroken, and often vicious horses received here in recent years this change is a great relief.

The method of handling new cadets adopted last year was followed again this year with entirely satisfactory results.

In addition to the usual lectures which were given to the first class, three map problems were given them. Solutions were submitted and the problems and the solutions were criticised and discussed by officers of the department. The cadets took commendable interest in these theoretical problems, and they proved to be a valuable supplement to the actual practical work.

The battalion of cadets is reasonably proficient in all drills, and, on the whole, the instruction given and the progress made have been satisfactory.

In small-arms target practice the progressive scheme was followed and the results were gratifying. The individual figure of merit of the first class just graduated was higher than that of any previous class. With an indoor gallery for gallery shooting during the winter months, together with the present scheme, the instruction in rifle firing will be quite sufficient and all that should be required of cadets. Such a gallery is provided for in the new gymnasium. In revolver practice the present first class is receiving more and somewhat better instruction than any previous class.

The schedule of hours for academic duties and for meals is, in my opinion, the correct one, and should not be changed.

The discipline is good, and the usual high standards govern. There have been two investigations under the provisions of paragraph 128, Regulations for the United States Military Academy, relative to hazing. No fourth-class man has suffered any abuse.

The Corps of Cadets, with the officers of this department, visited the Tercentennial Exposition (Jamestown), leaving West Point

June 4, and returning to West Point June 12. The journey was made to and from the exposition on the transport *Sumner*. There was very little to see or learn at the exposition, but the experiences on the transport were valuable and instructive. The cadets were given an opportunity to visit the ships of the United States Navy.

## RECOMMENDATIONS.

That provision be made for the detail of two captains as battalion commanders, with the rank, pay, and allowances of major, for duty in this department, in addition to the number of officers already on duty therein.

That an artillery officer, in addition to those already on duty in this department, be assigned to it, in order to give proper instruction to cadets in modern artillery.

That the allowance of ammunition for the instruction of cadets in gunnery be increased.

That the new model Maxim guns already asked for be furnished.

That the strength of the detachment of field artillery be increased to that of a battery, with the same organization.

That medals be issued to cadets for excellence in the use of the revolver.

That provision be made for the purchase, annually, of ten specially trained ponies for the use of cadets.

That proper escort wagons, with four-mule teams, be supplied this post for the special use of cadets in connection with the annual practice march and field service.

The transportation now used is antiquated and unsatisfactory. It is important that this period of field service be made a model as far as possible. With the exception of the transportation, fair success has been attained. The Corps of Cadets, for the sake of the impression which the graduate should take with him into the service, if for no other reason, should have the very best transportation. As a matter of fact, it has the poorest and the most unsightly. It is doubted if any other body of troops would take the field with such transportation.

That a new rifle range be constructed by straightening out the West Shore Railroad tracks so that they will lie in practically a straight line from the north end of the tunnel to a point on the east side of Target Hill. A report of a board of officers bearing upon this subject has already been submitted.

Very respectfully,

ROBT. L. HOWZE,  
*Lieutenant Colonel, United States Army,*  
*Commandant of Cadets.*

THE ADJUTANT, UNITED STATES MILITARY ACADEMY.

## APPENDIX F.

## REPORT OF THE INSTRUCTOR OF PRACTICAL MILITARY ENGINEERING.

DEPARTMENT OF PRACTICAL ENGINEERING,  
 UNITED STATES MILITARY ACADEMY,  
*West Point, N. Y., July 23, 1907.*

SIR: In compliance with instructions contained in Memorandum No. 74, Headquarters United States Military Academy, West Point, N. Y., July 5, 1907, I have the honor to submit the following report upon the work of the department of practical military engineering during the academic year ending June 14, 1907. The financial statement covers the fiscal year ending June 30, 1907.

The annual appropriation of \$2,000 for the use of the department was expended in the purchase of tools, materials for instruction purposes and for repair of equipment, for instruments, and for the extra pay of skilled mechanics from the engineer detachment, as authorized by law.

The expenditures during the year are grouped as follows:

Lumber.....	\$324. 13	Photographic supplies.....	\$49. 00
Iron, tools.....	397. 20	Explosives.....	80. 82
Oils and paint.....	159. 65	Coal.....	20. 00
Rope.....	278. 27	Extra duty pay.....	467. 50
Stationery.....	115. 15		
Books and instruments.....	108. 28	Total.....	2, 000. 00

The regular personnel of the department consists of 2 officers of the Corps of Engineers, United States Army, and a detachment of engineer troops with an authorized strength of 96, including 8 sergeants and 8 corporals.

In addition to the above, 4 officers, from other departments at the academy, were detailed to assist in the work during the summer instruction period, and 1 officer was detailed during the fall and spring instruction period. These officers were: Lieutenant Baer, summer of 1906; Lieutenant Whitlock, summer of 1906; Lieutenant Carleton, summer of 1906; Lieutenant Smith, W. D., summer of 1906; Captain Woodruff, fall of 1906; and Lieutenant Pope, spring of 1907.

The primary function of the engineer detachment is to prepare for and assist in the instruction of cadets in practical military engineering. In addition to these technical duties, they furnish a daily detail of 11 men for the post guard and details for marking targets and operating telephones during the instruction of cadets in target practice.

When not busy in connection with cadet drills, the detachment received instruction in military engineering work, target practice, and signaling. A limited amount of time was devoted to infantry drill. During the winter months instruction was given in carpentry, blacksmithing, photography, drafting, surveying, and reconnaissance work.

## CADET INSTRUCTION.

The first, second, and third classes receive instruction under this department.

The third class is instructed in surveying during the summer months, a maximum of fifty-nine hours per man having been devoted to this subject during the past year, the average being about fifty hours per man.

The course followed during the past year was fully described in the last annual report and will not be repeated.

Steps have already been taken toward carrying out the recommendation of my predecessor that some preliminary theoretical instruction be given in the subject of surveying toward the close of the fourth class term. If this change is finally effected the department will be enabled to give instruction in the use of the plane table, which is the connecting link between surveying and reconnaissance work. The need of such instruction has been evident both to this department and the department of drawing.

The second class received instruction in signaling during the fall of 1906 and the spring of 1907, a total of eighteen hours per man having been allotted to this subject. The time was largely devoted to visual signaling, using the flag and heliograph.

An effort was made to broaden the scope of this work by familiarizing the cadets with the modern field telephones and buzzers that have, to such a large extent, superseded the flag and heliograph.

At the request of this department, Maj. George O. Squier, Signal Department, United States Army, delivered an illustrated lecture on the work and methods of the Signal Corps, which added greatly to the interest of the cadets in this subject.

It is hoped to make further improvement in this course during the coming year, devoting less time to visual signaling and more to the establishment and operation of field telegraph and telephone lines.

The first class was under instruction from July 7 to August 11, 1906, half of the class attending daily. During this period two hours per day was devoted to the subject, except on the last two days, on which eight hours was spent in the making of a mounted road reconnaissance. Subsequently, during the cadet practice march, the class received further instruction daily in the making of road reconnoissances and in map reproduction.

During the fall and spring additional instruction was given to the first class, the available periods being about forty minutes long, the maximum number of attendances being 18.

This fall and spring work was unsatisfactory, the periods not being long enough to secure results that would make a lasting impression on the cadet mind.

It is urgently recommended that these fall and spring instruction periods be lengthened so that the cadets will be actually employed not less than an hour and a half. This can be accomplished by excusing the men under instruction from parade. Any increase in the length of the instruction period can be balanced by a reduction in the number of attendances.

The subjects included in the first class course were: The location and construction of intrenchments, including bombproofs, gun pits, obstacles, profiling and tracing, the construction of spar bridges, pile and trestle bridges, the construction and operation of trail bridge and rope ferry, the use of the standard bridge equipage, measurement of the flow of streams, launching expedients, demolitions, and the handling of heavy weights.

Attention is invited to the lack of a distinct line of demarcation between the instruction given in the department of drawing and that given in the department of practical military engineering, so far as reconnaissance work is concerned.

This department now instructs in the subject of surveying, a subject which includes the fundamental principles upon which all reconnaissance methods are based. This department also takes the first class and gives its members instruction in the making of a mounted road reconnaissance and in the making of a reconnaissance of position.

The intermediate course of instruction is now in the department of drawing and consists largely of a foot reconnaissance of a portion of the reservation.

The difficulty of defining where instruction in drawing should cease and instruction in reconnaissance begin is fully appreciated, and there is bound to be a certain amount of overlapping. It is believed, however, that instruction in the making of a foot reconnaissance belongs properly and logically to the department which instructs in surveying and which subsequently instructs in the making of a mounted reconnaissance.

The subject of reconnaissance is one of great and rapidly increasing importance. Not only should the instruction be combined in a single department, but the time devoted to it should, if possible, be increased.

Very respectfully,

CHARLES W. KUTZ,  
*Captain, Corps of Engineers,*  
*Instructor of Practical Military Engineering.*

The ADJUTANT, UNITED STATES MILITARY ACADEMY,  
*Present.*

---

#### APPENDIX G.

### REPORT OF THE LIBRARIAN.

LIBRARY, UNITED STATES MILITARY ACADEMY,  
*West Point, N. Y., July 31, 1907.*

SIR: I have the honor to submit herewith a brief report of the work of the library during the past year.

I respectfully refer to the report of August 5, 1906, with regard to matters not specially mentioned here.

*Users of the library.*—The library is used by 99 officers attached to the academy, by 442 cadets, by 19 enlisted men, and by 135 civilians to whom its privileges have been extended by order of the Superintendent. It is in close relation with the Library of Congress and with the libraries of other army schools. Especial pains are taken to answer all inquiries from army officers and civilians.

*Accessions.*—Two thousand six hundred and twenty books, pamphlets, maps, etc., have been recorded as received since July 31, 1906.

*Periodicals.*—We now subscribe to 145 periodicals, a large proportion of them being military works.

*Recent fiction.*—One hundred books per month are supplied, by subscription, by the Bodley Club Library, of Philadelphia.

*Library hours.*—Since September, 1904, the library is open from 8 a. m. to 9.30 p. m. on week days; from 2 p. m. to 6 p. m. on holidays.

*Notable accessions.*—During the past year some of the most notable accessions have been—

I. Burgoyne manuscript: A manuscript diary of an officer in Burgoyne's command, 1777, was acquired by the library in 1906. It has been thoroughly examined by Capt. George S. Simonds, Twenty-second Infantry, United States Army, during the past eleven months. His abstract of it is to be printed in the Infantry Journal. His work has been done in the most scholarly and painstaking manner. It will change accepted history in several respects.

II. Maps, charts, and plans: Capt. C. R. Lawson, Coast Artillery Corps, United States Army, made a thorough examination of 337 maps, charts, and plans of fortifications published in the sixteenth and seventeenth centuries and catalogued this very valuable collection, which apparently had been forgotten for many years. The collection itself is very fine and complete, and Captain Lawson's catalogue makes it available.

III. Lieut. W. R. Bettison, Coast Artillery Corps, United States Army, has completed his examination of the order books of the Corps of Artillerists and Engineers, 1795-1798, and has prepared a paper summarizing the chief points of interest.

*Changes in the building.*—It has been found necessary to strengthen the steel beams supporting the south wall of the main tower. The work is to be done by the quartermaster, United States Military Academy, in the summer of 1907. When it is completed the new shelving of the tower will become available.

*Galleries.*—In order to utilize the shelving in the upper part of the rooms on the two principal floors of the library it is necessary to build galleries, like the model gallery in the officers' study, round two sides of each room. The cost will be about \$1,200. The galleries will make about —— books readily accessible to cadets.

*New shelving.*—The present map room should have its shelving extended to the ceiling to house our rapidly increasing sets of bound volumes of military and other periodicals. These books are priceless and must be readily accessible. The cost will be about \$900.

*New bookcases.*—A model bookcase with locked glass doors to accommodate our unique set of books on West Point and the United States Military Academy (500 volumes) and of the text-books used here, 1802-1907 (332 volumes), has been built in the west entrance hall. A similar case should be put in the east hallway to house our collections of rare volumes on architecture and art and other folios. The cost will be \$450.

*Fireproofing.*—The wooden floor of the attic should be removed and replaced by iron walks, leaving the rest of the flooring bare. When this is done, the tower will be entirely fireproof and the rest of the building very nearly so.

*Printed catalogues.*—The names of graduates United States Military Academy in the American Library Association's portrait index (1906) have been marked so that all published portraits of graduates

can now quickly be found. The library is anxious to cooperate with the Association of Graduates in making its collection of such portraits, already very large, as complete as may be.

*Card catalogues.*—The following statistics show the attention which has been paid to perfecting our catalogues. The numbers represent the number of *cards* under each heading. A card may represent one or many volumes.

	Cards.
Author catalogue in the main room (this catalogue accounts for every book in the library) :	
June 30, 1905.....	31, 178
January 14, 1907.....	42, 700
May 22, 1907.....	56, 000
Subject catalogue in the main room (this catalogue accounts for all books) :	
June 30, 1905.....	61, 650
January 14, 1907.....	72, 300
May 22, 1907.....	95, 000
Shelf catalogue in the main room (covering all books not military) :	
June 30, 1905.....	16, 780
January 14, 1907.....	22, 500
May 22, 1907.....	27, 412
Dictionary catalogue in the officers' study (in process of formation and not complete) :	
January 14, 1907.....	8, 000
May 22, 1907.....	16, 000
Shelf catalogue of military books (complete) :	
June 30, 1905.....	4, 880
January 14, 1907.....	7, 000
May 22, 1907.....	8, 600

The total number of cards in all catalogues (excluding bibliographies) was—

June 30, 1905.....	117, 368
January 14, 1907.....	152, 500
May 22, 1907.....	203, 012
Increase in 23 months.....	85, 644
Increase monthly (average) about.....	3, 724
Increase daily (average) about.....	143
Increase hourly (average) about.....	18

That is, a card has been added every three minutes of working time for the past two years, approximately. This work has been done in addition to other duties by the librarian, Mr. Ostrander, Sergeant Maher, and First-Class Private Rathke.

*Additions by subjects.*—It is interesting to see in what subjects the library has grown during the years July, 1905–June, 1907. The shelf catalogues contained cards as follows:

	June 30, 1905.	May 22, 1907.
Cyclopedias, bibliographies, manuscripts, etc.....	840	1, 105
Philosophy, ethics, logic.....	400	510
Religion and religious history.....	680	700
Sociology, economics, law, education.....	2, 700	3, 272
Philology and language.....	480	595
Science.....	3, 760	4, 420
Useful arts—technology.....	2, 200	2, 465
Fine arts—sports.....	940	1, 130
Literature and standard fiction.....	820	1, 360
Geography, travels, maps, history.....	3, 960	4, 910

A large proportion of the cards added to the catalogues are printed cards of the Library of Congress. Forty-nine thousand four hundred and sixty such cards were purchased between July 1 and October 8, 1906. Not all have yet been put in the catalogues.

*Depository set of cards.*—By the courtesy of the Librarian of Congress the library, United States Military Academy, has been made a depository of Library of Congress printed cards (one card for each book) for the subjects of military science; military history (description and topography of the United States, of the leading European countries and of British, Central, and South America, and the West Indies); works in technology and sociology, which are especially valuable from the point of view of military science and military resources; United States Government documents; United States civil war; military fiction, etc.

This library thus becomes possessed of a card catalogue of the books on these subjects which are owned by the Library of Congress, and its own collections are catalogued with a completeness and accuracy not to be attained in any other way. For this and much other aid from the Library of Congress this library is very grateful. It is a pleasure to record the promptness, exactness, and courtesy of all its dealings with us.

*Shelf numbers.*—The entire library (except as to biography, fiction, periodicals, and Congressional documents) is classified on the Dewey system so far as *subject* numbers are concerned. The *book* numbers have been assigned by my predecessor and myself on differing plans. It has, so far, been impracticable to bring about uniformity by renumbering the books owned by the library before the beginning of my term of service, and it may be impracticable to do this for some years to come. The smallness of our skilled clerical force makes it necessary to choose the more important works and to neglect other tasks scarcely less imperative.

*Bibliographies.*—The Librarian of Congress kindly arranged to furnish the library, United States Military Academy, with some 275 cards giving the titles of military novels. These added to many others written by myself and selected or to be selected by Mrs. Stephen Abbot will form the beginning of a bibliography of military fiction. A considerable number of other military bibliographies are kept up to date in our catalogues. Most of them would be useful to cadets if they were printed as finding lists.

*New map room.*—The want of this room is, as in previous years, severely felt. One thousand and eighty maps are now stored in the basement where they are practically useless.

*New shelving.*—The main tower has been fitted with shelving for about 20,000 books and the cross walls of the attic with shelves for about 10,000 books. The tower is to contain our library of Congressional documents, of manuscripts, and many periodicals. It is cool and fireproof. The attic is only suitable for keeping duplicates and the like on account of lack of ventilation. Its shelves will be very useful, however, for these purposes. Shelves to accommodate 5,600 volumes have been added in the hallways and lobbies of the second story.

*Arrangement of books.*—The folios in our military library (and also those in two other rooms) have been brought close together during the past year and the result has been very satisfactory. It is intended to extend the system to all the folios of the library.

*Transfers to children's post school.*—Ninety-seven volumes of children's books were transferred to the post school during the year to the advantage of all concerned. Officers' children are apt to own their own books. A few classic juveniles have been retained in the United States Military Academy library.

*Display of books.*—In order to reach its highest usefulness, the library must exhibit a considerable number of its books in cases that are conveniently accessible to cadets; that is, in cases on the main floor or in galleries so that no book is more than 7 feet above the floor. It is only in this way that books can be displayed so as to attract the attention they deserve.

*Duplicates.*—Nearly all our duplicates are catalogued. All needed by the army service schools and by the Library of Congress are transferred or exchanged as fast as possible by authority of the honorable Secretary of War. A regular exchange account was opened with the Library of Congress in February, 1907, and the library has already benefited greatly by this arrangement.

*Instruction through the eye.*—The report of the Board of Visitors for 1885 contains a recommendation respecting maps in cadet rooms and suggests that the method spoken of has wide applications. The display of pictures and manuscripts in the library is a part of the plan outlined. The commandant of cadets has set up a series of military pictures in the cadet guardhouse. The department of drawing proposes to exhibit in a frieze of the new academy a series of maps to illustrate the history of topography from the earliest times. Many such maps have been selected for this purpose by Capt. C. B. Hagedorn. The department of engineering proposes to use the same method in displaying a series of plans of fortifications arranged chronologically. The library is fortunate in owning a great number of maps and plans suitable for these purposes. An appropriation of \$5,000 would enable this plan to be well started, and annual appropriations of \$2,000 would enable it to be kept up to the great advantage of our teaching.

*Historic pieces of ordnance.*—A very handsome *lantaca* from Jolo, P. I., has been presented by the Superintendent, United States Military Academy, and will be mounted in a conspicuous place. Two fine *lantacas* from the Philippine Islands have been presented by the department of ordnance and gunnery, United States Military Academy, and are mounted in the angles of the gallery stairways.

*Publications.*—Several finding lists were prepared for the use of cadets some years since. One of them, a list of our most interesting books, manuscripts, etc., is much needed at once. It has been in the hands of the printer since September, 1905. It has been found advisable to discontinue the printing of contributions from the library, United States Military Academy, referred to in the library report of 1906.

*Statuary.*—The library has owned for many years marble busts of Washington, Lafayette, and Napoleon, and it has lately acquired excellent life-size plaster casts of Alexander the Great, Hannibal, Cæsar, Cromwell, Turenne, Condé, Gustavus Adolphus, Marlborough,<sup>a</sup> and Wellington. It is expected that Frederick the Great, Von Moltke, and Sherman will be added to our collection by gift

<sup>a</sup> Not yet received.

during the next year. For the present we must be contented with an excellent portrait of General Grant. Each of these great soldiers (excepting the first three) is also represented by a military manuscript or order displayed in frames in the library. The exhibition of portraits and autographs together serves to give reality to military history and to present a living image of the world's greatest commanders. It is expected that a bronze equestrian statue of Washington—a copy of the artist's model—will be presented to the library during 1907 by the great kindness of Mrs. W. P. Thompson, a granddaughter of the sculptor, Rich. S. Greenough, and a niece of Gen. J. G. Parke, Corps of Engineers, Superintendent, United States Military Academy, 1887-89.

*Portraits.*—It is hoped that we may add to our collection shortly, by gift, an oil portrait of Washington—a copy of the Gibbs-Channing portrait by Stuart, now owned by the Metropolitan Museum of New York City. This noble portrait has never before been copied. It is only right to record that permission to copy it was generously granted by its former owner, the late Mr. S. P. Avery, in 1904. During the year our collection of portraits has been notably increased. The Misses Schuyler, of New York City, great-granddaughters of Alexander Hamilton, have generously given an excellent copy of Trumbull's portrait of Hamilton. (Artist, William J. Baer.) An excellent copy of Stuart's portrait of General Knox is owned by the library. Washington, Hamilton, and Knox were the founders of the Military Academy, and Hamilton devised a system of military education in the Army that sufficed for the needs of the first century of its history.

An oil painting of the Rev. J. W. French, professor and chaplain, United States Military Academy, 1856-71, was added in November, 1906. (Artist, Frank Fowler.)

An oil painting of Gen. Horace Porter, LL. D., ambassador to France, 1897-1905, United States Military Academy, 1860, was received by gift of General Porter in November, 1906. (Artist, W. T. Dannat.)

An oil painting of Brig. Gen. J. W. Clous, professor of law, 1890-95, was received by gift of General Clous.

A large photograph of Ferdinand R. Hassler, professor of mathematics, 1807-09, was received by gift from Mrs. Simon Newcomb, his granddaughter, in May, 1907, and has been transferred to the department of mathematics.

For all these gifts the sincere thanks of the academy are returned.

*Exhibitions.*—By the kindness of Mr. H. Williams, of New York City, 32 oil paintings of scenes in the Western United States and in Central and South America, by George Catlin, have been on exhibition since March 25, 1907. The first general knowledge of "the West" came to America and Europe through these very paintings.

*The library staff.*—Each and every member of the library staff has done his best to forward its work.

*Gifts.*—Maj. Gen. F. D. Grant, United States Army, has lent to the library a series of portraits of Lieutenant General Grant, and two uniform coats worn by him during the civil war, as well as other articles of uniform and equipment, all of the greatest interest.

Through the kindness of Mrs. John M. Schofield the library has received a considerable number of military books belonging to the

collection of the late General Schofield. It is hoped that the library may become the depository of General Schofield's manuscripts at some future time. They will be of the first importance to the military history of the United States Army. The sword of honor presented to General Schofield by the citizens of St. Louis has been deposited in the library, as a loan, by Mrs. Schofield.

Through the kindness of Mrs. Josephine Turner and Mrs. Mary A. Hovey, heirs to the estate of Col. James Duncan, Inspector General, United States Army, 1849, the library has received his sword, gold medal, manuscripts, books, and two uniform coats, and returns sincere thanks for these mementoes of a distinguished graduate.

Capt. W. I. Westervelt, United States Army, has lent to the library a manuscript order book of the Corps of Artillerists and Engineers, New York, 1799, which supplements the four volumes owned by the United States Military Academy that cover the years 1795-98.

*General Orders, Adjutant General's Office, and of divisions and departments, United States Army.*—Our very complete collection (198 volumes) has been increased by a gift from Col. S. C. Mills, United States Army, of most of the volumes relating to the Philippine Islands, 1898-1901. It must not be forgotten that general orders are the backbone of military history.

Through the kindness of Mr. O. C. Bakewell the library received, in 1903, a copy of André's Journal. These valuable volumes were stolen from the library. Mr. Bakewell has been at the considerable trouble and expense of replacing them by another set, and his great kindness deserves a special and grateful mention here.

The thanks of the library are due to the various military attachés United States Army, stationed in Europe, for researches made for it through the courtesy of the chief of the Military Information Division, and especially to Major Beacom, for a notable collection of documents sent to us.

Besides the gifts elsewhere mentioned, the library has received gifts of books, pamphlets, manuscripts, maps, photographs, etc., from the following institutions and persons, for which sincere thanks are returned:

Abbot, H. L. (1), Adjutant General of Connecticut (1), Adjutant General of Iowa (1), Adjutant General of Massachusetts (1), Adjutant General of Michigan (1), Adjutant General of New York (2), American Antiquarian Society (1), American Irish Historical Society (1), American Museum of Natural History (2), American Peace Society (11), American Philosophical Society (1), American Scenic and Historical Society (9), American Society of Civil Engineers (1), Army and Navy Life (12), Association of Graduates United States Military Academy (3), Ayer, J. E. (1), Bailey, W. W. (2), Baker & Taylor Company (1), Bakewell, O. C. (2), Barnes, J. S. (3), Bates, L. W. (3), Baylor University (1), Benjamin, Lieut. J. A. (1), Bigelow, John, jr. (2), Boughton, Major (4), Bowley, Capt. A. J. (3), Bradford, E. S. (1), Brown, J. M. (2), Brown University (1), Bureau of American Ethnology (1), Burrows, C. W. (2), Britten, E. E. (1), Bureau of Equipment, United States Navy (2), Bureau of Insular Affairs (3), Carnegie Institution of Washington (22), Casparian, G. (1), Carson, Maj. J. M. (12), Cattell, Prof. J. McK. (4), Chief of the Military Information Division (4), Chief of Engineers, United States Army (2), Chief of Ordnance, United States Army (4), Chief

of Staff, Second Military Information Division (2), Church, Col. W. E. (13), Clark, A. S. (2), Class of 1907, United States Military Academy (2), Collins, G. K. (1), Columbia University (1), Cornell University (1), Commissioner of Education (1), Commonwealth of Boston, Secretary (1), Commonwealth of Massachusetts (1), Comptroller of New York State (1), Connecticut State Library (9), Consul-General of Peru (1), Coxe, Macgrane (1), Cunningham, A. C. (1), Davis, G. (1), Davis, Gen. George B. (1), Davis, R. P. (1), Denver and Rio Grande Railroad (1), Department of Commerce and Labor (1), Department of Drawing, United States Military Academy (13), Department of Militia and Defence, Ottawa, Canada (2), Duc de Loubat (2), Dudley, Col. E. S. (1), Ecole Royale Superieure de Artillerie et du Genie, Sweden (1), Emmons, Cadet D. C. (3), Estey Wire Works (1), Exton, Capt. C. W. (6), Felton, Charles (1), Fieberger, Col. G. J. (2), Furness, W. E. (1), General Electric Company (9), George Washington University (1), Gettysburg National Park Commission (5), Gordon, Col. W. B. (2), Grady, J. E. (1), Harding, Miss Ruth (2), Harvard University (1), Havens Company, New York (2), Hayes, Col. W. C. (4), Henry Altemus Company (1), Hine, C. G. (1), Holden, E. S. (7), Hope, W. C. (1), Hopkins, A. (1), Howard, H. S. (1), Howze, Col. R. L. (3), Huidekoper, F. L. (3), Hull, Hon. J. A. T. (5), Ideal Manufacturing Company (3), Illinois State Geological Survey (3), Information Bureau of the Tile Industry (1), Inspector General, United States Army (1), Isthmian Canal Commission (4), John Crerar Library (1), Johns Hopkins University (2), Judge Advocate General, United States Army (6), Keim, R. (2), Larned, Col. C. W. (3), Lawyers' Cooperative Publishing Company (2), Lake Mohonk Conference on International Arbitration (2), League of American Municipalities (2), Lehigh University (1), Letts, Thomas (maps), Library of Congress (9), Lissak, Col. O. M. (6), McDonough, Lieut. M. J. (19), Macmillan Company (1), Manson, M. (1), military attaché, embassy of the United States, London (11), Military Order of the Loyal Legion of the United States (5), Military Secretary, War Department (1), Mills, Col. S. C. (General Orders, etc.), Mohawk Chapter, Daughters of the American Revolution (6), Monsieur le Minister des Travaux Publies, Paris (1), Montanari, Major (1), Moore, Capt. J. K. (1), National Guard of New Jersey (2), New York Police Department (1), New York Public Library (1), New York Society of Colonial Dames (5), New York State Historian (1), New York State Library (2), New York State Museum (8), New Zealand Health and Tourists Department (1), Nicholson, Col. J. P. (1), North Carolina Society of the Cincinnati (1), North Western University (1), Newell, Dr. W. G. (22), Father O'Hern (1), Pardo, S. D. Filipe (1), Pennsylvania Society, Sons of the Revolution (1), Piorkowski, Major (35), Pittsburg Filter Manufacturing Company (6), Poillon, Lieut. A. (1), Porter, J. W. H. (1), Potts, Col. R. D. (1), Princeton University (1), Pulsifer, P. (1), Quartermaster General, United States Army (4), Rathke, O. H. (1), Reed, Hugh T. (3), Richmond, G. H. (2), Roberts, Gen. B. K. (1), Robinson, Maj. W. (1), Rock Island Railroad (4), Roe, Gen. C. F. (1), Royal Society, London (2), Russell, Lieut. Col. A. H. (2), San Francisco Relief and Red Cross Society (2), Santa Fe Railroad (4), Saunders Company (1), State Historical and Natural History Society, Colorado (2), State Charities Aid Association of New York

(2), State Librarian, Connecticut (1), Schofield, Mrs. J. M. (178), Scott, Col. H. L. (8), Shillenberger, J. K. (1), Smith, G. S. (1), Smith, Lieut. W. D. (2), Society for Prevention of Sickness (3), Society of Colonial Wars (1), Sotheran, H., & Co. (1), Stewart, Capt. M. B. (5), Stickle, Capt. H. W. (1), Strickler, W. M. (1), Superintendent of Documents (1), Superintendent of Immigration, Ottawa, Canada (1), Syracuse Public Library (1), Swarthmore College (1), Sweeny, W. M. (6), Swift, Eben (1), Taylor, C. F. (5), Texas State Historical Association (1), Thompson, Gilbert (1), Tillman, Col. S. E. (2), Twentieth United States Infantry (6), United Confederate Veterans Association (1), United States Artillery School (General Orders, etc.), United States Coast and Geodetic Survey (1), United States Engineer School (3), United States Geological Survey (1), United States Infantry and Cavalry School (17), United States Naval War College (1), University of Alabama (1), University of California (1), University of Colorado (1), University of Illinois (4), University of Kansas (1), University of Missouri (1), University of Pennsylvania (1), University of Tennessee (1), University of Wisconsin (5), University Society, Incorporated, New York City (1), Vincent, Sir Howard (6), Ward, William (2), Washington University (2), Weinman, A. A. (2), Whistler, Lieut. Col. G. N. (1), Williams, C. W. (1), Williams College (1), Wright, Rev. J. (1), Wisconsin National Guard (1), Ziegel, F. L. (1).

Respectfully submitted.

EDWARD S. HOLDEN, *Librarian.*

The ADJUTANT, UNITED STATES MILITARY ACADEMY.

---

#### APPENDIX H.

### REPORT OF THE OFFICER IN CHARGE OF WATER SUPPLY.

DEPARTMENT OF PRACTICAL MILITARY ENGINEERING,  
 UNITED STATES MILITARY ACADEMY,  
*West Point, N. Y., July 30, 1907.*

SIR: In compliance with instructions contained in Memorandum No. 74, Headquarters United States Military Academy, dated July 5, 1907, I have the honor to submit the following report covering the fiscal year ending June 30, 1907:

#### WATERWORKS.

The annual appropriation of \$1,200 for the care of the waterworks was expended in cleaning the filter beds, washing and replacing filter sand, in the general police of the reservoir, and for other necessary work of maintenance and repair.

This appropriation has, in the past, been barely sufficient to meet the demands upon it, and since the new pipe line has been placed in operation, the construction of which carried with it the acquisition of about 450 acres of property, it has been impossible to properly maintain and repair the roads and bridges in charge of this department. In the estimates for the next fiscal year \$2,000 has been asked

for this purpose. All of this amount will be needed to maintain the reservoirs, pipe lines, and grounds pertaining to the waterworks in first-class condition.

In August, 1906, water was turned into the reservoir from the Popolopen Creek pipe line, and this source of supply has been used ever since, barring a short period of interruption due to the necessity of lowering the pipe line near the site of the new cavalry barracks.

This pipe line includes a Venturi meter and register, by which a continuous record of the water flowing through the pipe line is obtained.

The pipe line branches as it reaches the reservoir, one branch, 20 inches in diameter, leading directly into the reservoir at the middle of the western side; the other branch, 12 inches in diameter, leads under water to a point near the northern end of the reservoir, where it terminates in a vertical nozzle 4 inches in diameter.

When the 20-inch branch is closed the pressure is sufficient to produce a fountain jet about 23 feet high. The capacity of the pipe line, when discharging through the 4-inch nozzle, is about 2,250,000 gallons per day, and when discharging through the 20-inch branch is about 4,000,000 gallons per day.

The average daily consumption of water at the present time is about 750,000 gallons per day. There may come periods in which the low-water discharge of Popolopen Creek is not sufficient to fill the pipe line, but it is believed that these periods will be very infrequent and of short duration.

There is, in my judgment, no present necessity for the construction of a storage reservoir on Popolopen Creek, as the capacity of Lusk Reservoir is ample to tide over any period of extreme drought that is likely to occur.

During the year right of way for the pipe line was acquired through properties belonging to the following people: Heirs of Nicholas V. Drew; Mrs. Carrie A. Garrison; Mrs. Edith Mandigo; heirs of Theodore Faurot, and heirs of Harvey Leonard.

Negotiations are still in progress for a right of way over the property of Mr. J. P. Morgan, Mrs. Edward Tracy, the estate of Alfred Pell, and the estate of Reuben Rose. In the latter case the right of way is being obtained through condemnation proceedings which were instituted in August, 1905. It is hoped to get a final decision in this case in the near future.

Thirty-six acres of land on Popolopen Creek, below the intake dam, were purchased from Mr. Charles E. Lambert during the past year, and negotiations are in progress for the acquisition of two additional tracts owned by John G. Pavek and Louis F. Goodsell. The Pavek farm is being acquired through condemnation proceedings as a satisfactory price could not be obtained from the owner. A decision was had in the Pavek case February, 1907, but an appeal was entered by the owner of the property.

The property already acquired and to be acquired aggregates 713 acres. This property is all contiguous, and during the year the corners were marked by the erection of 68 rubble monuments, laid in Portland cement mortar.

In December, 1906, the State board of health was requested to establish regulations, under chapters 661, 251, 484, and 582, Laws of

the State of New York, for the protection from pollution of the watershed contributing to the West Point supply.

After an examination of the shed by a representative of the health commissioner, tentative regulations were prepared and submitted to this office. Subsequently, a board of officers, consisting of Col. E. S. Dudley, Maj. J. M. Carson, jr., and Capt. C. W. Kutz, was appointed to consider these regulations and prepare an estimate of the cost of enforcing them. This board had not submitted its report at the close of the fiscal year.

In connection with this investigation a map of the watershed was prepared on a scale of 4 inches = 1 mile, and a series of reconnaissance sketches made of all the habitations on the watershed at which conditions were found to be in conflict with the proposed regulations of the State board of health.

In the investigation of a complaint that the water supply of the post was contaminated with sewage, several tests of the water were made during the spring of 1907, samples being taken at different points along Popolopen Creek. These tests were extremely satisfactory, showing no evidence whatever of contamination.

Notwithstanding the fact that the source of supply is relatively pure and that steps have been taken to protect the watershed, it was deemed wise to enlarge the filter plant sufficiently to bring down the normal rate of filtration from 6,000,000 gallons per acre per day to 3,000,000 gallons per acre per day, and at the same time provide a reserve bed by means of which the rate of filtration could be reduced to 2,000,000 gallons per acre per day in case of an outbreak of typhoid or other water-borne disease on the watershed.

In furtherance of this policy, plans were prepared for two additional filter beds, each one-eighth of an acre in extent, and of the same general character as the existing filters—that is, the slow sand type. Bids for the construction of these filter beds were opened June 10, 1907, and were rejected as being too high, except for the item of excavation, which was awarded to Mr. E. A. Matthews, and contract entered into under date of June 25, 1907. The balance of the work was readvertised, bids to be opened July 29, 1907.

#### REPAIRS TO FORT PUTNAM.

At the date of the last annual report 269 cubic yards of masonry wall had been built and a considerable amount of stone prepared and hauled to the fort.

Under the appropriation for the fiscal year 1907, work was resumed on August 7, 1906, and continued until November 18, 1906. On February 20, 1907, a small force began hauling stone from the quarry to the fort, and on April 1 the masonry work was resumed.

With the funds heretofore available, \$10,000, 1,066 square yards of face wall have been rebuilt, comprising an estimated volume of 729 cubic yards.

The work of rebuilding the outer wall of the fort has been carried about halfway around the inclosure, but has not at all points been brought up to its full height.

Very respectfully,

CHARLES W. KUTZ,  
*Captain, Corps of Engineers, In Charge of Water Supply.*  
The ADJUTANT, UNITED STATES MILITARY ACADEMY,  
*Present.*

## APPENDIX I.

## REPORT OF THE QUARTERMASTER AND DISBURSING OFFICER.

OFFICE OF THE  
QUARTERMASTER AND DISBURSING OFFICER,  
*West Point, N. Y., August 1, 1907.*

SIR: In compliance with instructions contained in Memorandum No. 74, current series, Headquarters United States Military Academy, I have the honor to submit herewith the following report, in triplicate, of the operations of the quartermaster's department of the post of West Point and Military Academy, and the gas works, for the year ending June 30, 1907:

## QUARTERMASTER'S DEPARTMENT, POST OF WEST POINT.

The duties pertaining to this office are enumerated in paragraph 1009, Army Regulations, 1904.

Contracts entered into during the year and prior thereto remaining in force in part or for the whole of the fiscal year are as follows. (See list attached marked "III." <sup>a</sup>)

The following improvements and repairs were made during the year. (See list attached marked "IV." <sup>a</sup>)

## TRANSPORTATION.

In addition to the daily demands made upon this office for hauling of supplies and policing of the post, transportation has been furnished for hauling freight and material during the year amounting to approximately 20,000 tons. For this purpose there have been available 90 horses and 17 mules. When not required for post purposes, the teams have been utilized in connection with the work of improvements, though they have by no means been adequate for this purpose. Civilian teams have had to be employed constantly on the different projects under way.

During the past year we have had in operation a 2-ton motor truck, furnished by the Quartermaster's Department, which has given very satisfactory service. We have, however, been unable to use it during the winter when the roads were in a more or less soft condition, and for two months it was necessary to lay it up altogether. The sole difficulty is in securing a suitable appliance to attach to the tires which will enable the machine to secure sufficient traction when the roads are soft or muddy. Several devices have been tried, but none as yet have been successful.

## POST CEMETERY.

The cemetery has been in use ninety-one years. The total number of interments up to June 30, current year, is 1,340. Twenty-six interments were made between July 1, 1906, and June 30, 1907. Its care and maintenance are provided for in appropriation for the support

---

<sup>a</sup> See page 77.

of the Military Academy. Last year this appropriation was \$1,500, and with it we managed to get through, but with very little, if any, margin for additional plants and articles of maintenance which are necessary to keep up the grounds. Last winter the appropriation was cut down to \$1,000, and this amount is all that is available for the current fiscal year. I do not believe it will be sufficient unless the cemetery is neglected. There are in the neighborhood of 18 or 20 acres improved, and last year it cost approximately \$1,400 for the hire of labor in order to keep the grounds in a satisfactory condition. This amount, of course, will fluctuate each year, depending upon conditions. Severe storms inflict damage which requires expenditures to repair. An effort will be made to do the work required within the limits of the appropriation, but I doubt whether this effort will be successful. It will probably be necessary to submit a deficiency item.

Statement of receipts and disbursements under various heads of appropriations during the year ending June 30, current year, is attached, marked "B."<sup>a</sup>

#### QUARTERMASTER'S DEPARTMENT, MILITARY ACADEMY.

The duties under this head are defined in paragraph 14, Regulations United States Military Academy, 1902.

Contracts entered into during the year and prior thereto remaining in force in part or for the whole of the fiscal year are as follows. (See list attached marked "I."<sup>b</sup>)

The following improvements and repairs have been made. (See list attached marked "II."<sup>c</sup>)

#### DETACHMENT ARMY SERVICE MEN.

On July 1, 1907, this detachment was increased by 25 men, pursuant to authority of Congress contained in the current annual appropriation bill, so that the detachment has now a maximum authorized strength of 200 men. Thus far difficulty has been experienced in securing suitable men to fill the vacancies, doubtless owing to the great demand for laborers in the various mechanical and other trades. It is desired to secure and enlist only qualified men of good character, and preferably men who have had one or more enlistments in the line of the Army. This discrimination, which it is believed is justifiable under the circumstances, naturally results in slow recruiting, but I believe that all the vacancies can be filled with suitable men.

Statement of receipts and disbursements under various heads of appropriations during the year ending June 30, current year, is attached, marked "A."<sup>a</sup>

#### PUBLIC WORKS.

Since my last annual report plans and specifications have been completed and approved for gymnasium, hotel, electrical distributing cable system, two battalion guardhouses, elevator tower, army service barracks, captains' quarters (two double sets), steam piping in power house and tunnel, and traveling crane.

<sup>a</sup> See page 73.

<sup>b</sup> See page 75.

<sup>c</sup> See page 76.

Plans for laundry, additional officers' quarters, new south gate guardhouse, noncommissioned officers' quarters, and quarters for married enlisted men of artillery and cavalry detachments are being prepared by the architects.

The completion of cadet barracks and 16 sets of officers' quarters, under contract since May 24, 1905, with the Broderick & Wind Engineering and Construction Company, of New York City, were not completed as expected. Owing to the lack of capital and mismanagement on the part of the contractor progress continued to be very slow until finally on September 16, 1906, on recommendation of this office, the Secretary of War canceled the contract and directed that the surety, the United States Fidelity and Guaranty Company, of Baltimore, Md., be called upon to complete the work. This the bonding company agreed to do, and under date of September 20, 1906, a contract was made with them accordingly. As is invariably the case with a failing contractor, considerable time was lost in straightening out the affairs of the failing contracting company and getting the work under way again. Much of this delay could have been avoided had the bonding company taken hold with proper energy and made an honest effort to live up to the obligations of its bond. Much time was lost in an effort to persuade the bonding company that it had to complete the work, and to do so promptly. The officers' quarters were finally sufficiently completed to permit of their occupation during the winter. Progress on the cadet barracks has been slow, owing to delay in the receipt of stone trim, most of which could have been saved had satisfactory arrangements been promptly made by the bonding company with the subcontractor. The contract with the bonding company called for completion of both officers' quarters and cadet barracks by September 1, 1907. Though the officers' quarters are completed, the barracks will be at least two months behind time. This latter building is now almost entirely under roof, and a great deal of the interior work has been finished. There still remains much to be done, however, and it will be November or December next before it is ready for occupation. The percentage of completion of the barracks is 57.3 per cent.

The completion of the barracks, stables, and gun shed for the cavalry and artillery detachments has also been delayed, owing to the failure of the contractor, the Church Construction Company, of New York City, in April last. The surety on this contract, the Metropolitan Surety Company, of New York City, agreed to complete the work, and a contract was made with that company accordingly under date of April 18, 1907, the buildings to be completed by October 1, 1907. The work has progressed very well, and it is believed that all of the buildings, with the possible exception of the cavalry barracks, will be finished on time.

The percentage of completion on August 1, 1907, was as follows: Cavalry barracks, 73 per cent; artillery barracks, 92 per cent; cavalry stables, 99 per cent; artillery stables, 98 per cent; gun shed, 77 per cent.

The post headquarters building, on which work was started April 1, 1906, under contract with the J. W. Bishop Company, of Worcester, Mass., has progressed very satisfactorily, though the completion of the building will be delayed about a year, for the reasons stated in my last annual report. The additional foundations found necessary

were finally completed last fall. This is one of the largest buildings provided for by the new plans, and progress on it is necessarily somewhat slow. At the present rate of progress the main building should be under cover before cold weather puts a stop to outside work, and possibly a portion of the tower. The building on August 1, 1907, was 17 per cent completed.

The building for the central heating and lighting plant, referred to in my last annual report, has also been delayed, owing to the failure of the Church Construction Company, which had the contract for the masonry and other work, except structural steel. This is a steel-frame building with stone walls, concrete roof, etc. The contract for the steel work was awarded to the J. B. & J. M. Cornell Company, of New York City, who, though not the lowest bidders, were recommended because they offered to complete the work in less time than any other bidder, and owing to the location of their shops across the river. The expectations as to quick completion were not realized, and these contractors did not finish the framework on the main part of the building until March 28, 1907—over nine months after the time promised. This delay held back the Church Construction Company with their masonry work, so that cold weather arrived before the walls had reached the main floor. Upon the failure of the Church Construction Company last April, the surety, the Empire State Surety Company, of New York, took up the work, and is now completing it under contract dated May 1, 1907. The building is to be completed by September 1, 1907. On August 1 the percentage of completion was 50.6 per cent. All of the machinery forming part of its equipment is completed and ready for installation, and some of it—viz, generators and boilers—is now on the ground.

On September 7, 1906, proposals were opened for construction of bachelor officers' quarters. As all of the bids were much in excess of the amount allotted for the work and called for more money than it was thought wise to use at this period of improvements, they were all rejected and the work readvertised, after having certain modifications made by the architects with a view of reducing the cost of the building. Proposals were again opened on November 1, 1906, and all were still in excess of the amount allotted. It was recommended that the bid of the Church Construction Company to complete the building according to the modified plans for the sum of \$268,125 be accepted. This was done, and contract accordingly made with that company under date of November 13, 1906, work to be finished February 20, 1908. Some small amount of excavation was done in November and December, when cold weather put a stop to further outdoor operations. Before the work could be resumed in the spring the Church Construction Company failed, and it was necessary to make a contract with the surety, the Empire State Surety Company, to complete the contract. The building is planned to accommodate 40 unmarried officers, providing each with a study, two bedrooms, and a bath. The building will comprise two wings, and is located immediately north of Cullum Hall. The south wing, or wing adjacent to Memorial Hall, will have its front parallel to the front of that building, and will correspond in dimensions and general appearance to the officers' mess and quarters

immediately south of Memorial Hall. It will have three floors, with a two-story basement on the east, or river front, and will contain 21 sets of quarters.

The north wing, whose principal length will be east and west, and at right angles to that of the south wing, consists of four stories, with three-story basement, and will contain 19 sets of quarters. Only 11 sets, however, will be completed under this contract, as it was found necessary to omit the finishing of 8 sets in order to reduce the cost. The building will, therefore, when completed, for the present accommodate 32 unmarried officers.

A square tower containing main entrance, hall and stairway, and elevator connects the two wings. The basement walls will be faced with stone similar to the basements of Memorial Hall and officers' mess. The superstructure will be of brick, with artificial stone trimmings. The roof will be of tile.

On August 1 nearly all of the excavation was completed, and concrete footings laid ready for foundation walls. The new contract with the surety calls for completion by April 1, 1908. It is expected that the building will be ready for occupancy next spring, and certainly by next summer. The percentage of completion on August 1, 1907, was 1 per cent.

On September 22, 1906, proposals were opened for laying underground conduit for electric cable in accordance with approved plans prepared by the consulting engineer, Mr. Henry C. Meyer, jr., New York City. All proposals were rejected on account of the excessive cost, and after the consulting engineer modified the plans they were again readvertised and proposals opened on January 5, 1907. The prices received were satisfactory and contract was accordingly awarded to the Russell Contracting Company, New York City. As the proposals were based on unit prices—i. e., so much per yard for excavation and running feet of conduit—it is not possible to state exactly the cost of this work, but based upon the estimated quantities of excavation, conduit, etc., the cost will be approximately \$64,371.97. The contractor commenced operations early in the spring as soon as the weather conditions permitted, and has now completed about 70 per cent of the work. His progress has been quite satisfactory and it is believed it will all be finished early in the fall.

Upon recommendation of this office authority was given to excavate and construct the basement walls for the new gymnasium by purchase of material and hire of labor. While the general plans for this building were submitted by the architects and approved August 25, 1906, there were some details of the heating and ventilating that was thought best to work out and complete before advertising for proposals for its construction. Owing to the necessity of getting this building under way as soon as possible, and as the site selected for it was unoccupied, it was decided to do the basement portion in the manner stated, without waiting for completion of the heating and ventilating plans. By doing this not only was much time saved (nine months or perhaps a year), but also considerable money, probably \$10,000 or more. This work is now nearly completed, and by September 1 will be ready for the superstructure. On August 1 the percentage of completion was 80 per cent. The plans and specifications are

about completed, and it is expected advertisement will be issued this month for proposals for erection of the superstructure complete.

Work on the foundations for the new chapel was started about July 15, 1907. As it was found that excavation and foundation work can be done cheaper by purchase of material and hire of labor than by contract, authority was obtained to use this method in the erection of the cadet chapel. The site has been cleared and excavation is now under way. It is probable that much of this will be completed before next winter.

Should it be possible this fall to withdraw from use as quarters the building known as "Kinsley House," it is the intention to demolish this and begin the erection of a triple set of officers' quarters, similar in plan and design to those already completed, but specially designed for this site; and should quarters Nos. 10 and 12 not be required, these will also be torn down and ground broken for the new hotel, which is located immediately in the rear of them.

Owing to the difficulty experienced in using the old method of public advertisement inviting proposals for erection of buildings at a lump sum price, it was recommended that authority be given to erect the remaining buildings on what is known as the percentage plan, i. e., actual cost of the work, plus a commission to the contractor. This method is being used more and more in civil practice, and is found to work satisfactorily to both owner and builder. As the law providing for improvements at the Military Academy authorizes the Secretary of War to do the work by contract or otherwise, it was felt that it would be wise to take advantage of it and adopt the percentage method for the balance of the work at West Point. This plan was recommended by the Superintendent in his last annual report; but detailed recommendations were not submitted until December 26, 1906. These were approved by the Secretary of War under date of February 23, 1907; and the War Department, under date of July 17, 1907, gave official approval to the form of contract and specifications. They will be used hereafter in arranging for the construction of the remaining buildings and such other portions of the work as can be advantageously handled by contract.

The steam tunnel, connecting the central heating plant with the various other buildings, referred to in my last annual report, was completed last fall as far as the new barracks, at which point work was suspended until the ground in rear of these barracks could be cleared of the large amount of building material stacked up there for use in that building. It is expected that the work of extending the tunnel far enough to provide heat for the new cadet barracks can be completed this fall. The branch connecting the main tunnel with the old cadet barracks is nearing completion, and will be finished by the end of August.

The main sewer to carry off the sewage from the central group of buildings, referred to in my last annual report, as being constructed, has been completed, and necessary connections made with the different buildings to be served. The storm sewer and drain at the south end of the post has also been completed, and is now carrying off the drainage of the area through which it runs, and also sewage from the group of artillery and cavalry buildings.

The construction of retaining walls, roads, branch sewers, etc., has been continued. The laying of water and gas mains has been practically completed; also all of the retaining walls at the south end of the post, except the extension of the main road southward from the vicinity of the south gate guardhouse. Parapet walls, along retaining walls that have been finished, have been completed, and the construction of sidewalks started. The macadamizing of these roads has been deferred until the electric underground conduit could be laid. This has been done, and this fall it is expected that a large part of the macadamizing of the roads already constructed will be completed.

The operation of the quarry, from which all local stone required for the new buildings is furnished, continues to be satisfactory in results. A large amount of building stone has already been taken from the quarry, and such as has not been required for building purposes has been used for walls, and crushed into broken stone and utilized for making concrete and repairing roads.

During last fall and winter plans and estimates were prepared for remodeling the old cadet barracks, for the purpose of providing them with accommodations similar to those of the new barracks. This work consisted in remodeling the heating system, wiring the building for electric lighting, providing lavatory facilities in the basement, and running hot and cold water to the hall ways on each floor. The approved plan provides necessary water-closets and bathing facilities underneath each division for the number of cadets occupying the division, viz, 32; excavating under the north sally port to provide space for water heaters, and entrance of steam pipes from steam tunnel, connecting sewer lines in the basement with main sewer in street, etc. As the improvements were quite extensive, it was found impossible to complete more than 7 of the 12 divisions in the time available—i. e., from the 15th of June to the 27th of August, while the cadets were in camp. These 7 divisions will be finished in time for the cadets to move in, and a portion of the work, viz, electric wiring, will be finished in the other 5 divisions. The balance will have to be postponed until either a portion of the old barracks can be vacated by occupation of the new barracks or until next summer. The usual difficulties arose in the delayed receipt of material and difficulty of securing mechanics. Contracts were made and orders placed in the spring for all material, and guarantees given for its delivery by July 1. Notwithstanding this, some of it was not received until August 1. In addition to the above, it will be necessary as soon as we can get to it, to place skylights in the roof of the porch in the rear of the barracks, so as to give sufficient light to the area rooms on the first floor; and to renew the floor of the porch. This is now of wood, and it should be replaced with one of cement, to correspond with that of the new barracks.

#### GAS PLANT.

As director of the gas works, I am charged with providing the necessary illuminating gas for the needs of the post. The revenue derived from the sale of gas, coke, and tar is applied to payment of civilian employees at the gas works and purchase of gas coal if

the appropriation therefor is not sufficient, and for miscellaneous expenses not otherwise provided for. Gas is charged for at the rate of 75 cents per 1,000 cubic feet.

Coke is sold at \$1.17 per 18 bushels; tar at  $3\frac{1}{4}$  cents per gallon.

During the fiscal year 26,129,700 cubic feet of gas were manufactured; 5,856,600 pounds of gas coal and 1,460 gallons of oil were used.

The gas plant has managed to meet the heavy demands made upon it, though to do so it has been worked to the full limit of its resources. It will still be necessary to economize in the use of gas until the new power plant is completed. When this is done, electricity will be used for lighting the streets and a number of the buildings, and will greatly relieve the pressure upon the gas plant.

The amount of gas manufactured during the fiscal years 1906 and 1907 is given by months in appendix marked "D."<sup>a</sup>

The receipts and disbursements pertaining to the gas works are shown in statement of special contingent fund, marked "C."<sup>a</sup>

#### SPECIAL CONTINGENT FUND.

This fund is derived from the rent of hotel, stables, store, post-office, and miscellaneous receipts. Expenditures from this fund are made under direction of the Superintendent, by authority of chapter 212, act of Congress May 1, 1888. Expenditures for repairs of buildings which pay rent are paid from receipt of rentals.

The necessary expenditures for the work of forest improvement now under way are made from this fund, which is reimbursed therefor from the sale of timber, in the shape of cord wood, sawed lumber, etc. During the past fiscal year we have sold 150 cords of wood, for which we received \$649.50. A large amount of cord wood is still stacked up in the woods, as the result of the cutting operations a year ago; but, owing to the market conditions, satisfactory prices can not be obtained for the whole quantity. It is hoped that we will be able to dispose of it at a satisfactory price during the coming fall and winter.

The receipts and disbursements are included in the statement attached, marked "C."<sup>a</sup>

Very respectfully,

J. M. CARSON, JR.,

*Major and Quartermaster, United States Army.*

THE ADJUTANT, UNITED STATES MILITARY ACADEMY.

---

<sup>a</sup> See page 74.

## A.—Abstract of disbursements at the United States Military Academy at West Point, N. Y., during the year ending June 30, 1907.

	Current and ordinary expenses.	Miscellaneous items and incidental expenses.	Buildings and grounds.	Total.
DR.				
July 1, 1906:				
Balances on hand fiscal year—				
1905 .....	\$20.30			\$20.30
1905-6 .....			\$786.39	786.39
1906 .....	10,083.74	\$9,714.62	4,553.00	24,351.36
Officers' quarters and mess			1,000.00	1,000.00
No year (enlarging the Military Academy) .....			143,800.05	143,800.05
Received since fiscal year—				
1907 .....	117,103.75	53,917.00	34,943.00	205,963.75
1907-8 .....		7,425.00	3,890.00	11,315.00
No year (enlarging the Military Academy) .....			800,000.00	800,000.00
Total .....	127,207.79	71,056.62	988,972.44	1,187,236.85
CR.				
June 30, 1907:				
Deposited fiscal year—				
1905 .....	20.30			20.30
1905-6 .....			786.39	786.39
1906 .....	3,581.85	536.80	9.07	4,127.72
Officers' quarters and mess			286.96	286.96
Disbursed fiscal year—				
1906 .....	7,672.11	9,173.02	4,543.93	21,389.06
1907 .....	108,924.59	48,027.49	31,375.13	188,327.21
1907-8 .....		1,000.00	2,332.58	3,332.58
Officers' quarters and mess			713.04	713.04
No year (enlarging the Military Academy) .....			850,987.14	850,987.14
Balances on hand fiscal year—				
1906 .....	154.00	4.80		158.80
1907 .....	6,854.94	5,889.51	3,567.87	16,312.32
1907-8 .....		6,425.00	1,567.42	7,982.42
No year (enlarging the Military Academy) .....			92,812.91	92,812.91
Total .....	127,207.79	71,056.62	988,972.44	1,187,236.85

J. M. CARSON, Jr.,

Major and Quartermaster, United States Army,  
Disbursing Officer, United States Military Academy.

WEST POINT, N. Y., August 1, 1907.

## B.—Statement of funds received and disbursed from appropriations for the quartermaster's department at West Point, N. Y., during the fiscal year ending June 30, 1907.

Appropriations.	On hand July 1, 1906.	Received since.	Total to be accounted for.	Disbursed and deposited.	On hand June 30, 1907.	Total disbursed, deposited, and on hand.
Regular supplies .....	\$8,236.85	\$60,713.67	\$68,950.52	\$68,382.57	\$567.95	\$68,950.52
Incidental expenses .....	249.35	11,010.86	11,260.21	10,823.34	436.87	11,260.21
Army transportation .....	2,019.83	21,273.41	23,293.24	21,816.26	1,476.98	23,293.24
Clothing and equipage .....		1,315.75	1,315.75	1,311.75	4.00	1,315.75
Barracks and quarters .....	805.01	6,266.13	7,071.14	6,661.90	409.24	7,071.14
Shooting galleries and ranges .....	9.15	293.50	302.65	302.37	.28	302.65
C. and R. hospitals .....		119.65	119.65	119.65		119.65
Horses for cavalry, artillery, and engineers .....		2,521.00	2,521.00	2,521.00		2,521.00
Military post exchange .....	80.20	510.00	590.20	590.20		590.20
Miscellaneous receipts .....		1,581.95	1,581.95	1,581.95		1,581.95
Total .....	11,400.39	105,605.92	117,006.31	114,110.99	2,895.32	117,006.31

Respectfully submitted.

J. M. CARSON, Jr.,  
Major and Quartermaster, United States Army.

## C.—Statement of receipts and expenditures pertaining to the special contingent fund, United States Military Academy, from July 1, 1906, to June 30, 1907.

CR.

1906.			
July 1. By balance on hand per last account	-----		\$2, 519. 94
1907.			
June 30. By amount received:			
Rents—			
Hotel	-----	\$2, 000. 00	
Post-office	-----	150. 00	
Stables	-----	300. 00	
Store	-----	125. 00	
Bindery	-----	60. 00	
Miscellaneous	-----	1, 389. 64	
			4, 024. 64
Sales of—			
Gas	-----	8, 484. 73	
Coke	-----	1, 259. 46	
Coal tar	-----	957. 83	
			10, 702. 02
June 30. Total to be accounted for	-----		17, 246. 60

DR.

June 30. To amount disbursed per abstract	-----	14, 934. 70
June 30. Balance on hand	-----	2, 311. 90

J. M. CARSON, JR.,

Major and Quartermaster, United States Army,  
Treasurer Special Contingent Fund, United States Military Academy.

WEST POINT, N. Y., August 1, 1907.

## D.—Statement of gas manufactured from July 1, 1906, to June 30, 1907, showing quantity of coal and oil used in manufacture.

	Gas made.	Gas sent out.	Coal used.	Oil used.
Fiscal year 1906:	<i>Feet.</i>	<i>Cubic feet.</i>	<i>Pounds.</i>	<i>Gallons.</i>
July	1, 177, 500	1, 184, 400	284, 900	155
August	1, 245, 500	1, 257, 200	293, 000	155
September	1, 735, 900	1, 723, 200	397, 000	180
October	1, 980, 000	1, 986, 800	457, 000	248
November	2, 330, 100	2, 333, 400	513, 400	240
December	2, 590, 000	2, 570, 900	600, 800	248
January	2, 579, 200	2, 586, 200	587, 000	248
February	2, 200, 900	2, 177, 900	478, 400	224
March	2, 199, 000	2, 190, 800	483, 100	248
April	1, 795, 200	1, 784, 000	402, 300	190
May	1, 630, 200	1, 631, 800	369, 200	124
June	1, 420, 400	1, 435, 600	318, 800	120
Twelve months	22, 883, 900	22, 862, 200	5, 190, 900	2, 380
Fiscal year 1907:				
July	1, 224, 600	1, 209, 600	275, 700	124
August	1, 258, 000	1, 286, 200	285, 000	124
September	1, 793, 800	1, 808, 600	407, 200	120
October	2, 347, 400	2, 323, 700	536, 100	124
November	2, 688, 400	2, 688, 500	594, 200	120
December	2, 889, 000	2, 894, 300	643, 700	124
January	2, 979, 900	2, 968, 600	656, 000	124
February	2, 591, 700	2, 603, 400	574, 100	112
March	2, 634, 500	2, 629, 900	573, 400	124
April	2, 128, 200	2, 135, 900	475, 500	120

## D.—Statement of gas manufactured from July 1, 1906, to June 30, 1907, showing quantity of coal and oil used in manufacture—Continued.

	Gas made.	Gas sent out.	Coal used.	Oil used.
Fiscal year 1907:	<i>Feet.</i>	<i>Cubic feet.</i>	<i>Pounds.</i>	<i>Gallons.</i>
May.....	1,987,700	1,983,400	454,800	124
June.....	1,584,300	1,597,600	381,400	120
Twelve months.....	26,107,300	26,129,700	5,856,600	1,460
Fiscal year 1906.....	22,883,900	22,862,200	5,190,900	2,380
Increase.....	3,223,400	3,267,500	665,700	.....
Decrease.....	.....	.....	.....	920

Very respectfully,

J. M. CARSON, JR.,

Major and Quartermaster, United States Army,  
 Quartermaster, United States Military Academy,  
 Post Quartermaster and Director of Gas Works.

WEST POINT, N. Y., August 1, 1907.

## I.—Contracts in force during fiscal year 1907.

No.	Name.	Date.	Purpose.
1	Cram, Goodhue & Ferguson.....	Aug. 17, 1903	Developing competitive design for improvements, United States Military Academy.
2	Olmstead Bros.....	May 26, 1904	Plans and designs, landscape improvements, United States Military Academy.
3	Henry C. Meyer, jr.....	Oct. 7, 1903	For designing and supervising the construction and installing of heating and lighting plant.
4	General Electric Co.....	Dec. 6, 1904	Furnishing generators, motor, and switchboard for power house.
5	The Babcock & Wilcox Co.....	Feb. 17, 1905	Furnishing boiler and mechanical draft plant for power house.
6	Providence Engineering Works.....	Mar. 29, 1905	Furnishing Corliss engines for electrical lighting.
7	Robbins Conveying Belt Co.....	May 19, 1905	Coal-conveying apparatus.
8	C. H. Sanborn.....	Jan. 31, 1906	Steam-heating system for post headquarters building.
9	J. W. Bishop Co.....	.....do.....	Construction of post headquarters building.
10	J. B. & J. M. Cornell Co.....	Mar. 6, 1906	Structural steel for power house.
11	Hildreth & Co.....	Mar. 10, 1906	Inspecting steel for power house.
12	Dickson & Eddy.....	June 15, 1906	Anthracite coal.
13	Standard Oil Co.....	June 16, 1906	Gas oil.
14	Penn Gas Coal Co.....	June 19, 1906	Gas coal.
15	The Thomas Keery Charcoal Co.....	June 21, 1906	Hardwood charcoal.
16	The Horn & Brannen Mfg. Co.....	Aug. 15, 1906	Gas and electric fixtures for officers' quarters.
17	Library Co.....	Sept. 17, 1906	Bookcases, library.
18	The United States Fidelity and Guaranty Co.....	Sept. 20, 1906	For completing contract of Broderick & Wind Engineering and Construction Co. for constructing officers' quarters and cadet barracks.
19	Library Bureau.....	Oct. 1, 1906	Shelving, library.
20	Russell Contracting Co.....	Feb. 4, 1907	Construction of electrical subway system.
21	Johnston Livingston, jr., & Co.....	Feb. 14, 1907	Installing conduit, wiring panel board, etc.
22	Niles-Bement-Pond Co.....	Feb., 26, 1907	Furnishing and installing traveling crane in power house.
23	George T. Barnes.....	Feb. 27, 1907	Remodeling heating system, present cadet barracks.
24	The Metropolitan Surety Co.....	Apr. 18, 1907	For completing contract of Church Construction Co. for construction of cavalry and artillery barracks and stables and one gun shed.
25	The Empire State Surety Co.....	May 1, 1907	For completing contract of Church Construction Co. for construction of power house (except structural steel work).
26	.....do.....	.....do.....	For completing contract of Church Construction Co. for construction of bachelor officers' quarters.
27	Davis Marble Co.....	.....do.....	Marble and tile work, present cadet barracks.
28	The General Fireproofing Co.....	.....do.....	For steel wall lockers.
29	Belmont Iron Works.....	May 4, 1907	Steel work, basement present cadet barracks.
30	West Side Structural Co.....	.....do.....	Iron stairs for halls, present cadet barracks.
31	The Champion Iron Works.....	.....do.....	Iron stairs, officers' quarters, present cadet barracks.
32	H. W. Palens' Sons.....	May 7, 1907	Windows, doors, and inside woodwork, present cadet barracks.
33	J. H. Gautier & Co.....	May 6, 1907	Floor benches, gas house.
34	E. A. Matthews.....	June 25, 1907	Excavation for two slow sand filterers.

Because of failure to complete, the following contracts were, by order of the Secretary of War, declared forfeited and annulled:

*Forfeited contracts.*

No.	Contractor.	Date.	Purpose.
1	Broderick & Wind Engineering and Construction Co.	May 24, 1905	Construction of officers' quarters and cadet barracks.
2	Church Construction Co.....	Aug. 26, 1905	Construction of cavalry and artillery barracks and gun shed.
3	.....do.....	Apr. 2, 1906	Construction of power house.
4	.....do.....	Nov. 13, 1906	Construction of bachelor officers' quarters.

II.

Repainting exterior woodwork, porches, roofs, passageways, gutters, and leaders of soldiers' hospital.

Making and placing in position 70 storm sash with ventilating panes at the cadet hospital.

Repainting and repairing quarters of the first sergeant of the cadet hospital. Repairing and renewing plastering and kalsomining.

Rooms in cadet barracks: Repainting rooms in the cadet guardhouse. Repainting rooms in the cadet sinks.

Painting and repairing interior walls and woodwork of the cadet mess building.

Painting exterior walls, woodwork, and roofs of quarters numbered 43, 45, 47, 49, and 51.

Painting exterior walls and woodwork of quarters numbered 53, 61, and 63; and exterior walls and woodwork and roofs of additions to quarters numbered 33, 35, 37, 39, and 41.

Repairing and painting walls, ceilings, and woodwork of the officers' mess building and quarters.

Repairing and reshingling roofs of 8 sets of quarters for enlisted men.

Building addition to quarters occupied by Mr. McEnany.

Making 150 clothes presses for cadet camp.

Repairing gutters and leaders throughout the post.

Painting exterior woodwork of the academy building.

Repairing, renewing, and placing window screens and storm windows in quarters throughout the post.

Repairing and painting greenhouses at quarters No. 23.

Building shed for stone crusher.

Erecting building for range finder.

Painting iron fences, lamp-post railings, and rail fences throughout the post.

Painting front porches of quarters 19, 21, 23, 25, 31, 33, 35, 37, 39, and 41.

Painting front porches of quarters A, B, and C.

Repairing south dock.

Reshingling roof of soldiers' bath house.

Reenameling washstands in memorial hall.

Building porch against kitchen of quarters No. 41.

Repairing and renewing platforms for tents in cadet camp.

Making 30 kitchen tables.

Repairing chimneys of officers' and enlisted men's quarters.

Reshingling roof of quarters at the observatory.

Placing new gutters in front of quarters 19 and 23.

Building bins in cadet store.

Repairing, painting, and renovating rooms in West Point Hotel.

Repairing roof of livery stable.

Building addition to cemetery keeper's quarters.

Painting walls, ceilings, and woodwork of rooms in the enlisted men's children's school house.

Painting two rooms in memorial hall.

Painting rooms in officers' children's school house and renewing floor in room.

Painting rooms in quarters 41, 51, and 57.

Painting rooms in quarters 19, 27, and 55.

- Repairing greenhouse at post cemetery.
- Repairing porch of quarters No. 43.
- Repairing roof of the academy building.
- Painting rooms in quarters A and F.
- Erecting building for office and workshop for the post electrician.
- Pointing roof of library.
- Building closets in bedrooms, pantry, and kitchen of quarters No. 40.
- Painting rooms in quarters D, E, and F.
- Painting rooms in quarters 49.
- Reshingling quarters occupied by post quartermaster-sergeant.
- Rebuilding quarters occupied by a member of the ordnance detachment.
- Reshingling quarters 53, 61, and 63.
- Painting rooms in quarters 33.
- Painting rooms in quarters 8.
- Painting rooms in quarters 21.
- Building chimney for furnace on north side of quarters No. 19.
- Repairing tile floor in academic building.
- Painting rooms in quarters No. 14.
- Placing snow guards on roof of cadet mess, and on quarters 31, 33, 35, 37, 39, and 41.
- Building wagon bridge on south side of officers' mess.
- Painting and renovating room in the academy building for a club room of the first class of cadets.
- Erecting shed for steam fitters on west side of cadet guardhouse.
- Painting interior walls and woodwork of the cadet store.
- Completing about 6,000 order cards and memorandum for jobbing work of various kinds.

III.

No.	Contractor..	Date.	Purpose.
1	Dickson & Eddy.....	June 4, 1906	Anthracite coal.
2	John W. Pavak.....	.....do.....	Hard wood.
3	Clark & Wilkins.....	.....do.....	Soft wood.
4	Chas. L. Rickerson.....	June 11, 1906	Forage.
5	The American Hay Co.....	June 15, 1906	Straw for bedding.

IV.

- The following repairs have been made during the year:
- Officers' quarters Nos. 30 and 32: Repainting all exterior woodwork and tin roofs.
  - Officers' quarters Nos. 34 and 36: Repainting all exterior woodwork and tin roofs.
  - Officers' quarters Nos. 38 and 40: Repainting all exterior woodwork and tin roofs.
  - Temporary artillery stable No. 41: Replacing one-half of stable floor in stalls.
  - Engineers' barracks No. 42: Twenty-nine pairs of new window sash, primed and glazed, placed in building. Waterproofing south side of building. Laying 1,200 feet of Georgia yellow-pine flooring. Pointing exterior brick and masonry walls. Renewing gutters and down spouts.
  - Post commissary building No. 43: Whitewashing walls of storehouse throughout. Painting interior woodwork of the storehouse. Repairing brickwork near front entrance. Repairing window and door frames. Placing wooden ceiling in butcher shop. Placing wash basin and water-closet complete in storeroom for use of employees.
  - Main guardhouse No. 44: Painting woodwork in guardroom and prison room.
  - South guardhouse No. 46: Painting interior side walls, ceilings, and woodwork and varnishing wainscoting.
  - Quartermaster shops No. 48: Placing roof with skylights over exterior platform on west side of blacksmith shop.

Band barracks No. 54: Repairs to leaky roof. New gutter placed on building containing married men's sinks. Making four kitchen closets for members of the band. Placing 16 kitchen sinks in kitchens of the married members of the band. New granolithic sidewalk placed in front and two ends of band barracks. Thirteen water-closet bowls with fixtures placed in married men's sink.

Post crematory No. 56: Building concrete platform for depositing refuse preparatory of placing same in furnace. New steel smokestack placed on crematory.

Post exchange No. 57: New water-closet in basement for use of employees of the post exchange. Large refrigerator placed in post exchange meat market. New Georgia pine (yellow) flooring placed in storeroom.

Artillery barracks No. 58: Drain back of kitchen repaired. Covers placed over coal chute on kitchen coal shed. Coal box made for stable guardhouse. Repainting walls and ceilings and woodwork of squad room in barracks and reglazing windows where necessary. New refrigerator.

Army service barracks No. 60: Wash rooms and water-closets painted. Area walls pointed. Windows reputtied where necessary.

Sergeant, first class, of the Hospital Corps, soldiers' hospital: New bath tub and new washstand placed in bathroom of quarters occupied by the sergeant.

Soldiers' hospital: Rebuilding front porch where damaged by fire. Building dark room for photographing purposes.

Repairing and painting transportation.

#### APPENDIX J.

### REPORT OF THE PROFESSOR OF ORDNANCE AND SCIENCE OF GUNNERY.

UNITED STATES MILITARY ACADEMY,  
OFFICE PROFESSOR OF ORDNANCE AND SCIENCE OF GUNNERY,  
*West Point, N. Y., June 5, 1907.*

SIR: I have the honor to submit the following report concerning ordnance matters at this post during the fiscal year ending June 30, 1907:

#### ARMS AND AMMUNITION.

The guns and carriages mounted on the post have been kept in serviceable condition. All additional parts that have been added to similar guns and carriages in service since the construction of those on hand here have been procured and will be added during the coming year, so that the armament will conform in all respects to that installed in service.

The small arms in the hands of cadets and troops have been kept in repair, and the needed supply of ammunition provided.

#### ORDNANCE LABORATORY.

The machine shop at the laboratory has been improved by the addition of tools as follows: One 24-inch vertical drill press; one 14-inch tool-grinder machine, and one grinding attachment for lathe.

The blacksmith forge has been removed from the shop proper and placed by itself in an extension of the shop, where the dust and dirt incident to its use will not affect the machine tools in the shop proper.

Under the yearly appropriation of \$500 for the purchase of tools and equipment for the machine shop to be established for cadets in the new academic building, shafting and hangers have been purchased and two machine tools. The appropriation will permit the collection of an excellent equipment of tools for installation when the building is finished.

#### GUN PENDULUM.

The wooden tower which housed the gun pendulum in rear of the seacoast battery has been removed, and the pendulum is now exposed to view. This instrument possesses great interest as one of the earliest instruments used in investigations in ballistics.

#### MUSEUM.

The following articles have been presented to the museum during the past year:

Model of carabao and sled from Philippine Islands. George Van Horn Moseley, captain, Fifth Cavalry, United States Army.

Portions of brick from Chinese wall 2,000 years old. Col. Samuel E. Tillman, professor, United States Military Academy. Received from Capt. George Montgomery, Ordnance Department.

Implements showing three primitive methods of making fire by natives of the Philippine Islands: First, flint and steel; second, friction and attrition; third, fire syringe. Col. Samuel E. Tillman, professor, United States Military Academy. Received from Capt. Samuel G. Jones, Eleventh Cavalry.

The following articles have been loaned to the museum by the library:

Three coats and cap worn by Gen. James Duncan.

Uniform coat worn by Gen. U. S. Grant.

Sword, belt, used by Gen. U. S. Grant, 1864-65.

Flag and glasses used by Gen. U. S. Grant during the campaign of the Wilderness, and in 1864.

Epaulets worn by Maj. Moses Maynard, Sixty-fifth New York State Troops, in 1816.

Pistol carried by Capt. H. W. Warner, 1812-15.

Cockade worn by Capt. Moses Maynard in 1812.

Very respectfully,

ORMOND M. LISSAK,

*Lieutenant Colonel, United States Army,  
Professor of Ordnance and Science of Gunnery.*

THE ADJUTANT, UNITED STATES MILITARY ACADEMY.

## APPENDIX K.

## REPORT OF THE FORESTER.

OFFICE OF THE FORESTER,  
UNITED STATES MILITARY ACADEMY,  
*West Point, N. Y., August 1, 1907.*

SIR: I have the honor to submit the following report of the forestry operations upon the reservation of the United States Military Academy army post for the year ending July 31, 1907:

## 1. FOREST PROTECTION.

The reservation has been, in general, free of forest fires of any consequence. The danger zone has been along that part of the forest which borders on the West Shore Railroad. Thanks to the moral effect of the fire notices posted, and the cavalry patrol, and close observation of the woods foreman, the numerous fires started by careless pedestrians and picnickers are rapidly becoming less frequent. There were no fires deserving mention last fall, and but one this spring; the latter was discovered simultaneously by the cavalry patrol and a party of cadets, who successfully held it in check until the arrival of the woods foreman and the forest fire corps of the army service detachment. The fire was completely extinguished in less than an hour after being discovered, and did no damage beyond burning the leaves and ground cover on 3 or 4 acres. Several fires, including one covering 8 or 10 acres, were started by sparks from the locomotives on the West Shore road. There seems to be no way of stopping the starting of these fires so long as the road uses the coarse screens on its locomotive smokestacks. The spreading of these fires has been successfully checked by the construction and persistent cleaning out of a fire trail along the road, across which the ground fires seldom pass, and from which back fires can be safely started. Too much credit can not be given the efficient work of the forest fire corps recruited from the army service detachment, under Captain Foy, which has been ready and equipped at all times to fight fires beyond the control of the woods foreman.

No fungus or insect pest has been discovered during the past year, and it is believed that with the gradual removal of all infected trees by the regular improvement thinnings of this department that the reservations will be remarkably free from these important devastations.

The salutary influence of the special order of the Superintendent requiring that no one should cut or remove any trees or material from the forest without a written order from the quartermaster, and that the same must be taken where and in a manner prescribed by the woods foreman, or furnished by the woods foreman himself, has continued to materially lessen the trespassing and cutting which has heretofore greatly damaged the forest. It is certainly to be hoped for that arrangements may be made in the near future so that the woods foreman may cut and furnish all forest products for the various departments of the post, to the end that the same may be removed with the least possible injury to the forest. Even after

being carefully instructed by the woods foreman, it is impossible for enlisted men from the various detachments to get out an order for materials without more or less injury to the remaining growth.

## 2. IMPROVEMENTS.

Since the last report a small portable sawmill with planer and edger has been added to the equipment of this department. The initial cost of the machinery, including shafting, pulleys, etc., was about \$560. The setting up and installation of the machinery was done by the men in this department, assisted by the chief engineer of the post, and the lumber for the mill building was manufactured on the spot and construction done without hiring outside help. The excess in value of the lumber already sawed over its previous sale value as cord wood has more than covered the entire cost of the mill.

About 2 miles of bridle path has been cleared out and made useful for both fire purposes and horseback riding. A good system of logging roads has been established and built on the post side of Cro' Nest, which were used last winter in the forestry operations. Permanent log bridges have been built wherever necessary. The roads should be sufficient for all future operations on this portion of the reservation. They become at once an important addition to the series of trails available not only for pleasure riding but for practice work with the light mountain battery.

The growing of seedling trees in the forest nursery for future transplanting in the run-out portions of the reservation and for landscape purposes has continued successfully. Twenty thousand pine 3-year-old seedlings were transplanted in rows in the unoccupied part of the nursery area, where they will be allowed to grow into large, well-formed transplants for special planting.

Three thousand American and English elm were root pruned and transplanted for landscape work on the post. One thousand red oak seedlings were root pruned and sorted for similar work. These two species, generally recognized as the most suitable shade and street trees for this locality, should be of proper size and quality for the regular planting operations in the scheme for landscape work when the construction of the new academy buildings is completed. Besides the above-mentioned species, the nursery contains thrifty seedlings of the following species: Scotch pine, Austrian pine, European and American larch, Colorado blue spruce, Norway spruce, hemlock, white or canoe birch, and hard maple. It is my purpose to add each year five or six nursery beds yielding several thousand seedlings each until it is considered that a sufficient number for future planting operations is insured. The experiment made last year of setting out 2-year-old white-pine seedlings in the cut-over areas of the forest promises excellent results. Even under comparatively heavy shade the young pines have maintained a satisfactory progress. The acorns and chestnuts planted in similar situations, however, were completely destroyed by squirrels and mice during the winter. The results of this experiment are discouraging, because it was hoped that a considerable portion of the better soiled land could be restored to a seedling growth in this manner. The alternative seems to be in planting

seedlings started in the nursery. While the initial cost will be somewhat greater, the results of setting out thrifty, well-established seedlings will undoubtedly compensate for it in a much quicker restoration of the stand to its normal condition.

The present woods foreman, Mr. Knowles, was for several months last fall detailed by the forester for special work on the shade trees of the academy grounds. With a crew of men furnished by the quartermaster he removed the dead and decayed portions of the trees surrounding the parade grounds and filled the cavities with sand and cement. The lives of these old trees, which have so long formed an important aesthetic feature of the grounds, have been prolonged and their growth and health improved so that the dreaded time of replacing them with younger and smaller trees has been postponed. This sort of work will, of course, come more properly within the sphere of the landscape gardener when such a man is appointed. The continuance of this work can not be too strongly urged, as a very large proportion of the shade trees are old and fast decaying and only immediate heroic methods of tree surgery can save them. While the cost of thoroughly treating some of these is considerable, it is not one-fourth of the cost of replacing them with trees of sufficient size to preserve the landscape effect. The carefulness and efficiency of Mr. Knowles in this work, as well as in his regular duties as woods foreman, deserve special mention.

### 3. CUTTING.

Owing to a lack of capital, it was impossible to employ as large a force of choppers as would have made the cutting operations the most economical and profitable. It is this lack of working capital which is the most serious obstacle to profitably executing the cutting plans on the reservation. The fall and winter months are the best months for cutting and getting out both cord wood and saw logs, and it is certainly a regrettable fact that this department can not during these months employ a force sufficiently large to enable it to make the operation a business proposition and place it on an even basis with outside competition.

The southerly slopes of Cro' Nest in compartments 17 and 18, which is the area cut over during the past year, is the most expensive and difficult portion of the reservation, owing to its precipitous and bold topography. Careful improvement thinnings were made up to the very base of the cliffs surrounding the mountain. The fact that this side of the mountain is the most conspicuous landscape feature from the post necessitated that it be given thorough and painstaking treatment at the earliest moment. This fact was the reason that a considerable amount of thinning was performed when the amount removed did not pay for the cost of the work. This area will be underplanted with seedlings from the nursery as soon as funds are available for the undertaking.

Next season's operations will be conducted on the heavier and more valuable stands of the flats and coves on compartments 17, 18, and 19, and consequently should result in a more satisfactory financial situation. The trees being generally larger and of better quality, there should be a larger proportion of logs for manufacture in the mill.

About 75,000 board feet of lumber has been sawed in the mill, of which about 15,000 feet has been sold to outside buyers at satisfactory prices. The remainder has been carefully stuck up in piles to air dry, in which condition it should be worth considerable more in the markets. It is greatly to be regretted that more of the lumber and materials from the forest reservation is not used in the construction and repairs of the buildings of the academy. It would seem an economy to use such of this product as is suitable which is right on the ground and could be sawed into any desired dimension at a day's notice.

A considerable portion of the logs which are not suitable for lumber is being sawed into railroad ties which have a ready market delivered on the track. The better quality of logs, however, are worth more manufactured into lumber.

During the past year there has been a marked increase in the amount of lumber and special materials furnished the various departments of the post on orders of the quartermaster. An accurate account of these materials is kept by the woods foreman, because while they are not cash receipts, they, nevertheless, represent a part of the yield from the forestry operations. This past year the above materials at market prices amount to \$1,150. The usefulness of the forest reservation to the post it is felt is constantly increasing, and all demands made upon it for products are gladly met so far as possible by the woods foreman. A still more complete cooperation of the various departments with the forestry operations would certainly be very beneficial to all concerned.

Very respectfully,

ROY L. MARSTON, *Forester.*

Col. HUGH L. SCOTT,  
*Superintendent, United States Military Academy,  
West Point, N. Y.*

○

