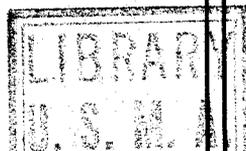


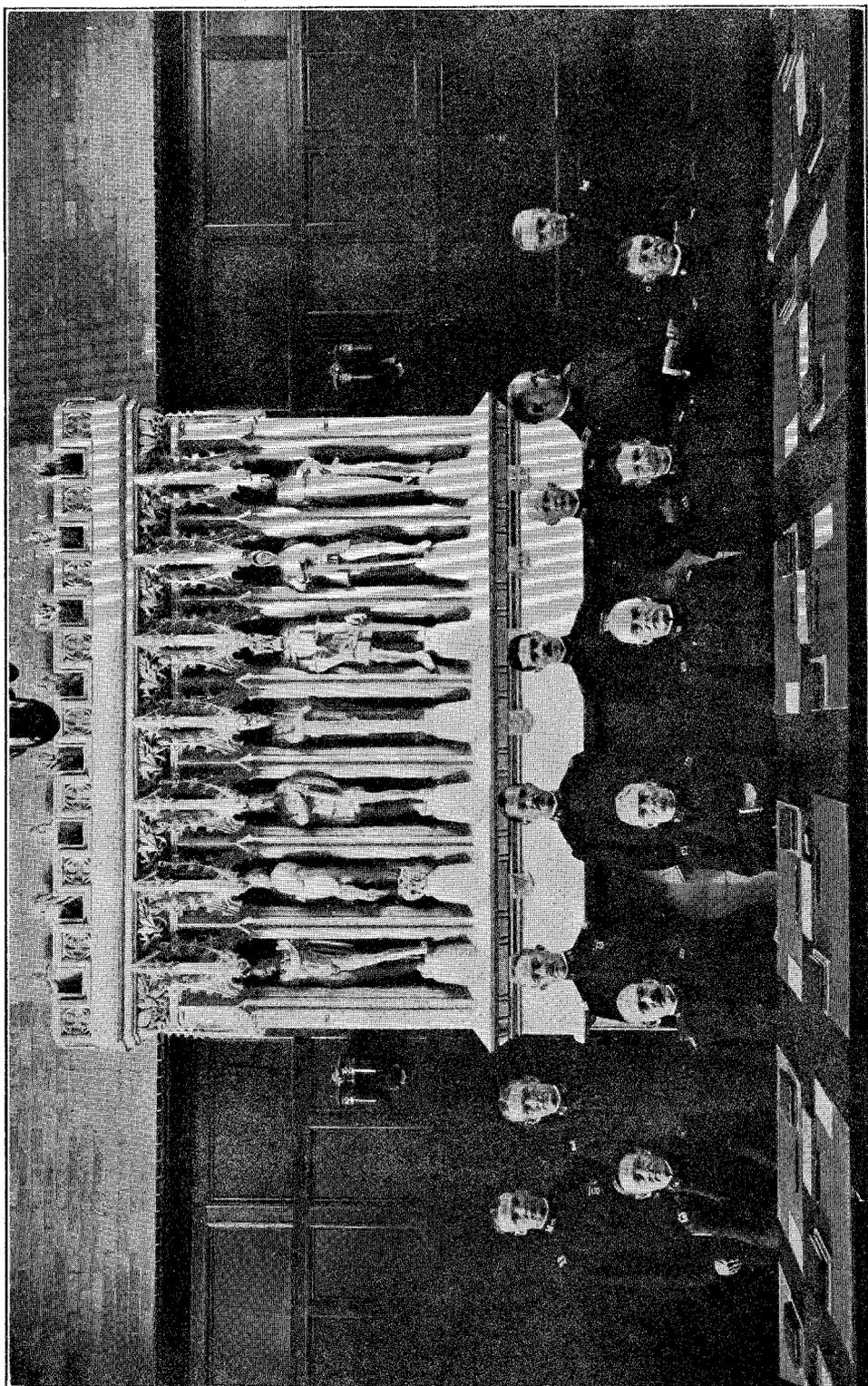
ANNUAL REPORT
OF THE
SUPERINTENDENT



UNITED STATES
MILITARY ACADEMY

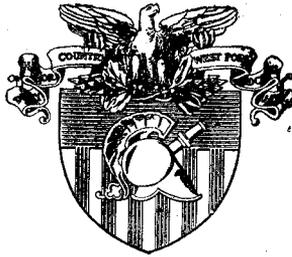
1914





THE ACADEMIC BOARD

ANNUAL REPORT
OF THE
SUPERINTENDENT



UNITED STATES
MILITARY ACADEMY

1914

ANNUAL REPORT OF THE SUPERINTENDENT OF THE UNITED STATES MILITARY ACADEMY.

Headquarters United States Military Academy,
West Point, New York, June 30, 1914.

SIR:—I have the honor to submit the following Annual Report of the United States Military Academy:

Personnel.

The number of officers on duty at the Academy is shown in the following list:

Superintendent and staff	7
Professors, permanent	7
Professors, by detail from the Army	3
Professors, Associate, detailed	2
Professors, Assistant, detailed	12
Commandant of Cadets and Tactical officers	15
Master of the Sword, Instructor of Military Gymnastics and Physical Culture	1
Instructors and other officers	71
Medical Corps	3
Dental Surgeons	2
Chaplain	1
Pay Clerk	1

Besides these there are others in prominent positions as follows:

Librarian	1
Civilian Instructors of Languages	4
Civilian Instructors in Fencing and Military Gymnastics	2
Teacher of Music	1
Organist and Choirmaster	1

Inspection.

There has been no inspection of the business methods, etc., of the Academy by the War Department since my last Annual Report.

Detail of Officers as Instructors.

Officers detailed for duty at the Military Academy should be permitted to remain, if satisfactory, for at least four years regardless of any other detached service they may have had. It requires from one to two years' experience for even the best of the officers selected to become really proficient and efficient instructors. In all departments much of the first year of a detail as instructor is used in instructing the new officers, both in the subjects taught and in the methods of presenting and teaching the subjects. In the department of mathematics where officers are advanced as instructors from the Fourth to the Third Class, a second year has to be largely devoted to such instruction, so unless an officer can remain here for a full period of four years the cadets lose that instruction to which they are entitled.

The effect of the detached service law passed in August, 1912, has been to deprive this Academy of a four-year period of instruction from officers detailed here for that purpose. Except those from the Engineer Corps not an instructor at the Academy can complete a four-year detail, and not one of the sixteen officers detailed to report here as instructors this August can remain four years. As a rule officers with nine or less months beyond complete years of availability when they report must be relieved at the end of a complete year's service because it is impracticable to change instructors during the progress of a course. For instance, an officer available for three years and nine months under the detached service law can stay but three years; if two years and nine months available he can stay but two years, and so on.

Every possible effort was made to secure satisfactory officers who could remain a longer period. It should be borne in mind that the Academy is very much limited in its selection of officers as instructors:

1st. They must be graduates of the Academy, as no others are sufficiently known here to warrant their selection;

2d. They should be graduates who were not cadets with any class at the Academy. This cuts out all graduates of less than three years' service as officers;

3rd. They should be officers whose standing in the subject they are to teach and whose character and abilities are such as to commend them for such a detail;

4th. They should not have been too long away from the Academy and out of touch with subjects of education. Officers over eight years away from the Academy should not be detailed as instructors unless they have recently served as instructors or are known to have done work that specially fits them for the position.

These requirements, when further curtailed by the detached service law, places nearly all the officers of the Army beyond our reach for a four-years' detail. The very officers who would make desirable or even satisfactory instructors are, because of their attainments, selected for other details and so rendered unavailable as instructors.

At present there are about seven hundred first and second lieutenants in the Army who are graduates with three years or more service as officers, and about fifty graduate captains sufficiently young in the service to be considered available for detail as instructors; a total of seven hundred fifty graduates from which instructors may be selected. Of these only about one-third are desirable because of their class standing and general fitness for such detail. In other words, 250 officers from which the 98 required can be selected not considering the detached service law and it must be remembered that these very 250 officers are in great demand for all the other necessary details in the service. Judging from past experience and the future outlook not one of these 250—except Engineer officers—can take a four-years' tour because of the detached service law; about one-fifth could stay three years, one-half but two years, and many but one year.

While I do not claim that these figures are mathematically exact, they are very close to it, and give an honest representation of the difficulties we encounter in the selection of desirable officers as instructors under this detached service law. The result is that we are compelled to ask for officers as instructors who, without this detached service law, would not have been considered for such duty. These officers when detailed have done their very best, and yet the results have not been up to the standard heretofore attained, and an exhaustive amount of work in instructing these instructors that is beyond all reason has been put upon the heads of the academic departments. The ill effect upon discipline of having instructors not naturally well equipped cannot even be estimated, and in this lies a most serious and bad effect of the detached service law upon the cadets at the Academy. Instructors

who graduated low in their classes and who are not temperamentally constituted to be good instructors are now necessarily required to instruct the keen cadets standing high in their studies, and who are ready to take every advantage of an instructor's errors or peculiarities. The result is unsatisfactory not only as regards instruction but in its effect upon discipline.

It is not my purpose to oppose this detached service law, which was designed to correct existing and serious evils, but merely to urge that an exception be made in the case of officers detailed to this Academy so that they may remain here for a period of four years regardless of any other detached service they may have had. I recommend it, not in the interests of the officers detailed, but solely for the proper instruction and discipline of the cadets at the Academy with the resulting benefit to the Army in general. I would not recommend it at all could I see that the future contained any promise of relief, but it does not. Young, desirable graduates are available for other detached duty after two years' service in the Army, whereas at least three years are necessary before coming to West Point. These are the very officers to be selected for other detached duty and are thereby rendered unavailable as instructors here, and this condition is bound to continue under the present law unless exception is made for the Military Academy.

The Corps of Cadets.

Since my last report, August 31, 1913, the status in the Corps has been as shown below:

September 1, 1913:		Members.
1st Class.....	107	107
2d Class.....	176	176
3rd Class.....	143	143
4th Class.....	187	187
Total.....	613	613

By Act of Congress approved September 3, 1913, Thomas Green Peyton was admitted as a cadet to the Academy on September 20, and by instructions from the War Department Lewis Perrine was also admitted on September 29, some time after the academic term had begun.

Graduated.....	107
Discharged for deficiency in studies.....	40
Discharged for deficiency in conduct.....	2
Resigned.....	6
Dropped from rolls—foreign student.....	1
Absent on sick leave.....	3
Turned back to join next lower class.....	13
Suspended.....	1

The following table gives the number of cadets admitted to the Fourth Class by certificate or by mental examination as a result of the March and May examinations:

	Examined mentally.	Submitted certificates under G. O., No. 3, W. D., 1914.
March Examination.....	61	115
May Examination.....	8	17

Owing to the large First Class, 168, for the coming year and the law of 1910 authorizing an additional cadetship for each member of that class, there were for this year 748 cadetships authorized and 661 cadets on the rolls, leaving 87 vacancies in the Corps July 1, 1914.

This is the first time for many years that the Corps of Cadets at the Academy has closely approached the capacity of its buildings. Due to the law of 1910 and the size of the classes now in the Academy, there will be about 720 cadetships for 1915 and 745 for 1916—after that, unless the law of 1910 is re-enacted—the cadetships will be reduced to 571, which is 150 below the capacity of the Academy, and at that number it will remain until there is a change in the number of Congressional Districts, States, or Territories, or in the laws authorizing cadetships.

The law of 1910 should be re-enacted by the next Congress extending its operation until 1923, at which time the result of the census of 1920 will be known and the increase in Congressional Districts determined for another decade. It will then be possible to decide whether or not further extension or modification of that law is necessary to keep the Corps of Cadets up to the capacity of the Academy buildings.

In the interests of the country, the Army and economy to the Government the maximum number of cadets that can be accommodated at the Academy should be kept under instruction. The plant to-day can easily handle 700 cadets. Only forty-four per cent. of the active Army officers are graduates of the Academy.

This can be fully doubled in time if the Academy is kept up to its capacity of 700 cadets.

In the last decade the number of cadets at the Academy and unfilled vacancies existing are as shown below:

Year Sept. 1st.	Authorized number of cadets.	Unfilled vacan- cies.	Remarks.
1904	522	42	
1905	522	55	
1906	522	51	
1907	522	76	
1908	533	117	
1909	533	129	
1910	533	122	
*1911	629	57	*The law of 1910 becomes effective
1912	631	74	
1913	640	80	
1914	748	87	As of date June 30

For the March and May entrance examinations this year 766 examinations were made. The following table shows the results:

Nominations.	Examinations.		Total
	March	May	
*†Qualified and directed to report for admission...	178	25	203
Ex-cadet to report for admission August 28.....	1		1
Qualified mentally, rejected physically.....	58	7	65
Qualified physically, deficient mentally.....	148	36	184
Mentally and physically disqualified.....	55	16	71
Qualified alternates for whom no vacancies exist (including 4 U. S. A. L. candidates).....	49	3	52
Qualified mentally for admission in 1915 subject to reappointment and physical examination..	3		3
Failed to report for examination.....	116	18	134
Declined appointments.....	6	5	11
Prevented by sickness from reporting.....	1		1
Qualified mentally, failed to report for physical examination.....	6		6
Appointments revoked.....	5		5
Failed to report for physical; did not complete mental examination.....	8	5	13
Disqualified physically; did not take mental ex- amination.....	2	4	6
Qualified physically; failed to report for mental examination.....	1	4	5
Reported June 15.....		6	6

*Two qualified candidates failed to report for admission on June 15.

†Two candidates of the March examination to be admitted July 1.

Two Filipinos reported for admission on June 20.

Attention is invited to the unusually large number of physically defective candidates, 142 out of 562 who were examined physically. The physical requirements are none too rigid for those who are to lead a somewhat strenuous life and be able to meet the requirements of field and war service when called upon to do so. The causes for rejection physically this year are shown below:

Cause for rejection.	Number.
Deficiency in height, weight, chest measurement and general appearance.	71
Defective vision.....	17
Heart trouble	13

Aside from these principal causes there were numerous other defects such as deformities, varicocele, bronchitis, etc., etc. Attention is also invited to the large number (149) who failed to report for the examination. Many districts have no cadets from this cause.

With the law of 1910 kept in force, and the present standards for entrance maintained, I believe that the Academy can secure enough cadets to keep up to its capacity of 700 very closely. The desire of the Academy being to secure the best and most promising material for officers in the regular Army, there should be no lowering of its standards for entrance or of its requirements as to discipline or academic work.

With the regular Army limited in numbers as it now is and the Corps of Cadets up to the capacity of the Academy more than all the vacancies for officers can be supplied from graduates of the Academy. If there are 700 cadets in the Corps there should be an average graduation of about 130 per year, and the present prospect for vacancies in the Army for some years to come is below that number.

In order to secure cadets of perhaps a broader preparation in studies than required by the West Point entrance examinations and to permit youths, hoping to secure appointments, to pursue a course of study that would not only prepare them to enter West Point, but to enter a first class college as well, the following order was issued by the War Department:

General Orders,
No. 3.

War Department,
Washington, January 23, 1914.

A candidate for admission to the United States Military Academy from a State, District, or Territory may be excused from the mental examination for admission upon one of the following conditions:

1. That he present a properly attested certificate that he is a regularly enrolled student in good standing without condition in any university, college or technological school accredited by the United States Military Academy, provided that the entrance requirements for the course he is pursuing in such institution include proficiency in the subjects of mathematics A_1 (algebra to quadratics); A_2 (algebra, quadratics and beyond), and C (plane geometry); English A (reading and practice) and B (study and practice), as outlined by the College Entrance Examination Board.

2. That he present a properly attested certificate of graduation from a preparatory school or public high school which is on the accredited list of one of the institutions referred to in paragraph 1 of this order, provided that he is thus certified to have established proficiency in mathematics A_1 , A_2 , and C, and English A and B, as outlined by the College Entrance Examination Board.

3. That he present a properly attested certificate from the College Entrance Examination Board that he has passed 14 units of its examinations, including mathematics A_1 , A_2 , and C, English A and B, and history A (ancient history) and D (American history and civil government).

As was expected great difficulty arose in selecting the schools and colleges whose certificates could be accepted for admission mentally under that order, and the assistance of the National Board of Education was called for by the War Department. To that Board are due many thanks for their conscientious and intelligent cooperation.

Many difficulties of a perplexing nature arose, especially with certificates that gave incomplete and some times incorrect information. In many cases the showing was so poor or defective that those signing them should have refused to forward them because of this insufficient showing for entrance. A great many certificates were submitted by institutions which had no good claim to be accredited when compared with the standards established by paragraph 3 of the above order. To obviate these and other difficulties, General Orders, No. 38, War Department, 1914, has now been issued showing more particularly the standards and requirements for these certificates. This order will govern for next year's entrances by certificates, and is as follows:

General Orders,
No. 38.

War Department,
Washington, May 22, 1914.

General Orders, No. 3, War Department, 1914, is rescinded and the following substituted therefor:

A candidate for admission to the United States Military Academy from a State, District, or Territory may be excused by the Academic Board from the mental examination for admission upon one of the following conditions:

1. That he present a properly attested certificate that he is a regularly enrolled student in good standing without condition in any university, college or technological school accredited by the United States Military Academy, provided that the entrance requirements for the course he is pursuing in such institution require proficiency in subjects amounting to 14 units of the College Entrance Examination Board, which must include mathematics A_1 (algebra to quadratics), A_2 (algebra, quadratics and beyond), and C (plane geometry); English A (reading and practice) and B (study and practice), as outlined by the College Entrance Examination Board. A certificate indicating enrollment at an irregular time or for the specific purpose of obtaining such certificate will not be accepted.

2. That he present a properly attested certificate of graduation from a preparatory school or public high school which is on the accredited list of one of the institutions referred to in paragraph 1 of this order, provided that he is thus certified to have established proficiency in subjects amounting to 14 units of the College Entrance Examination Board, which must include mathematics A_1 , A_2 , and C, and English A and B, as outlined by the College Entrance Examination Board. A certificate indicating graduation at an irregular time for the specific purpose of obtaining such certificate will not be accepted.

3. That he present a properly attested certificate from the College Entrance Examination Board that he has passed 14 units of its examinations, including mathematics A_1 , A_2 , and C, English A and B, and history A (ancient history) and D (American history and civil government).

New forms of certificates are being prepared in accordance with this new order and with such detailed instructions therewith that schools and colleges, as well as the candidate, can readily see just what is required.

General Orders, No. 3, quoted above, admitting candidates by certificates made no appreciable change this year in the percentage of vacancies filled under entrance requirements. There remain eighty-seven unfilled vacancies on July 1, 1914.

I believe that the most certain and satisfactory way of filling these vacancies is by competitive examination for each, and I also believe that this method will give a much better average of good material for cadets and for officers in the Army.

In this connection I quote the following from my report of 1913:

“These cadetships belong to the people of the District, State, Territory, etc., and should be open competitively to all the youths eligible to compete, and it is my recommendation that *a law be enacted requiring competitive examinations to be held for each vacancy*, that youth to be appointed who passes successfully the best mental examination and who is physically and morally qualified. The examination questions should be prepared by the Academic Board and a successful passing of the competitive examination should qualify a youth to enter, so that no other mental examination need be required. The details of conducting such examinations should, I think, be left to the Secretary of War. By announcing in the local papers some ten months or a year in advance that such a competitive examination will be held, stating its scope, it is believed that there will be a large number of eligible youths who will present themselves for examination in each district from which a vacancy is to be filled.”

Improvements in Buildings and Grounds.

The appropriations authorized under various Acts of Congress beginning in 1902 for enlarging the capacity of the Academy and extensive improvements in its buildings and grounds have been entirely expended, and work of that character practically ended. There yet remain many improvements under the original plans approved by the Secretary of War and other improvements and changes, which time and conditions have made essential, that should now be authorized and appropriated for by Congress from year to year until completed. I submit below a list of the buildings, improvements, etc., that I think should now be adopted as a plan and authorized by Congress for completion during the coming four or five years. Funds for the first three items should be immediately appropriated, and funds for the remainder on the list appropriated for from year to year as they can be economically handled without upsetting too much the necessary routine work of the post and Academy:

Estimates for Completing Improvements at the United States Military Academy.

1. Eight sets of officers' quarters— flats (Q. M. Plans).....	\$ 85,000.00
2. Alterations to West Academic Building.....	30,000.00
*3. Laundry.....	100,000.00
*4. Hotel.....	350,000.00
5. Children's School House.....	100,000.00
*6. Guardhouse and Fire Engine House.....	65,000.00
*7. Cadet Store and Headquarters.....	400,000.00
*8. Furniture for Cadet Store and Headquarters.....	4,000.00
*9. Army Service Barracks.....	125,000.00
*10. Enlarging Band Barracks, etc.....	40,000.00
*11. Quartermaster Stables and Wagonshed.....	100,000.00
*12. Quartermaster and Commissary Storehouse and Shops....	300,000.00
*13. Ten enlisted men's quarters, south end of Post.....	50,000.00
*14. Two double sets non-commissioned officers' quarters, south end of Post.....	20,000.00
15. Remodelling Engineer Barracks.....	10,000.00
*16. Post Exchange.....	100,000.00
*17. South Gate Guardhouse.....	30,000.00
18. Completion of interior of Memorial Hall.....	25,000.00
19. Roads, walks, retaining walls, grading, etc., about grounds and new buildings.....	350,000.00
20. Architect fees, etc.....	200,000.00
21. Demolishing old buildings.....	12,000.00
Total.....	<u>\$2,496,000.00</u>

The eight sets of quarters for officers are urgently needed and at once. During the last year six married officers were compelled to live in bachelor quarters and twelve married officers in quarters designed for but six. The conditions for the coming academic year will be even worse, because of the increase in the size of the Corps of Cadets which necessitates an increase in the number of officers as instructors. There are no quarters for these additional

Note.—Plans for a hotel on a site remote from the present hotel site were made by the architects and approved by the Secretary of War some years ago. Necessity for a larger hotel than then planned has become evident in recent years and its site, in my opinion, should be that of the present hotel. This requires, both for its increased size and its prominence as an architectural feature at West Point, an increase in the amount originally estimated for the purpose. New drawings should be made for the hotel on this site. For those buildings indicated by an asterisk preliminary drawings have been made and approved by the Secretary of War, while sketch plans have been made for the Children's Schoolhouse.

officers and no quarters in the vicinity to hire. The only arrangement that can be made for them is to utilize the small bed-rooms in the basement of the Cullum-Memorial Hall. These are entirely unsuitable in the first place, and their use for such permanent occupancy is not in accord with the understanding when this building was erected and presented to the Academy by the late General Cullum. Foreseeing that present conditions would arise I have for two years urged the construction of more officers' quarters but without success.

The remodelling of the old academic building is another matter that should be provided for at once. Three departments have moved from this building into the new academic building during this year, vacating some large lecture rooms and laboratories that should now be rearranged and cut up into recitation rooms for use of the departments remaining in the building. One large room so vacated should have a large skylight replace most of its present roof for use by the drawing department. There are also other extensive roof repairs needed on this building. Thirty thousand dollars will be required for this work and the funds for this as well as \$85,000 for the eight sets of officers' quarters should be appropriated at once without waiting for the usual annual appropriations for the support of the Academy. In no other way can the Academy be relieved from its present embarrassment as to quarters and from being seriously hampered in its work of instruction.

The present laundry, an old brick structure, enlarged and altered from time to time to meet the increasing demands, is wholly inadequate, parts of it unsafe for needed modern machinery, is located under a steep bluff where heat is exhaustive in summer and even if desirable its site does not admit of remodelling and enlargement. Its employees are drawn principally from the town of Highland Falls, some two and one-half miles from the present laundry, which, in very hot and inclement weather necessitates sending conveyances for these employees or closing the laundry. A new site some two miles nearer the employees has been selected and approved and where a free circulation of air will exist through and about the building. The absolute lack of capacity, insecurity, unhealthy site and remoteness from labor make an immediate appropriation for this building quite as important as for the buildings urged above.

Besides these extremely urgent items there should be provided

in the annual appropriations for the next fiscal year and made available upon approval of the Act, funds for the construction of a new hotel and a school building for the children at the Post—from 165 to 200 in number.

Both of these items were brought to the attention of the Senate and House Boards of Visitors during their visits to the Academy, and I am disposed to believe that all appreciated the necessity for these improvements and the importance of the construction of these buildings without unnecessary delay.

Not only should these structures be provided for now, but the entire plan of improvement, as shown in the foregoing list, should be authorized by Congress and appropriations made from year to year until its completion. Appropriations to this end, if made one year, omitted the next, etc., not only will result in expensive construction because of overhead charges, but is apt to produce unsatisfactory and even unsightly results. The plans and estimates shown above are essentially those already approved by the Secretary of War as a proper continuation of the improvements already made at the Academy. A few items have been omitted as not necessary now or as not of sufficient urgency to be included at the present time. The only real departure from the original plans is in the site selected for the new hotel, and the increased cost necessitated by this site as well as the greater capacity now demanded in the hotel. The present hotel was built some eighty years ago from funds procured from the sale of timber and wood when clearing out the forests of the reservation. The original stuccoed stone building has been added to from time to time by inexpensive frame wings, etc., that are now, as well as the old structure, beyond economical repair or alteration. It has but a third the capacity needed, is inadequately provided with necessary conveniences for health and comfort, and in architecture is a blot on the landscape.

The new hotel should be placed practically on the site of the present hotel instead of against the high hills south of the old hospital as shown on the approved plans. In this view I am in accord with those of all the members of the Academic Board, my predecessor as Superintendent, and all Alumni with whom I have conversed and whose views and judgment on such matters are of value.

Most of the guests of this hotel are relatives and friends of

cadets whom they come to visit mostly during the period of the cadet encampment, so the hotel should be as near this camp as conditions admit. The site is a commanding and beautiful one, and the architecture of the building should be such as to harmonize with the other large buildings and the character of the landscape. The drawings for this hotel in the approved plans of improvement cannot be altered to suit this case; they do not furnish the necessary capacity in bedrooms, dining rooms, parlors, or porch space, and should be discarded entirely.

The large amount in the foregoing list allotted to roads, walks, retaining walls, grading, etc., etc., should be authorized from time to time as buildings are constructed and roads, walks, retaining walls, etc., are necessary in the completion of the work.

Physical Training and Athletics.

I quote below the report of Captain Herman J. Koehler, U. S. Army, master of the sword and instructor of military gymnastics and physical culture. Captain Koehler has had charge of the physical training at this Academy for nearly thirty years and is unquestionably one of the best authorities in practical physical training in the country. He has so fully and clearly expressed the objects and attitude of this Academy regarding physical development and athletics that no comment is necessary beyond expressing my absolute approval.

The means and methods pursued at the Academy to carry out the views expressed in this report have produced such excellent and lasting results that there can be no question as to the propriety of maintaining such physical training in its present important place as a part of cadet instruction. A sound mind in a sound body is what this Academy is endeavoring to produce in its graduates, and this can best be attained by a thorough, systematic and well balanced training of both mind and body.

The following is Captain Koehler's report:

The course in physical training of the Corps of Cadets was carried out in accordance with the prescribed program during the past year, and the result attained measured up in all respects to those of other years.

The curtailment of the Fourth Class course during the month of May, which was introduced by a change in the schedule two years ago, has affected that course noticeably, as it comes at a time when the benefits and the improvements

resulting from this training far exceed that obtained during any preceding month. It is earnestly requested that this matter be given the serious consideration it merits by the Academic Board with a view to arranging the schedule in such a manner that this course may again come into its own.

For nearly thirty years this training has proved its value by establishing a balance between mental and physical effort that has not had a mental or physical collapse charged against it. Furthermore, it has made the exacting requirements of the curriculum at the Academy possible and it is undoubtedly directly responsible for the general high standard of scholarship attained by cadets. Any change that affects this balance in the least should therefore be introduced only after the most serious consideration.

It has ever been the custom at other institutions to meet every new demand on the part of the academic course by encroaching upon the time allotted to the physical course. While this is, without doubt, almost always a grave error on the part of any institution that permits it to be done, even though the occupations for which the graduates of such institutions are being prepared and which may not demand that these graduates be the possessors of strong physiques and robust health in order to be successful in after life it is decidedly a very serious mistake to make such a sacrifice at this Academy whose students are confronted by curriculum requirements not equalled anywhere, and whose product, no matter what its other attainments may be, is dependent entirely and solely upon superior physical condition for success in the particular profession for which it is being prepared.

In my report of last year I called attention to the fact that in pursuance of an order issued by the President, about 1905, cadets of the First Class have been conscientiously trained, so far as the time allowed for this purpose permitted, to take charge of the physical training of the enlisted men when they enter the service. All of these young men, without exception almost, are qualified to do this, but as yet no concerted effort has been made by the War Department to avail itself of this material. As a consequence it is difficult to arouse the same amount of interest in cadets for this part of their training that would be aroused if they knew that they would be called upon to render this service upon joining their respective commands. It is respectfully suggested, therefore, that the War Department be again urged to require this service of graduates and thus establish in the Army in general a well defined and properly authorized course of physical training.

During the past year special inducements were offered to those of the graduating class that intended joining the mounted branches of the service to perfect themselves in the use of the saber with a view to better qualifying them to instruct enlisted men in its use. If this is required of them there will be no difficulty in stimulating an interest in succeeding classes; if it is not required, the lack of interest for this training in the service will be reflected here.

Besides the regular course in physical training that is required of every cadet and which includes gymnastics, fencing, boxing, wrestling, and swimming, and aims to develop every cadet harmoniously to the extent of his possibilities by means of safe and rational methods in which the danger of bodily injury is practically eliminated, every opportunity is given to the individual cadet to

engage and further perfect himself in any authorized form of exercise he may choose.

While this is voluntary it is always under the supervision of an expert; the time devoted to it belonging to the cadet.

To create a spirit of rivalry and interest, corps competitions are instituted annually in gymnastics, fencing, boxing, wrestling and indoor athletics. The results of these competitions are exceedingly gratifying, not so much on account of the quality of the performances, but on account of the large number who prepare themselves for these competitions and who participate in them for the sake of the benefit they receive from this indulgence rather than for the sake of the reward that is awarded those that particularly distinguish themselves. This is a very commendable spirit and it is trusted that it may continue to grow in the Corps as it signifies an appreciation of the fact that the real value of any sport or physical exercise is not to be measured by the results attained by prize winners or record breakers, but by the benefits that accrue to even the ordinary performer.

As a consequence of the interest displayed by the corps in general, every department of the gymnasium presented a very animated appearance last winter during release from quarters, the only time cadets are permitted to indulge in any form of voluntary exercise.

Athletics.

The Military Academy is credited with being the first American institution to take the physical welfare of its student body into consideration, and yet it was probably the last to venture into the field of intercollegiate athletics. The reasons for this may be briefly summed up as follows:

The constant aim of this institution from its inception has been the development of the highest standard of excellence of the mass of its students rather than of the few, and as such a standard is obtainable only by directing special effort toward those of average ability, rather than toward those of superior endowments, the authorities were loath to incorporate any element in the methods of the Academy that were so diametrically opposed to these methods as competitive athletics are, which, when winning is made the sole object, must of necessity be confined to the few who in every instance almost are superior to their fellows.

The value of athletics, shorn of this objectionable feature, and when indulged in by large numbers for the sake of the benefits that resulted from them rather than for the sake of winning at any cost, was never questioned.

The position taken by the authorities at that time is irrefutable even to-day. Under existing conditions, from an educational point of view, the value of intercollegiate athletic competitions may be seriously questioned. The success of these competitions is not generally determined by the benefits that accrue to the participants through them, but by the ability to win, which makes it necessary to restrict participation in these competitions to a relatively limited number of students all of whom are selected because of superior physical attributes to the exclusion of those less favored, who, under rational conditions, it would seem are much more in need of this special attention, training and the resultant benefits than their more fortunate fellows. So long as winning is made the chief

and sole object of these competitions the individual and the effect of the training upon him is taken into consideration only so far as it affects the chances of the success of the team of which he is a member, a condition that not infrequently results in serious injury by inducing an individual to extend himself beyond his limitations.

Since the responsibility of the authorities of other institutions does not extend beyond the students' undergraduate career, and even then it is not of such a grave and serious character as it is with the authorities here, athletics at these other institutions were and are not acceptable as models for their conduct and control here.

The responsibility of the authorities of the Military Academy for cadets is not a passing one, but a lasting and continuous one, beginning with the entrance of the cadet into the Academy and extending throughout his career as an officer of the Army. With such a serious responsibility constantly before them and with a knowledge of the great license allowed competitive athletics at other institutions, it was only natural that the authorities here took the advisability of the introduction of intercollegiate athletics at the Academy under most serious consideration, and it was only after long and careful deliberation and after weighing the pros and cons of the question most conscientiously, that they finally decided to sanction the introduction of competitive athletics with other institutions in a restricted form. This experiment was keenly observed by the custodians of the Academy's traditions, the Academic Board, and the deductions they drew from it are summed up here:

1. That where as much importance is attached to the physical training of the individual student by means of a compulsory course in physical training as there is at the Academy, athletics may be safely indulged in.

2. That they may be made a valuable adjunct to this training by bringing out qualities in the individual that even he himself was not aware of, and that under ordinary circumstances might never have been disclosed.

3. That under proper direction they instill a desire for regulated, wholesome sport and pastime, the success of which is dependent upon physical fitness; thus proving themselves a splendid incentive to clean, hygienic living.

4. That by serving as a vent for the exuberance of youth, which without this opportunity to relieve itself, is apt to spend itself in a much less profitable manner, they become a powerful aid to discipline.

5. That they enhance the value of the product of the Academy to the service, by assisting in the development of those physical attributes upon which more than anything else the success of an officer's career is dependent.

6. That the danger of infringing upon the time devoted to academic or military duties is minimized by the fact that it requires less time for cadets to become proficient in the various sports than it does students of other institutions, because of their usual good physical condition.

7. That the authorities being empowered to set athletics a hard and fast limit, that of actual benefit to the institution and the individual, all danger of undue license on the one hand and over-indulgence on the other is obviated.

8. And, finally, that under proper encouragement and control, such as can be put into force here, athletics can be made the pastime of the many rather

than the serious business of the few, while the evils, the prostitution of the ethics of athletics, the spirit to win at all hazards, that is the dominant object of college athletics, and that serves only to defeat their purpose from an educational point of view, could be made impossible.

These deductions have been accepted as the tenets of competitive athletics at the Academy, and in spite of all that has or may be said of them, by way of criticism by those who have been misled by the almost limitless license given athletics at other institutions, the fact remains that these tenets are responsible for having placed competitive athletics here upon a plane that is undoubtedly at least the equal of the best attained at any other institution. And so long as they are conscientiously adhered to they will continue to prove themselves no mean factor in the development of a higher, more complete and a more substantial standard of scholarship, in its broadest sense. A standard in which superior mental ability is backed up by physical vigor; a balance of brains and brawn, the one the willing and capable servant of the other; a condition in short that inspires men to dare because of the consciousness of the ability to do.

The control of athletics is vested in an Athletic Council appointed by the Superintendent; collectively the Council is responsible to the Superintendent, its nominal head, for all its actions; individually the members are responsible to the Council for the duties assigned to them. The control of all competitions is intrusted to the various representatives on the Council, who act in the capacity of graduate manager with greater power, however, than is usually vested in such managers.

With the assistance and suggestions of the captains and managers of the various teams and with the approval of the Council these representatives arrange the schedules, purchase supplies, engage trainers and officials, in fact they assume and are held responsible for everything pertaining to the branch of athletics which they represent.

Under such methods errors of judgment, misconception of the ethics of athletics, questionable tactics of unscrupulous coaches, over-indulgence, the playing of an individual beyond the limit of his capabilities and other mistakes of youthful exuberance and inexperience are made impossible.

The Council realizes that ideal athletic conditions could not be brought about by belittling the desire to win, and it makes no efforts to make that desire less keen. What it does, however, is to take steps that will bring cadets face to face with the fact that no matter how much prominence is given to winning there are other more lasting benefits to be derived from competitive athletics. To bring this fact out more prominently a change was made from professional to Army coaching and at the present time the only team not coached by graduates is the baseball team. This change has been invaluable to the corps, for without detracting in the least from the quality of the various athletics, the Army coaches have given athletics a much wider significance by inducing larger numbers of cadets to indulge in them, not so much for the sake of making a place on a team as for the benefits they derive from them personally.

For the results attained attention is called to the superior physical condition of the Corps in general which is obtained without jeopardizing the present or future welfare of the young men; the splendid record made by cadets in the

quality of their efforts; in the envious reputation they have earned as exponents of the ethics of sportsmanship; in the absence of a desire to indulge in practices that are prejudicial to military discipline or to straight, clean living and to the corps spirit which the practice of athletics engenders.

If any fault can be found with the practice of athletics at the Academy it is, that though the number participating in them far exceeds in proportion the number that participate in them at other institutions, it has been impossible to institute ways and means to still further increase this number.

An effort is now being made to induce cadets to indulge in those forms of athletics in which they may be able to continue to indulge in with profit after they join the service.

Department of Tactics.

This department besides having charge of the theoretical and practical instruction of cadets in drills of all arms of the service, has, under the Superintendent, supervision of all matters relative to their conduct and discipline, and because of this close relation to the cadets it is, more than any department at the Academy, responsible for the formation of their habits, character and military bearing, and I am pleased to report that the attitude and work of the officers in this department have been most gratifying.

Lieut. Colonel F. W. Sladen was relieved as commandant of cadets to go on foreign service in January and Lieut. Colonel M. F. Smith was detailed in his place the following March.

But few changes have been made during the last year in matters affecting this department. Instead of appointing cadet officers and non-commissioned officers in the cadet battalion, from the three upper classes they are now appointed from First and Second Classes—captains, lieutenants and sergeants from the First Class, and corporals from the Second. During camp and the absence of the Second Class on furlough acting corporals are appointed from the Third Class.

The recommendations in paragraphs 2, 7, 11 and 12 of the Commandant of Cadets in the report below are heartily concurred in. It is of serious importance to the instruction of both new and old cadets that all new cadets should report at the same time and within a day or two after the graduation exercises in June, and to this end I recommend that the entrance examinations be held the 16th of March for 1915 instead of the last Tuesday, March 30, for 1915, as now prescribed. There always remain after these examinations many vacant cadetships that the War Department

desires filled and a second examination has been ordered in consequence. This recommendation is made to meet this condition and afford the time experience shows necessary to have candidates admitted from the second examination report for duty at the same time as those admitted in the March examinations.

The funds necessary to carry out the recommendations in paragraphs 7 and 11 will be asked for in the estimates for the coming fiscal year.

The following is the report of the Commandant of Cadets, Lieut. Colonel Morton F. Smith:

1. The prescribed courses of theoretical and practical instruction, as approved by the Superintendent, have been carried out during the year.

While in camp, Fridays and Saturdays were devoted to practical field training. It is intended in the future to devote a little more time to this work, devoting Saturdays to infantry field instruction, covering the use of advance and rear guards; establishment of outposts; making reconnaissance; and attack and defense of position with small forces; and also to cavalry and field artillery field instruction, culminating the work with a week's practice march at the end of camp.

It is important that cadets, who are to become officers, should have some experience performing exactly the same duties as the enlisted men they are to command, and on this march they will be required to perform all such duties with the exception of having one enlisted man detailed as cook to each company.

2. Of the class that entered June, 1913 (strength 193), 156 reported on June 14 and 37 were admitted later on different dates. It is recommended that if possible, all new cadets be required to report upon the same date in order that a practical system of instruction for all may be carried out. The results of having them report a few at a time on different dates after the main part of the class has reported is most unsatisfactory in every way.

3. Satisfactory results were obtained in small arms target practice during the summer. Five cadets qualified as expert riflemen, fifty-seven as sharpshooters, and twenty-two as marksmen.

The gallery range in the gymnasium has been completed and was used during the spring period. A systematic use of this range will undoubtedly be of great help in improving the target practice.

It is recommended that a new pistol range be constructed as the present one is but a temporary makeshift and not at all suited to carrying out the prescribed course in pistol practice.

4. The First Class went to Fort Hancock, New Jersey, and received instruction in coast artillery practice with service charges.

5. Satisfactory results were obtained in target practice with the field artillery guns. With the large amount of work that devolves upon the field artillery detachment an increase is badly needed both in non-commissioned officers and privates.

6. The result of the instruction in riding, as shown particularly by the horsemanship of the graduating class, was excellent.

7. It is recommended that three separate buildings be constructed for the packers and pack train southwest of the engineer garden. At present the mules are kept in the artillery stable which is overcrowded and unsuitable on account of the hard brick floors. The following buildings should be constructed: one small house for the chief packer; one barracks consisting of one sleeping room, kitchen, and storeroom for packers; and one stable for the mules.

8. Under the provisions of G. O., No. 19, Hdq. U. S. M. A., April 29, 1914, the efficiency reports of the graduating class were submitted this year for the first time. It is believed that the rendition of such reports will cause cadets to realize more fully their responsibilities.

9. A white blouse and cap were adopted as part of the uniform and the use of the former in place of the heavy full dress coat will be a great source of comfort during the hot weather in camp.

10. The following serious infractions of regulations occurred during the year:

For offenses against 4th classmen resulting in special punishment . . .	18
Entering office and making unauthorized alterations on official papers	2

Two cadets were dismissed and one cadet suspended for deficiency in conduct during the year.

11. It is urgently recommended that as soon as an appropriation can be obtained construction be commenced upon the corps headquarter building. The present arrangement of having the officers separated in two small buildings is most unsatisfactory.

The porch of south barracks is in a very dilapidated condition and should be replaced by a new one with concrete flooring and glass roof.

The entire area should be regraded and repaved in accordance with specifications already submitted.

12. Every effort should be made to interest cadets in those athletic sports such as golf and tennis which they keep up after graduation. * * *

Academic Departments.

The work in all academic departments has been most satisfactory and successful. The method of spending much of each recitation period in explaining and imparting instruction has been continued with gratifying results. An instructor is available daily as heretofore in each department to help cadets who desire assistance out of recitation hours and many who avail themselves of this help undoubtedly improve their class standing, so there is no excuse for a cadet to be found deficient except a lack of ability or a failure to utilize his time properly.

Department of Civil and Military Engineering.

The course in this department includes the "Art of War" besides the subjects indicated by its title. Naturally much stress is put upon this part of the course; supplementing text book instruction by lectures and a visit of the entire class to the Gettysburg Battlefield where this great battle is studied on the field itself.

The course was carried out satisfactorily, all cadets being proficient at the annual and semi-annual examinations.

The following report is submitted by the head of this department Colonel G. J. Fiebeger, professor of civil and military engineering:

The course in civil and military engineering began Monday, September 1, 1913, with a class membership of 107.

The class was divided into halves, A and B, formed of the odd and even numbers according to standing in natural and experimental philosophy, and each half was divided into five sections according to standing. Although all sections used the same text books, by means of omissions the subject matter was divided into five courses graduated to the ability of the students forming the sections. Transfers between sections were made every two weeks.

The course was conducted by oral and written recitations and a written general review and was completed on December 22. Every cadet having received a mark of at least 73 per cent on the written general review, there was no examination on the subject.

The course in military engineering and the art of war was begun on January 2 and was completed on June 4. After a thorough preliminary study, May 4 and 5 were spent at Gettysburg visiting that field.

There was no examination at the close of the course, since every cadet had made an average of at least 73 per cent on the written recitations.

During the course lectures illustrated by lantern slides were delivered on recent wars and sieges.

Captain DeWitt C. Jones, Corps of Engineers, was the assistant professor.

The following officers of the Corps of Engineers were the instructors:

Captain William A. Johnson, Captain Frederick B. Downing, Captain Edmund L. Daley, Captain Daniel I. Sultan, and 1st Lieutenant James G. Steese.

All of these officers rendered very satisfactory service.

Department of Natural and Experimental Philosophy.

The course in this department embraces the subjects of mechanics, sound, light and astronomy. There is no course at the Academy that better develops the reasoning powers of the pupils than this course in natural and experimental philosophy.

The course has been satisfactorily conducted by the head of the

department, Colonel William B. Gordon, professor of philosophy. The following report is submitted by him:

The class of 1915 began the course in philosophy September 1, 1913, with 176 members. At the semi-annual examination Cadets Mitchell, Patterson, Herrick, Jones, A. M., Yancey, Quesenberry and Tate failed to make the mark necessary to excuse them from examination in mechanics. Jones was sick and not examined and was later granted a sick leave, to join the next Second Class on his return to the Academy. Of the others, Herrick and Quesenberry successfully passed the examination. As a result of this examination Mitchell was conditioned, Patterson and Yancey turned back and Tate discharged, he being also deficient in chemistry. Mitchell failed on his reexamination in March and was then turned back.

At the semi-annual examination McLean was deficient in chemistry and turned back, and all of these changes reduced the class to 170 members.

During the second term Cadet Hodges was granted a sick leave after the completion of the course in sound and light, to join the next Second Class at the beginning of the course in astronomy, and after the annual examination Hemphill was suspended for deficiency in conduct; so the course was fully completed by 168 members of the class, there being no loss by deficiency in academic studies during the second term. Goodman, Gorman and Herrick were examined in astronomy and passed.

The records of the last three classes in philosophy show that so far the percentage of cadets reaching the average mark for distinction under the new rule of the Academic Board—92 per cent of the highest possible total—has been quite satisfactory and has not varied greatly. These percentages are 7.53 per cent. for 1913, 9.43 per cent. for 1914 and 8.87 per cent. for 1915.

Department of Mathematics.

Instruction in mathematics is given cadets for the first two years of their course. It embraces solid geometry, advanced algebra, analytical and descriptive geometry, conic sections, trigonometry, surveying, differential and integral calculus and least squares.

In the two classes 326 cadets were under instruction and of these 37 were found to be deficient at examinations during the year; nine of those deficient were turned back one year, and twenty-eight discharged.

Below is the report of the professor of mathematics, Colonel C. P. Echols, U. S. A. Attention is particularly invited to that portion of the report relative to the six year service law, to which I have also asked consideration previously in this report. The

department of mathematics suffers as much if not more severely than any other department at the Academy because of that detached service law:

On June 30, 1913, there were on duty in the department one professor, one associate professor, one assistant professor and seventeen instructors.

Captain C. R. Pettis, Corps of Engineers, assistant professor, was relieved from duty August 22, 1913, Lieutenants G. Dillman, 6th Cavalry, and A. W. Robins, 12th Cavalry, were relieved from duty as instructors in the department August 23, and Lieutenant C. P. Stearns, 3d Cavalry, August 26, 1913; Lieutenants E. North, Corps of Engineers, D. M. Beere, 3d Field Artillery, and E. B. Gray, Coast Artillery Corps, were assigned to duty August 24, 1913. This gave seventeen instructors at the opening of the current academic year (including the assistant professor).

Lieutenant R. K. Greene, Coast Artillery Corps, was relieved temporarily from duty in the department August 4, 1913, and was returned to duty September 1, 1913.

The six year service law required the relief of Lieutenant D. J. MacLachlan, 22d Infantry, on December 10, 1913, of Lieutenant F. T. Dickman, Cavalry, on March 22, 1914, of Lieutenant R. K. Greene, Coast Artillery Corps, June 15, 1914, of Lieutenant S. Jarman, Coast Artillery Corps, June 6, 1914. Lieutenant MacLachlan was not replaced. To replace Lieutenant Dickman, Lieutenant J. B. Crawford, Coast Artillery Corps, was assigned to duty in the department March 31, 1914.

On June 30, 1914, there are on duty in the department, one professor, one associate professor, one assistant professor and thirteen instructors.

The Fourth Class course was in all respects the same as that of the previous year, alternating with surveying during the last sixty-six days of the academic term.

Examinations were held in December and June with the following results:

	No. in Class.	Deficient.	Turned back.	Discharged.
December	185	6	—	6
June	169	11	1	10

For the Third Class the prescribed course required recitations daily from September, 1913, to June, 1914. The academic calendar adopted May 4, 1912, went into full effect in the department of mathematics and required the omission of the extra course in differential equations given to the two previous classes. In the fall term the class finished plane analytical geometry, begun the previous session, completed solid analytical geometry and orthographic projections in descriptive geometry. In the spring term, descriptive geometry, including perspective, was concluded and differential and integral calculus and least squares were taken in full.

Examinations were held in December, March and June with the following results:

	No. in Class.	Deficient.	Turned back.	Discharged.
December	141	7	3	4
March	136	4	—	4
June	132	9	5	4

It appears to me to be my duty to call attention to the inevitable injury to the efficiency of instruction in mathematics wrought by the application of the six year service law. The best teaching is only to be expected from those young officers who have developed a special aptitude and interest in the subject taught. Many such graduates are no longer available. And those that can be obtained have their tour of duty so limited that they must leave the Academy just when, by their experience they are becoming most valuable in evoking and maintaining the educational atmosphere necessary to prevent the system from degenerating into a repetition by rote of a perfunctory task. Mathematics extends through two years. An instructor must remain two years to cover the subject once. No instructor in mathematics should be relieved, if the best results be hoped for, until he has completed a four year detail.

During the past year Lieutenant MacLachlan was relieved by operation of law after two and a half years' service. It was thought best not to have a new instructor come in the middle of an academic year so the sections were enlarged.

Lieutenant Dickman was unexpectedly relieved after two and three-quarter years' service. A new instructor was forced to take up the last quarter of the academic year's work.

Lieutenant Jarman was relieved after three years' work. He was at his most useful period of apprenticeship.

Unless the instructors at the Academy can be excepted from the application of this law, the conditions cited above will continue year by year resulting in a discontinuity and irregularity of instruction that, I feel sure, would be considered disastrous in any civil educational institution worthy of the name.

Department of Chemistry, Mineralogy and Geology.

The course in chemistry, mineralogy and geology includes besides the subjects indicated by its title an elementary course in heat and electricity with some practical work in the operation of electrical instruments and machines. It is regretted that time does not afford an opportunity to have a more extended course in the subject of electricity, the importance of which for all Army officers is increasing so rapidly.

The work of this department has been conducted very satisfactorily. The following report is submitted by the head of this department, Lieut. Colonel Wirt Robinson, professor of chemistry:

Changes in personnel.—During the past year, the following officer was relieved from duty with this department:

1st Lieut. R. C. Eddy, C. A. C.,	January 15, 1914.
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The following were assigned to duty with the department:

1st Lieut. Walter Singles, C. A. C.,	August 24, 1913,
2d Lieut. O. A. Dickinson, 5th Inf.,	August 24, 1913,
2d Lieut. C. A. Selleck, 1st F. A.,	August 24, 1913,
2d Lieut. F. A. Holmer, C. A. C.,	August 24, 1913,
2d Lieut. H. M. Hobbs, 3d F. A.,	August 24, 1913.

The course, greatly to its advantage, is now confined to the second class year.

New Academy Building.—Except for lectures and laboratory work, instruction has been carried on in the new Academy Building. The new lecture room will be in readiness by the beginning of the next academic year. The laboratory is now completed and will be used by the new class. The improved arrangement in the new building permits a much better installation of the dynamos and storage batteries. The new chemical laboratory is in every way satisfactory. The overhead lighting makes it possible to dispense with artificial light on even the darkest days.

New and up to date cases are being ordered to take the place of the dilapidated wooden cases now used in the mineralogical museum. When these are received, the collection will be rearranged and displayed to far better advantage, while an improved system of labeling will add greatly to its instructive value.

Department of Drawing.

This department instructs the Second and Third Classes in drawing. Its work with both classes has been satisfactorily conducted. The following report is submitted by the head of this department, Lieut. Colonel E. R. Stuart, professor of drawing:

Following is the annual report of the department of drawing for the fiscal year ending June 30, 1914:

Personnel:

- E. R. Stuart, Lt. Col., U. S. A., professor of drawing in charge of Dept.
- R. L. Avery, 1st Lt., C. A. C., assistant professor,
- T. M. Chase, 1st Lieut., C. A. C., instructor, reported August, 1913,
- E. F. Rice, 1st Lieut., Infantry, instructor,
- P. A. Larned, 1st Lieut., Infantry, instructor,
- G. F. Patten, 2d Lieut., Cavalry, instructor,
- M. Wildrick, 2d Lieut., C. A. C., instructor, reported August, 1913.

Relieved:

- E. E. Pritchett, 1st Lieut., F. A., assistant professor, August, 1913,
- O. Westover, 1st Lieut., Inf., August, 1913.

The work of the third class year has been continued without material modification in subjects or methods and with satisfactory results.

The work in topographical sketching transferred to the second class year was prosecuted this year with as close an approximation to service equipment and methods as could be secured. The instruction is considered to be a very considerable improvement on former methods, but the time spent on it was insufficient. With more time next year, a still greater improvement is expected.

The aim of the department is to provide a thorough course in mechanical drawing, so that the cadet who has completed the course will have no difficulty in understanding any drawings he may encounter in technical works, and can, if occasion require, represent by correct drawings, any object or piece of

mechanism. In addition to this, he will receive a good foundation for further instruction in topographical sketching.

The system of marking mentioned in last year's report has been continued in those portions of the course where a single drawing covers a considerable period of time. Under these conditions the comparative marking is more accurate under this system.

During this year I have visited the Naval Academy and the Ohio State University and inspected the work in drawing at both institutions. Professor T. E. French of the Ohio State University, at my invitation came and delivered a lecture to the cadets of the Second Class. Advantage was taken of his visit to West Point to go over the work of the department with him, and some valuable suggestions for the improvement of the course were received both from him and from the work at the Naval Academy.

The knowledge gained by contact with the work of outside institutions is very valuable, and it is believed that for the progress of the department it is advisable to continue these visits whenever opportunity offers.

The work of the assistant professor and of the instructors has been performed satisfactorily.

Department of Modern Languages.

The courses in this department were successfully carried on during the year without any cadets being found deficient in French or Spanish. Three classes (First, Second, and Third) or a total of 417 cadets were instructed for the academic year just ended, and for the coming year 457 cadets will be under instruction by this department. No other department at the Academy has so large a number, and yet the appropriation for the conduct of its routine business in the way of stationery and office help is less than for other large departments at the Academy. For two years I have urged an increased appropriation for this department but so far without success. The recommendations of the head of this department in the report below relative to this matter are heartily concurred in.

Attention also is invited to those parts of his report referring to "study abroad" and the recent laws relating to detached service.

The following report is submitted by the head of this department, Lieut. Colonel Cornélis DeW. Willcox, professor of modern languages:

Spanish.—The department of Spanish has had under instruction this year 107 cadets of the First Class, and 176 cadets of the Second Class, making a total

of 283. All have made satisfactory progress; none have been found deficient at either of the examinations.

The text books have remained the same, except the introduction into the First Class of a scientific and technical reader by the head of the department. This work is designed to make cadets and officers of the army familiar with technical terms used in Spanish, which are rarely found in the dictionaries in current use.

The department has kept in view the great need of a speaking knowledge of the Spanish language as well as ability to read and write it correctly, and without neglecting the latter, has put special stress on Spanish conversation with the result that every cadet on graduating can carry on a conversation in Spanish.

This has been accomplished, in a great measure, by the fluency with which the instructors in the department speak Spanish; a fluency acquired by daily conferences with the civilian Spanish instructors and the opportunity given them to study in Spain.

French.—The department of French has had under instruction during the current academic year from one hundred thirty-seven to one hundred thirty-two cadets of the Third Class. This variation in number is due to the fact that cadets have been found deficient in other branches of study. All cadets have made satisfactory progress.

Sixteen cadets were examined in December, of these, three were conditioned and reexamined in February. They satisfactorily passed this second examination.

The text books have remained the same with the exception of "DePfeiffer's Pronunciation" which was replaced by "Elements of French Pronunciation" by 1st Lieut. W. C. Jacobs, Coast Artillery Corps.

The use of enunciation sheets was discontinued at the beginning of the academic year. This has resulted in a great improvement in the quality and quantity of the work of the cadets. It also requires the instructors to be much more familiar with the daily lesson, and the entire section is at work during the whole recitation period.

During the first part of the year both civilian instructors held conferences five times a week with the officers. Later on, this work was placed entirely in the hands of Mr. Gauthier. His work has been invaluable in this respect and the results obtained have been of the greatest benefit to the officers of the department.

During the later months of the course, one lecture a month, in French, was given to the entire class by Mr. Gauthier. The course was terminated by a series of lectures in French, three of these being given by instructors in the department, the other six by Mr. Gauthier. That these lectures were understood and appreciated by the cadets is evidenced by the fact that they were required to write compositions and also recite on them. This work showed that the lectures were very well understood by the great majority of the class.

General. 1. Study Abroad.—The wisdom of the policy of the War Department in sending officers abroad to study French and Spanish has been made daily evident during the academic year just closed. The effect of this policy is especially noticeable in the matter of imparting a speaking knowledge to cadets.

This result is impossible of achievement unless the instructors can speak the languages they teach; and the only way to secure this condition is to go abroad. If officers detailed in the department of modern languages could be ordered to report June 1st and be sent abroad at once, the benefit to the department would be still more marked.

2. *Detached Service Laws*.—The department still labors under the disadvantages produced by the recent laws relating to detached service. The number of officers in the service who give their attention to the serious study of languages is small, and of those who do study it, none will be available for a four year detail at this Academy.

The officers thus far available have been able to serve, some two years, others three; but the average lies between two and three years. It follows that officers are relieved just when they are most efficient and of most use to cadets and to the department. A law that works so much harm to this Academy should be changed.

3. *Appropriation*.—The appropriation made for this department is insufficient. Four hundred fifteen cadets have been under instruction, next year, 1914-1915, the number will be four hundred seventy-five. The recommendation is renewed that the sum allotted be raised to \$1,000. The library of the department is miserably deficient in certain most important respects; notably in works of reference and standard editions.

4. *Clerk and Messenger*—(a) The salary of the clerk should be raised to \$1,200. The department of modern languages has more cadets under instruction by far than any other of the Academy. It is the only department that keeps both morning and afternoon hours. The clerk has charge of the library, is required to have some knowledge of French and Spanish, makes out all the papers, besides stenographic and typewriting work. His pay is not commensurate with his duties. (b) The length of hours and size of the department just mentioned justify the request that a messenger be permanently detailed for duty in the department. Except that of English and History, it is the only department of the Academy not so furnished.

5. *Instructors*.—All the instructors have given excellent service during the year. Major Ryan, associate professor, is to be relieved on or about September 1, 1914, by operation of the detached service law. I have the greatest pleasure in testifying to his uniformly excellent services, and to his unflinching loyalty to the best interests of the department. His departure, one year before the end of a normal tour here, is to me, a source of sincere regret. * * * *

6. I renew the recommendation, made at various times, that foreign instructors in the department should receive commutation for light and heat.

Department of Law.

Instruction is given in this department on alternate days to members of the First Class. The course includes "Elements of the Common Law," "Constitutional Law," "International Law,"

and "Military Law." With the brief time available for this course only a foundation in legal education can be acquired, but it is thought that with diligence on the part of graduates they will be able to handle intelligently the ordinary legal questions they are apt to meet in actual service.

The following is the report of the professor of law, Lieut. Colonel W. A. Bethel:

The course pursued and the text books used during the past year have been the same as in a number of preceding years, and the methods of instruction that were adopted some years ago, viz., quizzes with frequent short lectures and written recitations on general review have been followed.

Intermediate examinations were held when courses were completed. Nine cadets were required to undergo an examination in the "Elements of Law," and only one in each of the subjects of "Constitutional Law," "International Law" and "Military Law." No failures on examination occurred.

In view of the expected enactment of a new code for the military establishment and the fact that a number of the present articles of war, now treated in the course, are practically obsolete, it was deemed advisable to omit certain parts of the course in Military Law, which made it possible to devote more time to instruction in the use of the law library than has heretofore been possible. A few days were devoted to this work, immediately preceding the semi-annual examination, and about two weeks were found available at the end of the course. By a proper alternation of attendance at recitation it was also found practicable to arrange for an attendance of one-fourth of the class in library work at one time, which made it possible for cadets to receive greater personal attention on the part of the instructors. This instruction was, therefore, more thorough and successful than ever before, and it is thought that nearly all members of the graduating class can make proper use of any law libraries that they may find available.

The new assignment of rooms in the west academic building will place the recitation rooms, library and lecture room of the department of law in the northwest corner of the academic building, and will facilitate the use of the library by cadets. It is believed that room No. 201 now used as a lecture room should be hereafter the main library of the law department and that it would be well to permit the cadets of the First Class to have access to it during their recreation periods, and indeed at other times.

Department of Practical Military Engineering, Military Signaling and Telegraphy.

All four classes at the Academy receive instruction in this department of one kind or another at various periods during the year. Its work is largely practical and is of great value in fixing

in cadets' minds the meaning and purpose of their study in related subjects.

The courses have been conducted very satisfactorily.

Below is an extract from the report of the head of this department, Major G. A. Youngberg, Corps of Engineers, instructor of practical military engineering:

During the year the course was, in general terms, the same as that during the preceding year.

The work executed by the various classes is summarized as follows:

First Class.—For purposes of instruction in this department this class was divided into three sections, attending in rotation on ordinary drill days from July 7 to August 14, 1913. The usual hours of attendance were from 7 a. m. to 12 noon.

The program for this period included the following exercises, viz:

1. Contouring an outline map of a portion of the reservation, dismounted.
2. Road sketch, West Point to Fort Montgomery, mounted.
3. Road sketch, West Point—Highland Falls—Eagle Valley Cross Roads to initial point, mounted.
4. Combined road sketch, covering area between the Hudson River and the West Point—Long Pond road, mounted.
5. Combined position sketch, preliminary, covering a small part of the reservation, dismounted.
6. Combined position sketch, covering the reservation and territory south, dismounted (horses used to carry cadets to their assigned tracts).
7. Position sketch (individual) northern portion of reservation, dismounted.
8. Combined road sketch, in connection with artillery practice marches, mounted.
9. Knots and lashings; rafts of pontoons, casks and logs.
10. Floating bridges—use of U. S. bridge equipage.

During the fall drill period the available time was devoted to instruction in the rigging and use of tackle, in construction of spar and truss bridges and in demolitions by the use of explosives. In the spring period the instruction covered the fabrication and use of revetting materials, the construction of obstacles and field fortifications. The course was made progressive in such manner that at its conclusion a section of a modern infantry redoubt, complete in every respect, had been constructed. An interesting feature in this work was the use of re-enforced concrete as a revetting material put in place and built up by the cadets as the parapet was thrown up.

Second Class.—Heretofore this class has been instructed in military signaling but by reason of a change in the course this work was omitted for this year. The members of this class will be instructed in this subject during their first class year when, by reason of previous instruction in electricity, they will be better qualified to understand the equipment used in electrical signaling and in radio-communication.

Third Class.—This class was divided into three equal sections which attended in rotation during the period of the summer encampment, the hours being from

7 a. m. to 12 noon, prior to July 4, and after that date from 8 a. m. to 12 noon. The daily program included military signaling by visual means, such as the flag, heliograph and acetylene lantern, knots and lashings, rowing and the use of bridge equipage in bridges, rafts, and ferries.

Fourth Class.—This class reports to this department for instruction in surveying which subject alternates with that of mathematics for the last sixty-six days of the year.

By force of circumstances, the course is arbitrarily divided into two parts, designated theoretical and practical, but the object of each is the same, namely, to instruct the cadet in the actual manipulation of instruments and the methods to be used in the field. Special attention is devoted to military topographic surveying and to problems arising in connection with construction work. Only so much of the theory is taught as is necessary to an understanding of the practical exercises given during the latter part of the course.

These exercises, fourteen in number, are as follows:

1. Measurement of a base line.
2. Tracing out contours and plotting same.
3. Simple traverse with a surveyor's compass and chain.
4. Differential leveling—to establish a bench mark.
5. Accurate measurement of angles by method of repetitions.
6. Measurements of triangles and trigonometric leveling.
7. Plane table survey (without stadia).
8. Profile leveling—to run a grade for a sewer.
9. Transit and stadia traverse.
10. Staking out a building and setting batter boards.
11. Plane table and stadia traverse.
12. Cross-section leveling—to determine amount of excavation or fill.
13. Topographic survey with transit and stadia.
14. Topographic survey with plane table and stadia.

The foregoing does not indicate the sequence in which these exercises are taken up, but, by proper coordination, they are so linked together that their logical relationship to one another and their application in surveying are made evident to the cadet. In fact, a map of a small portion of the reservation is the result.

Throughout this work the cadets are handicapped by the fact that they have had no instruction in drafting and for this reason, as well as for certain others, it would be greatly to the benefit of the course if it were taken up during the third class year instead of the fourth class year. They would then have had a portion of their course in the department of drawing.

The quality of instruction this past year was better than ever before and fully justified the change made in 1912 when the practical work was included in the academic season in lieu of the summer instruction given heretofore.

During the year the equipment has been increased by the purchase of a number of slide rules and other auxiliary apparatus and by transfers, on the order of the Chief of Engineers, of a number of compasses, transits and plane tables. The engineer department has also supplied a field zincographic outfit for the reproduction of maps and certain supplies for the bridge equipage. In this connection attention is invited to the fact that there is no suitable structure

for housing the ponton equipage and it consequently is subject to rapid deterioration.

The Signal Corps has also supplied a large amount of equipment for instruction in signal work, including an instrument wagon and latest models of field radio sets.

By legislation included in the Military Academy Appropriation Act, effective July 1, 1914, the title of the head of this department is changed to that of professor and his status hereafter will be similar to that of other members of the Academic Board.

Personnel.

Inasmuch as this report practically marks the conclusion of my tour of duty at this Academy I take this opportunity to express my appreciation of the services rendered by the numerous officers who, from time to time, have been temporarily on duty under my direction in connection with the instruction of cadets in signaling, surveying and reconnaissance. My thanks are especially due to those officers of the Corps of Engineers, Captains W. D. A. Anderson, R. G. Powell, R. G. Alexander, and Lieutenant D. D. Pullen, who have been formally assigned for duty in the department and with the detachment of engineers. To their good judgment, energy, and attention to detail is due in no small degree whatever measure of success may have been attained by this department during the period of my service as instructor.

Department of Ordnance and Gunnery.

The course in this department has been conducted very satisfactorily. There have been no material changes in the work covered.

The following is the report of the head of this department, Lieut. Colonel W. H. Tschappat, professor of ordnance and science of gunnery:

Except for such revisions of text as were made to keep the subject matter up to date and a change in the subject of interior ballistics, the course in ordnance and gunnery throughout the year was the same as that for the year ending June 30, 1913.

Further changes in subject matter are in contemplation for the next year.

Theoretical instruction during the year was very successful, no cadets being required to take an examination either in December or June.

Practical instruction during the year included about 28 hours in the machine and blacksmith shops for each cadet. This instruction was given during the months of February and March. On account of the large class during the coming year it is proposed to give a part of this instruction during October and November.

Ordnance Material.—The armament of the Post has been kept in good repair during the year.

Changes and alterations ordered by the War Department have been incorporated in the field and seacoast artillery material at the Post.

In addition to the regular allowance of ammunition for small arms target practice for officers and enlisted men, and \$5,000 for such practice for cadets, a liberal allowance of field and seacoast ammunition was made for target practice for cadets.

Ordnance Laboratory.—The following additional machines for use of cadets in the practical course have been installed since last report:

5—"star" lathes, 13 inch swing, 5 ft. bed.

The following additional machines needed for cadet instruction have been ordered but not yet received:

8—"South Bend" lathes, 13 inch swing, 5 ft. bed.

An appropriation of \$1,000 for installing steam heat and electric lights in the ordnance barracks and electric lights in the storehouses at the ordnance laboratory is included in the Military Academy appropriation bill for f. y. 1915.

Museum.—The following flags have been repaired during the year by the netting method, with gratifying results:

1 Revolutionary flag,

1 Flag, 1812 period,

5 Civil War guidons.

The experience had during the year has shown that this method is applicable to flags in the worst condition of disintegration and the result restores the flag to a condition in which it can be handled and in which all of its original design and colors can be displayed. It is proposed to gradually repair all the flags needing repairs, by this method.

Four metal frame display cases have been installed during the year and an additional one ordered.

The following articles have been loaned or presented to the Museum during the year:

1. U. S. Standard (guidon) of the 1st Regiment of Mounted Riflemen, carried during the Mexican war. Received from the Depot Quartermaster, Philadelphia, Pa.
2. One pair of silver spurs worn by Major General Alfred Pleasonton, U. S. M. A. graduate of 1844. Gift of Captain Alexander W. Perry, U. S. A., retired, U. S. M. A. graduate of 1888.
3. One Memorial Tablet made from bronze recovered from the U. S. S. Maine, destroyed in Havana Harbor, Cuba, February 15, 1898. Received from the U. S. Navy Yard, Washington, D. C.
4. One Peruvian Rifle, model of 1909, with bayonet, bayonet scabbard and gun sling. Received in exchange for one U. S. model of 1903 rifle.
5. One Commission as 2d Lieutenant of Engineers, U. S. Army, given to Eleazer Derby Wood, to rank from October 30, 1806. He was admitted to the U. S. M. A. as a cadet in 1805. Gift of Mr. William N. Page, Ansted, West Virginia.
6. One revolver, formerly the property of Major Robert Anderson, the gift of his daughter, Mrs. J. M. Lawton. Transferred from the U. S. M. A. Library.

7. One President's flag and one Coast Artillery Corps color, both obsolete. Received from the Depot Quartermaster, Philadelphia, Pa.
8. One model loom for making Navajo blankets, from Zuni, N. M., one leg band of beads, from the Chippewa Indians of Western Minnesota, and two arrows made by the Zuni Indians. Gift of Lieutenant F. L. Purdon, 18th Infantry, U. S. A.
9. Two small pistols and a small powder flask. Deposited in Museum by Lieutenant Colonel Wirt Robinson, Professor, U. S. M. A.
10. One small cannon ball, a relic of the battle of Plattsburg, N. Y. Gift of Colonel W. M. Black, C. E., U. S. A.
11. Three pictures of the battle of Little Big Horn, drawn and colored on muslin by White Bird, a northern Cheyenne Indian. Gift of Captain R. L. Livermore, U. S. A., retired, U. S. M. A. graduate of 1891.
12. Sword of Colonel Sylvanus Thayer, presented to him by the graduates of the U. S. M. A. classes of 1820, 1821 and 1822. Obtained by purchase with money subscribed by officers of the army, graduates in civil life, friends of the Academy and cadets of the U. S. M. A.

Department of Military Hygiene.

The course of instruction in this department was carried out with satisfactory success.

The following report is made by the head of this department, Lieut. Colonel Henry A. Shaw, Medical Corps, U. S. Army:

Instruction in military hygiene given during the past academic year covered the following subjects: personal hygiene, exercise and physical training, the selection of recruits, preventable diseases, clothing and equipment, water supply, foods and their preparation, the disposal of wastes, the sanitation of posts and barracks, the sanitation of camps, marches and battlefields, the hygiene of hot and cold climates, the sanitary duties of line officers, venereal diseases, the nature and effects of alcohol and other narcotics.

Instruction was given by recitations and lectures. The text books in use were "Elements of Military Hygiene, Ashburn," and "Alcoholic Drinks and Narcotics, Keefer."

Recitations began September 1 and continued until October 6 under the following instructors: Captains Will L. Pyles, Philip W. Huntington, and Arthur N. Tasker, Medical Corps.

Lectures were given on September 17 by Lieutenant Colonel Keefer on Personal Hygiene, on September 19 by Captain Huntington on Camp Sanitation, on September 24 by Captain Pyles on Transportation of Wounded, on September 26 by Captain Tasker on Preventable Diseases and on September 29 by Lieutenant Colonel Keefer on the Functions of the Medical Department.

Since the previous report a suitable room in the East Academic Building has been assigned to the department.

Department of English and History.

The course in this department has been carried out successfully and satisfactorily.

I am unable at the present time to recommend the important changes recommended in the conclusions of the report submitted by the head of this department. The successful operation and the good results now obtained in this department do not call for a change in its present organization and the additional expense of another department.

The following report is submitted by the head of this department, Lieut. Colonel L. H. Holt, professor of English and history:

No marked change has been made in the regular course of study in the two branches of this department. The conferences held before each advance lesson have been continued as previously; the use of study diagrams by the instructors has been emphasized; and the uniformity of class room instruction has been maintained. The assignment of ten officers to the department has allowed the division of the class into a sufficient number of sections to insure careful attention to each individual cadet.

English.—In the instruction in English increased emphasis has been laid upon individual instruction, especially during that large part of the course concerned with composition. After written exercises opportunity has been given the instructors to hold individual conferences with the cadets, pointing out errors and suggesting means of improvement.

Toward the end of the advance work an effort was made to determine whether the members of the class had noticeably improved in their manner of writing. An hour was set apart for a written recitation and the subjects assigned were those general subjects assigned in the entrance examination. Careful comparison of the work of the class on the entrance examinations and on the written recitation in February of the following year showed notable improvement in over 85 per cent of the cases.

The only change of note in the English course has been the introduction of a special course for the upper third of the class during the period ordinarily set apart for the written general review. During this special course of seventeen lessons the cadets had readings in Browning, Coleridge, Byron, Fitzgerald, Masfield, and Yeats. With the poetry read in the regular course, the knowledge of poetry of these authors has given, I feel sure, to these cadets a fair familiarity with the most notable figures in the literature of the 19th century. Outside of this poetry, the department was able to supply the cadets of this special course with books for reading a number of dramatic works, such as Marlowe's *Jew of Malta* and Dr. Faustus, Shakespeare's *Hamlet* and *Othello*, Ben Johnson's *Alchemist* and *Every Man in his Humor*, Beaumont and Fletcher's *Philaster* and *Maid's Tragedy*, Sheridan's *The Rivals* and *School for Scandal*, Goldsmith's *She Stoops to Conquer*, Pinaro's *Trelawney of the Wells*, Henry A. Jones' *Middleman*, Moody's *Great Divide*, Kennedy's *Servant in the House*,

Shaw's *You Never Can Tell*, and Yeats' *Land of Heart's Desire*, Kathleen in Houlihan, and *Pot of Broth*.

The assistant professor in English deserves great commendation for the efficient and painstaking way in which he has cooperated in the operation of the department throughout the past year.

History.—The new text book in history, Hazen's *Europe since 1815*, has now been in use with the sections for two years. The first favorable impressions have been confirmed.

The text book in Political Science, although distinctly better than the one it displaced, still leaves much to be desired. I expect to ask for a change of text books in this subject as soon as I can feel reasonably sure that I can suggest a better book.

Owing to the unusual stress of committee work this year I have been forced to shift many of the conferences in history to the assistant professor of history, Lieutenant R. M. Lyon. Lieutenant Lyon deserves very great credit for the zeal and ability he has shown in this work.

Lectures.—The department has followed its previous custom of supplementing its daily instruction with various lectures by outside educators. The lectures during the past year were the following:

December 6. Professor Arlo Bates of the Massachusetts Institute of Technology on *The Value of Literature*.

December 13. President Arthur T. Hadley, of Yale University, on *The Study of History*.

December 20. Professor Charles D. Hazen, of Smith College, on *Notable Figures of the French Revolution*.

January 10. Professor George Baker, of Harvard University, on *Shakespeare*.

January 24. Professor Albert G. Keller, of Yale University, on *Colonization*.

January 31. Professor J. H. Robinson, of Columbia University, on *the Lesson of History*.

February 6. Professor Allen Johnson, of Yale University, on *the Irish Question*.

February 7. Mr. Brian Hooker, of New York City, on *The Value and Uses of Poetry*.

February 9. Professor Henry A. Beers, of Yale University, on *Milton*.

February 14. Professor E. B. Reed, of Yale University, on *The Cavalier Poets*.

February 21. Professor Robert K. Root, of Princeton University, on *Sheridan*.

February 28. Professor John C. Adams, of Yale University, on *Wordsworth and the Romantic Movement*.

April 15. Mr. Clayton Hamilton, of New York City, on *The Contemporary Drama*.

Conclusion.—Another year's experience confirms in my mind the advisability of carrying out the suggestions contained in my report for 1912-1913, paragraphs 6-9 especially. I cannot but reiterate in this report my persistent feeling that the best interests of the course of study at the Academy would be served by divorcing the history from the English and by creating a new department for the former. The unusual demands upon the time of the head of this department made by committee work during the past academic year emphasized still further the impossibility of his carrying on to the best advantage the two dis-

similar branches. If it seems unwise at the present time to create a new department, I recommend most earnestly that provision be made for an associate professor of the rank of major or captain to whom the conduct of the course may in the main be entrusted.

In conclusion, I wish to commend with special emphasis the zeal and enthusiasm with which the two assistant professors and the instructors have cooperated with me in the work of the department.

Children's School.

This school has been in charge of Captain R. G. Alexander, Corps of Engineers, and has been satisfactory in spite of the difficulties encountered as to space.

The salary of the principal and other teachers is inadequate and not in accord with salaries paid in similar schools in the State. I shall ask an increase in this respect in my estimate of funds for the Academy for the coming fiscal year.

A new school building, or if it is practicable the enlargement of the present one is greatly needed, and funds will be asked for the purpose:

The following report of the Children's School is submitted for the fiscal year ending June 30, 1914. The organization of the school was as follows:

Principal, Edmund Cocks.	Number of Pupils.
8th grade	12
7th grade	19
Miss T. Schattan, 6th grade	21
Miss A. Meagher, 5th grade	18
Miss M. Noonan,	
4th grade	21
3rd grade	27
Miss A. M. O'Connor,	
2d grade	24
1st grade	20
Total	162

Miss Schattan was employed to fill the vacancy July 1, 1913, caused by the resignation of Miss L. J. Wicks. The vacancy as sewing teacher caused by the resignation, July 1, 1913, of Mrs. Guttormsen, was not filled as the work formerly done by her was this year divided among the remaining teachers with satisfactory results.

There were six children graduated from the school in January and six more in June, 1914.

For lack of room in the school building the 3rd and 4th grades, as in the preceding year, attended in the basement of the new Cadet Chapel, and for the

first half year the 1st and 2d grades alternated in attendance for half a day each. The disadvantages of the Cadet Chapel as a school for small children were more pronounced than ever. The unusually severe winter greatly increased the inconveniences due to the isolated and exposed position of the building. The basement was not designed as a school room and the lighting is poor and arrangements for ventilation inadequate. The teacher there in addition to the regular 3rd and 4th grade subjects had to teach writing and sewing without the assistance of the teachers specially qualified and designated to supervise such work for the remaining grades.

The need of a large room in the school building for general assembly, opening exercises, school entertainments, etc., is also keenly felt. It is believed that school entertainments from time to time would be of considerable benefit to the pupils and would greatly stimulate the interest of parents and lead to a heartier cooperation on the part of the latter.

It is hoped that the unsatisfactory conditions at present existing may be remedied in the near future by the construction of a new school building or remodelling of the present one.

The progress of the pupils during the year was very satisfactory, as attested by the exhibits at the end of the term which reflected credit on both pupils and teachers. The Palmer System of Penmanship was used throughout the year with good results.

Due to low salary, the school loses by resignation this year the services of Mr. Edmund Cocks, principal of the school for the past six years. To him is largely due the credit for building up the school to its present substantial condition, toward which result he has spared neither time nor energy.

It is thought that the salary of the principal should be increased to an amount equal to that received for like positions in the schools of neighboring towns. Unless this is done it will be impossible to retain a man of satisfactory ability and experience.

The appropriation of \$4120.00 for maintenance of the school was expended as follows:

Pay of principal.....	\$1080.00
Pay of four grade teachers.....	2350.00
Pay of janitor at Chapel.....	100.00
Purchase of books, stationery and other supplies.....	588.84
Balance on hand at end of year.....	1.06

Adjutant's Office.

The work of this office has been most efficiently and ably handled by Captain George Vidmer, Cavalry. His systematic methods, fore-thought and intense interest in all matters pertaining to his office and the Academy have been of the greatest value and assistance, and it is with extreme regret that, because of the detached service law, I shall be obliged to relieve him from duty near the end of this year.

The recommendations of the Adjutant in his report given below regarding the increase and equalization of the pay of clerks are not only approved but strongly urged. Their pay should be in accord with the character of their work and what others here and elsewhere are receiving for the same or like service.

The following is the report of the Adjutant:

I was temporarily relieved from duty as Adjutant on July 10 and reappointed October 29, 1913, for the purpose of permitting me to serve with troops in order that I might retain the office of Adjutant for the greatest length of time possible. During my temporary absence the duties of Adjutant were performed by 1st Lieutenant Eugene R. Householder, 26th Infantry.

The great increase in clerical work due to the admission of candidates by certificate under General Orders, Nos. 3 and 38, War Department, 1914, and the increased size of the corps—the largest in the history of the Academy—has been ably and efficiently done without increase of the force. It still consists of nine civilian clerks, one messenger and five enlisted men. Due to the experience and efficiency of the force it was able to handle the increased work promptly and satisfactorily. All the civilian clerks were given authorized leaves and the enlisted men passes when the work permitted it. Scarcely any days were lost on account of illness. The printing and binding divisions are most efficient and have met every call on them in a highly creditable manner.

I have been ably assisted by my chief clerk in the work of the office who has been working for a salary entirely incommensurate with the requirements exacted of him. This clerk's position is a most exacting one, being chief clerk of the principal office at the Academy and his salary should be equal to the chief clerks of department headquarters. An increase has been asked for him for the past two years and it is hoped that Congress will authorize the increased amount to which he is justly entitled.

The necessity of equalizing the pay of the heads of divisions in this office is apparent, and with this in view I have asked that two clerks, one of whom has been here for about twenty-five years and receiving \$1200, and the other but \$1000 per annum, be put on the same basis as the heads of the other two divisions by giving them an equal salary, that is \$1400 per year. The clerical force of this office is generally of unusual length of service, tried experience and efficiency, and they all have the interest and welfare of the Academy at heart.

A board appointed by the Superintendent to design an overcoat for the band and field music succeeded in securing a very ornamental and serviceable article. The appearance of the band in formation, in overcoats, with the corps of cadets, is very materially improved.

The War Department has now allowed the additional officer so long needed to take charge of the post exchange and to act as assistant to the Adjutant. Lieutenant E. R. Householder was relieved from the department of natural and experimental philosophy on June 17 and assigned to this duty. In addition to running the post exchange—no small job in itself—this officer will relieve the Adjutant of the many small duties which have heretofore fallen

on him, and will be a very essential help. This detail will allow the Adjutant to take advantage of short leaves of absence which will be most grateful reliefs from the long hours of office work.

The Thayer Sword has been purchased by contribution from the Alumni, officers of the army, cadets and friends of the Academy and is now in the museum.

The attendance of the Alumni during graduation week was about 215, the largest number on record with the exception of the Centennial of the Academy in 1902. The classes of '67, '69, '70, '73, '74, '75, '84, '89, '94, 1904 and 1909 held reunions and forty classes were represented including one member of the Class of 1847.

Due to the increase in the number of visiting graduates the question of taking care of them will have to be solved so that it will not present a new problem each year. An outline of a plan will be made the subject of a separate report.

Quartermaster's Department.

The work of this department has been efficiently and satisfactorily performed. Major B. T. Clayton, Quartermaster Corps, was in charge until April 25, 1914, the date of his departure for duty at another station. Until the arrival, June 20, 1914, of Major E. J. Timberlake, Coast Artillery Corps, detailed to relieve Major Clayton, Captain F. B. Watson, Quartermaster Corps, had charge of this department and carried on its work very satisfactorily.

The report of the quartermaster quoted below is so complete as to require little comment. Attention is invited however to his recommendations regarding the old power plant, increase of \$500 for the up-keep of the post cemetery, and to his remarks upon the condition of the laundry.

Concerning the roads I desire to add to the report that present appropriations are only sufficient for policing, imperfect repair and now and then a few rods of rebuilding. The funds only permit of repairing breaks, resurfacing bad portions of roads that were not built originally with proper foundations, and such must be the case until sufficient funds are appropriated to admit of tearing out sections and rebuilding them in a proper and durable manner.

The following is published from the report of the quartermaster, Major E. J. Timberlake, Quartermaster Corps:

In obedience to the requirements of Memorandum No. 12, Headquarters United States Military Academy, I herewith submit report in triplicate, of the operations of the Quartermaster Corps, Quartermaster and Disbursing

Officer, United States Military Academy, in charge of construction, and Treasurer, Special Contingent Fund, for the period from July 1, 1913 to June 30, 1914.

Pursuant to paragraph 36, S. O., No. 124, c. s. W. D., I reported June 20, 1914, to the Superintendent of the U. S. Military Academy, for duty and assumed the above duties. From July 1, 1913, to April 24, 1914, Major B. T. Clayton, Q. M. Corps, and from April 25, 1914, to June 20, 1914, Captain F. B. Watson, Q. M. Corps, performed those duties. This report is, however, a report for the year, made from the records of the office.

Quartermaster Corps.—The general duties of the Quartermaster Corps, as defined in paragraph 1000, Army Regulations, 1913, are carried on by this office under the direction of the Superintendent and in accordance with orders and instructions of the War Department making this an independent post. With respect to the work carried on by the enlisted men of the Quartermaster Corps and under expenditures from funds of the Quartermaster Corps, this office is governed by the various circulars and instructions of the Chief of the Quartermaster Corps.

The work pertaining more directly to the Military Academy and provided for in the Appropriation Act for the support of the Academy, is carried on and expenditures made under the direction of the Superintendent as authorized by the Secretary of War. As referred to in the last Annual Report different systems were formerly used in keeping account of the various funds pertaining to the Military Academy and those pertaining to the Quartermaster Corps. At the beginning of the present fiscal year, 1914, the books formerly kept of different appropriations carried in the Military Academy Act were discontinued and during the present fiscal year (1914) the different items of the Military Academy appropriations have been kept track of in the same manner as have the funds allotted by the Chief of the Quartermaster Corps using the apportionment or allotment sheets provided for this purpose. This change has resulted in considerable saving of clerical labor and has enabled the office to perform the additional work due to the enlargement of the Academy without additional clerks.

Since the last Annual Report one additional sergeant (chauffeur) has been authorized for the Quartermaster Corps Detachment at this Post; making a total of 18 enlisted men in this detachment. These men are employed in the pack train; in the post bakery; in the subsistence and quartermaster storehouses; and as teamsters and chauffeur. The work required of them has been performed in a satisfactory manner. It has been recommended that the strength of this detachment be increased by one Fuel Sergeant.

Army Service Detachment.—This detachment is provided for in the annual appropriation for the support of the Military Academy and has an authorized strength of 201 enlisted men. This organization constitutes the principal enlisted working force here. They are employed as teamsters, chauffeurs, clerks, custodians and laborers in the Academy buildings; messengers; mail carriers; telephone operators; watchmen; and as mechanics and laborers in the repair and improvement of the buildings, grounds, roads, docks and other public utilities pertaining to the Academy. The detachment has met the requirements in a satisfactory manner.

Civilian Employees.—In addition to the civilian employees provided for as "Permanent Establishment" in the Military Academy Appropriation Act, it has been necessary to employ a varying number of civilians to perform the work provided for in the lump-sum appropriations. Those employed have consisted chiefly of mechanics and laborers. The number employed depends upon the amount of work provided for, but which can not be done by the permanent employees and enlisted men of the Quartermaster Department. The employment under the lump-sum appropriations is regulated by letter from the Secretary of War, dated April 29, 1913, published in Memorandum 15, Headquarters United States Military Academy, May 3, 1913. During the past year a tentative draft of Civil Service Regulations drawn especially for this place was received from the office of the Secretary of War, and after a careful examination of the various provisions it was returned with recommendations for such modifications as seemed desirable. Without waiting for the final adoption of these regulations, this office is keeping card record of such employees and endeavoring as far as practicable, to carry out the principles of the Civil Service in giving the preference to employees who have worked here previously and performed their work in a satisfactory manner.

Transportation.—The usual work of police, fuel, forage, freights, etc., has been performed satisfactorily by the transportation at this post during the fiscal year 1913. The three gasoline trucks have proven most satisfactory as an economical and expeditious means of handling all classes of freight. Note should be made, however, of the fact that they were unable to operate during the period February 14 to March 22, inclusive on account of the heavy snow. This appears to be a sufficient reason for the retention of a certain amount of horse transportation for this post at all times. It is recommended that 100 draft animals (horses and mules), be authorized for the Quartermaster's use. A small automobile truck (1000 lb. or 1500 lb.) is badly needed for jobbing work. The distances here are great and too much time is lost in getting men, tools and supplies, to points of small repair and jobbing work. Such a machine would pay for itself very soon in time saved, and its cost of up-keep would be small in comparison with the wagons and teams now used. An effort will be made to obtain one in the near future.

Post Cemetery.—This cemetery contains about 16 acres. It has been in use since 1816. The total number of interments up to June 30th, current year, is 1538. During the past 12 months 29 interments were made.

Its care and maintenance is provided for in the annual appropriations for the support of the U. S. Military Academy. For several years past \$1500 has been allowed per annum.

Owing to gradual increase in the number of interments, the necessity for filling in, resodding old interments, and the annual increase of space occupied, required increase in work to keep up the appearance of the grounds.

In former years \$2000 per annum was allowed for hire of necessary labor, purchase of flowers, shrubs and other material. An increase of \$500 should be granted to maintain the cemetery in a suitable manner. The authorities here are held responsible for its condition, and they should be supplied with adequate funds to maintain it in a manner demanded by its importance and location.

As stated in the last report, the portion of the cemetery set aside for enlisted men and such of their families as may be authorized for burial, is nearly filled and should be enlarged to provide additional space.

Fire Department.—The appropriation act for the support of the Military Academy carries an item of \$1000 for purchase and repair of fire apparatus. The following have been purchased during this fiscal year: 672 feet of hose, 20 couplings, 24 hydrant wrenches, 180 charges for fire extinguishers, 20 charges for chemical engine, 32 springs for pump valve, 32 pump valves, and two brackets for hose rack.

The quartermaster is fire marshal and the other officers on duty in the Quartermaster Department are assistant fire marshals. The Army Service Detachment is divided into details for manning different parts of the apparatus, and drills are regularly conducted. Some hose and other apparatus has been assigned to the other detachments and they are drilled under the detachment commanders, particularly with regard to the protection of the buildings in charge of those detachments. One engine and one hose cart with ladders and buckets are kept in area of south cadet barracks and are used for drilling cadets by officers of the Tactical Department.

A new fire engine is a necessity. The appropriation act for 1915 for the support of the Military Academy carries an item of \$2500 for the purchase of one fire engine and equipment. This office is in correspondence with manufacturers and expects to let out bids early in July, 1914.

Power Plant.—During the fiscal year, 8435 tons of buckwheat coal have been purchased at a cost of \$26,343.50. During the current year steam and electric lighting have been provided in the East Academic Building in addition to buildings heretofore heated and lighted from this plant. Before any more material additional requirements are made on this plant, it is recommended that another boiler be added to the present battery, now consisting of four 440 horse power boilers. Estimates are now being prepared.

The storage capacity of the plant is only 4000 tons, necessitating frequent deliveries during the winter season. Storage capacity should be provided for at least 6000 to 8000 tons, so as to avoid the necessity of receiving coal during extreme winter weather when ice and snow interfere with the operation of the conveyor. An estimate is being prepared to alter the conveyor so it will work at all times.

Old Power Plant.—The continuation of this plant does not meet economic conditions. The uses to which this plant is put are:

1. Heating Q. M. storehouse and workshop,
2. Furnish power to coal elevator motor,
3. Furnish power to small motor for sawing wood,
4. Furnish power to small motor for horse clipping,
5. Furnish power to small motor for charging battery of electric launch.

The purposes for which this plant is maintained could be more easily and economically met by installing a heating plant for the quartermaster storehouse and work shops, and altering the motors so as to run them from the new power plant. The savings per year would be about 200 tons of coal and the services

of two men. Moreover the building could be used for store and work rooms that are badly needed.

Gas Plant.—On February 2, 1914, the superintendent of the gas plant died, and since that time the plant has been operated by Mr. John McGee, one of the firemen, in direct charge, but acting under the general supervision of the master mechanic. Application was promptly made for a list of civil service eligibles, but up to date none have been received, it being understood that it was necessary to have an examination in order to establish eligibles. The master mechanic has made a number of minor repairs and improvements, and during the year new purifier tank covers have been built at a cost of \$470. One of the tanks has developed leaks and is now being emptied, and as soon as free from gas and the water pumped out an examination will be made with a view to its repair.

The plant has been in use since 1893, at which period it was remodelled at a cost of \$41,993. It has greatly deteriorated due to ordinary wear and tear, and should be overhauled or rebuilt.

The revenue derived from the sale of gas, coke and tar, is covered into the Special Contingent Fund and applied to the payment of employees at gas works, purchase of gas coal, if the appropriation is not sufficient, and for miscellaneous expenses not otherwise provided for.

Gas is charged for at the rate of 75 cents per 1000 cubic feet, coke at \$1.25 per 18 bushels, and tar, if available, is sold under contract in force for one year to the highest responsible bidder.

During the period from July 1, 1913, to June 30, 1914, 13,565,100 cubic feet of gas were manufactured; 3,463,040 pounds of coal were used for this purpose.

Special Contingent Fund.—This fund is derived from rentals and the sale of gas, electricity, coke, tar, wood, and miscellaneous sources. Expenditures from this fund are made under the direction of the Superintendent, under provisions of Chapter 212, Revised Statutes, Act of Congress, approved May 1, 1888.

The statement of this fund for the fiscal year is included in report No. 3.

Hotel.—As stated in the last report, the hotel is very old and inadequate, but as far as the building permits, it has been operated in a satisfactory manner by the present lessee.

Expenditure on hotel for fiscal year 1914 is \$129.60.

Forestry Department.—A woods foreman and four woodsmen have been employed during the year and other laborers have been hired from time to time as the necessity arose. All were paid from the Special Contingent Fund. Since July 1, 1913, 861 cords of cordwood and 40,000 feet of chestnut poles have been cut. The chestnut poles were sold during the year to a pile driver and the cordwood will be available for sale during the next fiscal year. This wood is unfit for domestic consumption and is ordinarily sold for use in brick kilns; funds accruing from this sale being turned into the Special Contingent Fund. In addition to the above, the woods foreman has turned out about 30,000 feet of rough lumber. This has been used wherever it was considered suitable for stable floors, small bridges, hand rails, where roads and paths are

near steep places not provided with breast high walls, and various similar purposes.

The following trees were planted last fall: Dogwood, 80; pine, five years old, 1000; oak and elm, 40.

The shade trees about the post have been pruned and about 150 of various ornamental varieties transplanted from the forest.

The services of Professor Marston as consulting forester were dispensed with on October 20, 1913, and arrangements have been made with the Forestry Bureau of the Agricultural Department for expert inspection and advice. Their representatives, Mr. Cary, Logging Engineer, and Mr. Frothingham, Pathologist, made an inspection on March 14, 1914, and Mr. Bryant, Forest Inspector, on May 6, and their recommendations which are, with minor modifications in line with the approved plan for the improvement of the forest, are being carried out.

The chestnut growth throughout the reservation has been attacked by the blight and will all be dead within a few years. The report of the Forestry Department inspectors recommend that it all be cut out and sold as soon as practicable, as otherwise it will be a dead loss.

The spring plantation this year consists of 7500 Norway spruce and 7500 red pine, 3 year old transplants, which have been set out through the thinned growth in Washington Valley.

Public Works.—The main portion of the east academic building was accepted as completed in all essential respects under contract with James Stewart & Company, June 30, 1913, as stated in the last annual report. Further provisions have been made of rolling steel shutters for windows of the lecture room, machinery and cars for elevators, vacuum cleaning apparatus and lighting fixtures. Additional fittings and furniture as necessary to fully equip it for the various academic departments occupying the building are being provided.

The map room wing and chemical laboratory wing extensions reported 96 per cent. and 9 per cent. advanced, respectively, on July 1, 1913, have been completed and were accepted under contract with James Stewart & Company dated August 15, 1913, as ready for occupancy January 15, 1914. The workmanship and conduct of construction upon this building have been carefully supervised, expenditures for material and labor under the commission form of contract have been restricted as far as practicable, and the building completed in a substantial and permanent manner within the funds appropriated for the purpose. The cost of the east academic building is as follows, exclusive of grading, furnishings and fittings, etc., being done by this office and not yet completed.

Main portion of building	\$471,607.23
Map room wing	18,665.16
Chemical laboratory wing (including wall and steps between this building and post headquarters)	85,785.70
	<hr/>
	\$576,058.09

As construction of the east academic building approached completion, one superintendent of construction and one assistant civil engineer were found unnecessary and were discharged; thus terminating the services of all additional office employees upon new construction. Supervision of the erection of the chemical laboratory wing, retaining wall and steps since August 1, 1913, has been performed by the Superintendent of Construction regularly employed under this office, with the assistance of the master mechanic.

A granolithic sidewalk leading to the principal entrance of the east academic building has been laid the entire length of west front, and south side leading to steps at retaining wall near southeast corner of chemical laboratory wing.

* * * * *

Stone Quarry.—On March 12, 1913, work was commenced at the quarry to get out dimension stone required for the chemical laboratory wing of the east academic building. About 8500 cubic feet of cut stone was needed for the exterior walls. This stone had to be of a good sound grade, free from checks, stains and other imperfections. The quarrying and cutting was done at approximately \$1.17 per cubic foot. Considerable work had to be done by way of stripping and cleaning to get at stone of the quality required. Much of the stone required had to be rejected but all that was not used on this building can be crushed and used for roads and walks construction.

The air compressor plant needs a few minor repairs, but is otherwise in good condition.

Laundry.—Attention is invited to the very poor condition of the old laundry building. During the year it has been found necessary to jack up the floors and put heavy pine timber girders and posts under same. The shafting has been relined, gas pipes, etc., repaired. The building is considered safe for the time being, but before long extensive repairs will be required unless the new laundry is provided for and this old building can be abandoned and torn down.

General Repairs and Upkeep.—Public buildings and quarters have been maintained, and necessary repairs and improvements have been made as far as practicable with the funds appropriated.

Quarters "D" has been converted into quarters for two officers. The house formerly occupied by the superintendent of the gas works is being prepared for occupancy as officers' quarters. It will be ready by the time of the arrival of the new detail. Steam heating and plumbing fixtures purchased under advertisement are now being installed in connection with necessary repairs.

It is not considered feasible to provide other necessary additional quarters by conversion of present buildings, as the expense would be greater than could be undertaken from the current appropriation for maintenance. The assignment of some married officers to quarters in the bachelor building and the allotment of rooms in Cullum Hall to some unmarried officers appear necessary. While this arrangement is undesirable it seems unavoidable until funds are appropriated for the erection of additional officers quarters.

The brick restaurant building has been repainted and renovated throughout. New kitchen and serving facilities on the first floors, new plumbing for first and second floor kitchens, and new fixtures for two toilet rooms on the second floor have been provided.

Repairs have been made as necessary to the north and south barracks, consisting of repairs in plastering; reflooring 26 cadet rooms; 6 halls; 4 toilet dressing rooms; painting 160 cadet rooms, hallways of 10 divisions, 10 basements, repairing, painting and varnishing 560 cadet study tables, 180 washstands; general repairs in addition have been made to doors, sashes, lockers and hardware throughout. The laying of sheet copper has been completed beneath copings of parapet walls of the north cadet barracks, except about 100 feet to be done this summer. Similar flashings have also been provided beneath about half the coping of the post headquarters building, and the parapet walls re-pointed to stop leaks.

Much trouble has been experienced by leakage through exterior walls of the bachelor building and the post headquarters, apparently due to capillary attraction. Though the leakage is small in amount it is sufficient to cause dampness and make waterproofing necessary. One coat of linseed oil has been applied to the north and east walls of the bachelor building, and the slight resulting discoloration of stone and brick work in walls, seen only from a distance, is not objectionable, and leakage and dampness appears to be remedied to some extent. It is thought that another coat of oil should be applied to these two sides of this building. Waterproofing of the walls of the post headquarters building is proposed by special process, as most suitable in a situation exposed to close view on all sides. If results on trial of this process are entirely satisfactory adoption of this treatment is recommended for the south and west sides of the bachelor building.

Roads.—Of the 26 miles of road on the reservation, only about 5 miles are macadam. There is much heavy traffic over most of them and much work remains to be done. The work of up-keep during the past year has consisted chiefly of the following: Repairing road from hotel to academic buildings; patching road from academic buildings to south gate guardhouse; resurfacing road from south guardhouse to ferry; building water breaks and dragging dirt roads; rebuilding wooden bridges on Washington Valley road and blasting and removing three 15-ton boulders which had rolled down on the road back of quarters No. 67, and on road south of the ferry dock. New road has been constructed north of north cadet barracks and along the east side of new gymnasium, as referred to in another part of this report; also on hill south of restaurant.

The heavy rains and steep slopes on this post necessitate frequent repairs and in some cases the use of a more resistant binder than the tar produced by the gas plant which has proven satisfactory on level roads. Most of the stone used is turned out by the crusher on the post. The heavy and frequent snow storms of the past winter were a source of much expense and labor as much of it had to be shovelled by hand from roads and walks and from the roofs of buildings where its weight made it dangerous.

Receipts and Disbursements.—Receipts and disbursements are shown on statements attached, marked Nos. 1 and 2.

Personnel.

Captain Frank B. Watson, Quartermaster Corps, Assistant to Quartermaster since December 3, 1912.

Captain Sylvester Bonnaffon, 3d, Quartermaster Corps, Assistant to Quartermaster, December 2, 1912. Relieved June 15, 1914.

1st Lieutenant J. M. Hobson, Infantry, Assistant to Quartermaster of the Military Academy, was relieved October 14, 1913.

1st Lieutenant Raymond E. Lee, Coast Artillery Corps, Assistant to the Quartermaster of the Military Academy, since September 8, 1913.

Captain G. D. Arrowsmith, Quartermaster Corps, Assistant to the Quartermaster since March 13, 1914.

All the officers named have been willing and efficient in the performance of the duties assigned to them.

No. 1.—Statement of funds pertaining to the Quartermaster Corps, West Point, N. Y., received, disbursed and deposited during the fiscal year 1914, from July 1, 1913, to June 30, 1914.

	On hand July 1, 1913	Received since	Total to be accounted for	Disbursed and deposited	Total dis- bursed, de- posited, and on hand
Pay of the Army.....	\$11,183.86	\$315,000.00	\$326,183.86	\$326,183.86	\$326,183.86
Pay of the Military Academy.....	64,520.22	620,433.00	684,953.22	684,953.22	684,953.22
Pay of the Army Deposit Fund.....	4,711.19	5,000.00	9,711.19	9,711.19	9,711.19
Soldiers' Deposits.....		12,929.65	12,929.65	12,929.65	12,929.65
Pay Collections.....		4,768.46	4,768.46	4,768.46	4,768.46
Subsistence of the Army.....	9,725.94	115,213.49	124,939.43	124,939.43	124,939.43
Regular Supplies.....	394.01	120,009.87	120,403.88	120,403.88	120,403.88
Incidental Expenses.....	.01	6,502.45	6,502.46	6,502.46	6,502.46
Military Post Exchanges.....		152.00	152.00	152.00	152.00
Horses for C. A. & E.....		1,394.15	1,394.15	1,394.15	1,394.15
Barracks and Quarters.....	38.67	3,703.92	3,742.59	3,742.59	3,742.59
Army Transportation.....	723.81	19,311.21	20,040.02	20,040.02	20,040.02
Roads, Walks, Wharves & Drainage.....	2,783.64		2,783.64	2,783.64	2,783.64
Water and Sewers, M. P.....	48.85	2,722.91	2,771.76	2,771.76	2,771.76
Clothing and Equipage.....		2,552.55	2,552.55	2,552.55	2,552.55
Shooting Galleries and Ranges.....	325.89	255.00	580.89	580.89	580.89
Disposition of Remains.....		37.50	37.50	37.50	37.50
Headstones for Soldiers' Graves.....		90.50	90.50	90.50	90.50
Miscellaneous Receipts.....		2,414.91	2,414.91	2,414.91	2,414.91
Totals.....	\$94,461.09	1,232,491.57	1,326,952.66	1,326,952.66	1,326,952.66

No. 2.—Statement of funds received and disbursed from appropriations for the United States Military Academy
at West Point, N. Y., during the fiscal year ending June 30, 1914.

	DR.	Current and ordinary expenses	Misc. items and incidental expenses	Buildings and grounds	No year Enlarging M. A.	No year Buildings and grounds	No year Misc. items and incidental expenses	Misc. receipts sales at auction	Total
Balance on hand July 1, 1913:		\$100.00							\$100.00
Fiscal year, 1912		11,010.50	\$5,280.26	\$13,709.98					30,000.74
Fiscal year, 1913				6,698.99					6,698.99
Fiscal year, 1913-1914					\$5,642.28				5,642.28
No year Enlarging M. A.						\$8,607.91			8,607.91
No year, Buildings and grounds									
Received since July 1, 1913:									
Fiscal year, 1912		12							12
Fiscal year, 1913		134.32	3.00						137.32
Fiscal year, 1913-1914			7,000.00						7,000.00
Fiscal year, 1914		137,693.79	53,311.05	40,712.00					232,216.84
Fiscal year, 1914-1915		1,300.00	2,500.00						4,000.00
No year, Enlarging M. A.					47,963.08				47,963.08
No year, Buildings and Grounds						130,617.68			130,617.68
No year, M. & I.							\$2,500.00		2,500.00
Miscellaneous receipts		143.09						\$253.86	253.86
Cash collections									143.09
Totals		\$150,586.82	\$61,594.31	\$68,120.97	\$53,605.36	\$139,225.59	\$2,500.00	\$235.86	\$475,868.91
CR.									
Deposited since July 1, 1913, fiscal year, 1912		\$.12							\$.12
Fiscal year, 1913		2,906.34	\$300.75	\$2,246.92					5,454.01
Fiscal year, 1914		92.57	58.35						150.92
Miscellaneous receipts, sales at auction							\$235.86		235.86
Disbursed since July 1, 1913, fiscal year, 1912									
Fiscal year, 1913		100.00	4,982.51	11,463.06					100.00
Fiscal year, 1913-1914		8,238.48							24,684.05
Fiscal year, 1914				13,540.94					13,540.94
Fiscal year, 1914-1915		129,491.37	49,734.45	37,880.50					217,106.32
Fiscal year, 1914		1,495.94	319.98						1,819.92
No year, Enlarging M. A.					\$53,605.36				53,605.36
No year, Buildings and Grounds						\$100,538.51			100,538.51
No year, Miscellaneous Items, etc.							\$2,500.00		2,500.00
Transferred June 30, 1914, fiscal year, 1913-1914				158.05					158.05
Fiscal year, 1914		8,257.94	4,018.25	2,831.50					15,107.69
Fiscal year, 1914-1915		.06	2,180.02						2,180.08
No year, Buildings and Grounds						38,637.08			38,637.08
Totals		\$150,586.82	\$61,594.31	\$68,120.97	\$53,605.36	\$139,225.59	\$2,500.00	\$235.86	\$475,868.91

No. 3.—*State of receipts and expenditures pertaining to the Special Contingent Fund, U. S. M. A., for the fiscal year 1914.*

June 1, 1913, Balance on hand.....		\$5,745.29
June 30, 1914, By amounts received:		
Hotel rent.....	\$100.00	
Post Office Department.....	200.00	
Stables.....	300.00	
Electric light plant.....	875.00	
Store and restaurant.....	208.34	
Western Union Telegraph.....	60.00	1,743.34
		<hr/>
Sale of:		
Wood (forestry).....	\$ 2,994.02	
Electric current and gas.....	10,617.82	
Coke.....	537.50	
Tar.....	5.06	14,154.40
		<hr/>
June 30, 1914, Total to be accounted for.....		\$21,643.01
June 30, 1914, Total expended.....		19,884.25
		<hr/>
Balance, June 30, 1914.....		\$ 1,758.76

**Treasurer, U. S. Military Academy and Quartermaster
and Commissary for the Battalion of Cadets.**

The duties of this office have been ably conducted by Major Peter Murray, Infantry, and it is with extreme regret that I am obliged to relieve him from duty at the Academy because of the recent laws regarding detached service, after about twenty months service as treasurer.

His report given below shows very clearly the status and needs of this department. A new laundry is a most urgent necessity; the capacity of the present old laundry is already exceeded, much of the work of the post of this kind had to be refused on this account. Attention is invited to my remarks on this question on page 14 of this report.

A new cadet store is also needed as shown in the report below. In the improvement plans, approved by the Secretary of War, a new building is provided to contain under the same roof a headquarters building for the corps of cadets and the cadet store, and early appropriation therefor is recommended.

The following report is submitted by Major Peter Murray, treasurer, quartermaster and commissary for the battalion of cadets:

<i>Assets.</i>		<i>Liabilities.</i>	
Accounts receivable	\$4,448.44	Accounts payable	\$43,863.46
Cadet Mess stock	12,672.83	Equipment Fund	163,309.87
Cadet Store stock	41,005.42	Dialectic Society	248.17
Cadet Store	1,128.45	Glee Club80
Cadet Laundry stock	1,030.65	Miscellaneous Fund	9.22
Treasurer's Cash	155,729.67	Canoe Fund	10.50
Pay & Rations Due	35,465.08	Y. M. C. A	280.45
		Surplus Fund:	
		Store	39,859.69
		Mess	184.53
		Laundry	3,713.85
	\$251,480.54		\$251,480.54

1. *Treasurer's Office.*—The Treasurer's office was transferred from the Cadet Store Building to the Administration Building April 1, 1914. The present location is satisfactory and in many ways business is considerably expedited by this change.

2. *Cadet Store.*—The total sales for the year ending June 30, 1914, amounted to \$190,695.42. The Treasurer's office was moved from the store building April 1, 1914, in order to secure more storage space. With the additional room made by this transfer, for two months prior to graduation the store-rooms were completely filled. The manufacturing plant is taxed to its utmost capacity and there is no available room for additional machines or employees. It has been necessary to have some articles of clothing made by manufacturers away from the Post. Clothing so made is not as satisfactory as when made under the immediate supervision of the employees of the store.

3. *Cadet Laundry.*—The following defects noted in the last report of the Annual Inspection have been corrected as far as practicable:

(a) Strong supports have been placed under the second floor. As an additional protection to employees in case of fire or other danger, an outside stairway to the second floor has been installed.

(b) Electric light has been installed throughout the building. This was made possible by using an obsolete dynamo and other equipment furnished by the Quartermaster, the power being derived from the engine at the laundry.

(c) A new flat-work-ironer (mangle), with safety appliances, was installed in place of the old obsolete pattern. This new ironer develops at least 50 per cent. greater capacity than the old one and is more satisfactory in many respects.

To increase the capacity of this laundry to its fullest extent the following new machinery has been installed:

- 2 Washing machines, 36"x72", replacing two old ones worn out and which have been in service over 20 years,
- 1 Extractor, 32",
- 1 Flat-work-ironer (mangle) replacing obsolete type,
- 6 Trouser presses, for ironing tops of white trousers,
- 2 Coat presses, for ironing white coats,
- 1 Air pressure system with attachments to trouser ironers, coat and trouser presses and body ironers.

This system relieves the employees on these machines of what was formerly the hardest manual labor in the laundry and increases the capacity of these machines from 25 to 100 per cent. To provide this machinery \$5,997.00 was expended from the laundry fund in addition to \$1,720.00 from regular appropriations for laundry machinery. There is room for no more machinery in the laundry. To make room for machines necessary for summer work other machines were removed. The limit of capacity of the laundry has been reached and this year more residents of the Post were deprived of laundry privileges by reason of the increased number of cadets. The necessity for a new modern laundry of sufficient capacity to do the work for all pertaining to this Post is most urgent. While everything practicable is done to contribute to the comfort of employees, during the summer months, when little other work is done than for cadets, the conditions under which employees have to work are little short of intolerable.

4. *Cadet Mess.*—The cost of board at the Cadet Mess for the year ending June 30, 1914, was 63.7 cents per day. The daily reports of the Officer in Charge and the scarcity of complaints on the part of cadets leads to the belief that the Mess has been satisfactory. Considerable improvement in the Mess was effected by the savings resulting from the elimination by cadet officers of some wasteful practices in the Mess Hall. Efforts to secure a competent sergeant to replace Sergeant McDonald, Q. M. C., as steward of the Mess, have not been successful. The equipment of the kitchen of the Mess is not sufficient for the number of cadets now at the Academy, and as this equipment has been in use for twelve years some of it is now about worn out. This is specially the case with the ranges. An estimate has been submitted for funds to replace the old ranges. Arrangements are being made to add ranges of five ovens to the present equipment from funds, f. y. 1915.

Health and Sanitation.

The health of officers, cadets and enlisted men at this Post has been excellent. The percentage of daily sick for the fiscal year was for cadets 1.55 and for enlisted men 1.27, a reduction of .33 and .26 respectively compared with last year. The number of admissions to hospital, days lost and percentage of admissions are less than ever before recorded for both cadets and enlisted

men. Malaria so frequent a few years ago seems to be practically stamped out.

Attention is invited to that part of the following report submitted by the surgeon relative to football injuries, also to the following tables covering the football season September 1 to December 1, 1914:

Number of football injuries, admitted to hospital.....	24
Number of minor football injuries, causing excuse from duties but not admitted to hospital.....	18
Total number of cases, hospital and quarters.....	42
Number days lost in hospital from football injuries.....	157
Percentage of football injuries to <i>all injuries</i> in hospital.....	76%
Percentage of days lost in hospital from football injuries to days lost in hospital from all causes.....	29%

Of these injuries ten were of a severe character liable to cause trouble in after life. Four men in the graduating class for this year were so afflicted, although at the time of graduation and some months before they showed no ill effects from these injuries. In fairness it must be said that many of these serious injuries reported for 1914 are but recurrences of old injuries of the same character; also that results this year show a decided improvement over those of previous years. While football produced 32% less injuries than last year other injuries were reduced by a corresponding amount for the same period so that the percentage of football injuries to all others remains about the same.

Attention is also invited to that part of the following report regarding the fixing of some standard as to cadets' eyes at time of graduation. It is important that some standard should be fixed other than the standard fixed for admission, otherwise the examining board is at a loss how to recommend and the result will necessarily be ununiform and vary according to the personnel of the examining boards.

From Table VII of the surgeon's report it will be seen that there is an immense amount of dental work done for cadets, and it is a fact that there is great need for more dental work than is now possible with but two dental surgeons at the Post. There should be another one detailed here for this necessary work. About 2,000 people are entitled to dental work by these two dental surgeons.

The following is the report of the surgeon, Lieut. Colonel Henry A. Shaw, Medical Corps.

Corps of Cadets.

The health of the Corps of Cadets has been very satisfactory throughout the year. The non-effective rate (percentage of daily sick in hospital and quarters) is slightly lower (1.55%) than that of the preceding year (1.88%) while the percentage of preventable diseases has been remarkably low.

The following table shows the amount of sickness in actual and comparative figures for the past five years:

	1910	1911	1912	1913	1914
Days lost on account of sickness (hospital and quarters).....	8478	5203	5066	3642	3468
Average daily number on sick report (hospital and quarters)..	23.20	14.10	13.60	9.98	9.5
Percentage of daily sick (hospital and quarters).....	5.60	3.24	2.49	1.88	1.55
Average daily number sick in hospital.....	14.93	11.57	9.52	7.95	6.75
Percentage of daily sick in hospital.....	3.60	2.66	1.74	1.50	1.12

The conditions responsible for the greatest amount of disability have been first, diseases of the respiratory tract 202 cases or 21% of the total; second, injuries 139 or 14.2%; third, diseases of the digestive system 124 or 12.5%.

Football Injuries.—During the past football season from September 1 to November 30, 1913, 42 injuries resulting from practice in the game were recorded. As compared with the average for the four preceding seasons, which was 63, this is a reduction of exactly one-third. Of these 42 injuries, 24 required treatment in hospital, the total number of days lost being 157, as compared with 180, the average number of days lost for similar cases during the last four seasons.

Comparing football accidents with injuries due to other causes it is noted that during the same three months' period 14 such cases were admitted to hospital, the total number of days lost being 91. If the severity of the injury is in proportion to the length of time the case is in hospital it is interesting to observe that the number of days of treatment is the same in both classes of injuries, that is 6.5 days. During the entire year 115 injuries not due to football were recorded as under treatment in hospital.

For the first time in the history of the Academy, so far as can be ascertained from the records, no case of malaria has occurred among the Corps of Cadets, the last case having been reported in September, 1912. The average admission rate for this disease for nine years previous to 1912 was 89.3 per thousand, very considerably in excess of the highest rate for the Army at large (in the United States) for any year during that period. In 1910 the rate was 41.11 and for the next two years it was somewhat less (exact figures not available).

For the year ending June 30, 1913, the rate was 30.1 per thousand. The elimination of malaria from this station since September, 1912, is remarkable in view of the high admission rates during past years and also when it is considered that the disease is likely to be freshly imported with each new class. This excellent record is mainly due to the efficiency of the measures carried out by my predecessor in regard to prevention.

The annual physical examination of cadets made in May, 1914, showed a number of cases of defects of vision below the standard for admission, that is 20/40. Nine cases were noted, three in the first class, and two each in the second, third, and fourth classes. In all these the errors were due to myopia or myopic astigmatism.

Of the nine cases noted, three entered with a vision of 20/20 in both eyes; four entered with vision between 20/20 and 20/40 and in two the vision was below 20/40 in one eye. All these cases showed a progressive deterioration in vision; in six cases it was found to be 20/70 or 20/80 in one or both eyes and in three cases it was between 20/40 and 20/70 in one or both eyes.

As it was possible in all these cases to correct the vision to normal with glasses, recommendation was made that the defects be waived in the cases of the first classmen, and that the others be placed on probation.

These cases indicate that the strain of academic work tends to produce a progressive deterioration in the vision of myopes. If this is true it would seem to be a very questionable policy to permit cadets with myopic defects to enter the Academy whose vision is already below the required standard.

In connection with this subject attention is invited to the recommendation made by my predecessor in indorsement from this office dated December 13, 1912, and approved by the Superintendent, United States Military Academy, and the Surgeon General, U. S. Army, to the effect that a minimum standard of vision for graduation be fixed as follows: Not less than 20/100 in one eye and 20/70 in the other, defects to be fully correctable with glasses. This recommendation has never been acted upon by the War Department. As no standard is fixed for graduation other than that set for admission, the medical examining boards are embarrassed as to the proper disposition of first classmen whose vision, even if above the requirement for admission, has fallen very considerably below it at graduation. That the War Department considers a certain deviation below the minimum requirement as permissible for graduation is indicated by the fact that in certain cases authority for entrance has been granted to candidates whose vision was below the minimum.

The recommendations as to lighting, etc., of rooms in cadet barracks, proposed in the last annual report from this office was carried out during the summer. Thirty-six cadets were given glasses during the year; the percentage of the corps now authorized to wear glasses is 17%. Twenty members of the fourth class which entered a year ago have applied for and been granted permission to wear glasses on account of defective vision.

Enlisted Men.

The amount of sickness among the enlisted personnel of the command has been surprisingly low, the admission rate for the year being 468 per thousand

as compared with 824 per thousand for the Army at large (1912). The non-effective rate is correspondingly low, 12.7 per thousand, as compared with 30.1 for the Army at large (1912). Of 302 admissions to sick report, 42 only were preventable diseases. Of these 28 were venereal, 6 influenza, 4 malaria, 2 pneumonia and one each chicken-pox and dysentery.

The following table shows the amount of sickness among enlisted men during the past five years:

Table III.

	1910	1911	1912	1913	1914
Total admissions to sick report..	725	622	401	415	302
Ratio per thousand of command	1085	825	626	603	468
Percentage of daily sickness in command.....	2.85	1.81	1.5	1.53	1.27
Average daily number sick in hospital.....	14.72	10.72	8.70	8.87	7.81

Although venereal prophylaxis appears to be very generally disregarded among enlisted men at this station, the amount of venereal disease is surprisingly low, the admission rate being 43.4 per thousand as compared with 115.75 the average for stations in the United States (1912).

Hospital Buildings.—Cadet Hospital.—Particular attention is invited to the fact that for two years no appropriation for the improvement and upkeep of this building has been made other than the small routine sums for minor repairs and care of grounds. The allotment of funds as shown in the annual estimate is urgently needed.

Enlisted Men's Hospital.—The completion of an addition, 20x32 ft. in size and two stories in height, has provided the hospital corps attendants with suitable quarters. Their bathroom too has been remodelled and the heating plant enlarged.

Sanitation.

During the year just concluded, there has been no occasion to make recommendations on serious defects of sanitation. An informal note to the quartermaster of conditions needing correction has always resulted in their prompt remedy.

Buildings and grounds, cadet camp, drainage, sewerage, water supply and the disposal of wastes have been maintained in a satisfactory state. The food supply, clothing of the men and their personal hygiene have been good. The monthly bacteriological examinations of raw and filtered water have been continued and periodical examinations of the watershed made.

Preventable Diseases.

There has been a remarkable decrease in the number of preventable diseases, 70 during the past year as compared with the year preceding, 104. The greatest factor in this reduction is probably the diminution in the number of cases of malaria, six this year being reported as compared with 43 the year before. Only 29 cases of venereal disease were recorded as compared with 47

during the year previous. On the other hand influenza was responsible for 23 admissions during the past year while it was not reported at all during the previous year. The greatest reduction in the number of cases of preventable disease occurred among the enlisted personnel and civilians, 49 cases during the past year and 81 during the year previous, while among officers and cadets the number was about the same during both periods, 21 during the last year and 23 during the previous year.

Tables IV, V, VI, VII, and VIII show the amount and character of certain special lines of professional work at this station.

Table IV.—*Preventable Diseases.*

Disease.	Officers.	Cadets.	Enlisted men.	Civilians.	Total.
Chicken-pox.....			1	1	2
Dysentery.....			1		1
Erysipelas.....				2	2
Influenza.....	1	16	6		23
Malaria.....	2		4		6
Measles.....				4	4
Pneumonia.....		1	2		3
Veneral:					
Chancroid.....			5		5
Gonorrhoea.....		1	19		20
Syphilis.....			4		4
Total.....	3	18	42	7	70

Table V.—*Surgical Operations.*

	Officers.	Cadets.	Enlisted men.	Civilians.	Total.
Abscesses, incision and drainage of.	3	27	19	24	73
Abortion, incomplete, curetage....				2	2
Adenoids, removal of.....			3	68	71
Appendicectomies.....	4	6	3	11	24
Amputation of breast (radical operation) with removal of auxiliary glands.....				1	1
Amputation of cervix.....				1	1
Amputation of finger.....			1		1
Amputation of uvula.....		1			1
Bunions, excision of.....			1		1
Cervix, uterine, dilation of.....				6	6
Cholecystotomy.....	1		1	2	4
Circumcisions.....		2	1	6	9
Colporrhaphy.....				1	1
Decompression of skull.....			1		1
Excision of keloid.....		1			1
Excision of lipoma.....		1	1		2
Excision of vulvo vaginal cyst.....				1	1
Excision of verrucae planterres....		10			10

	Officers.	Cadets.	Enlisted men.	Civilians.	Total.
Excision of varicose veins		1			1
Extra peritoneal shortening, round ligaments (Gilliam's operation) . .				3	3
Exploratory laparotomy				1	1
Fissure in ano				1	1
Gastro-enterostomy	1		1	2	4
Hemorrhoids, excision of		2	4		6
Hernia, strangulated, reduction of .				1	1
Herniotomies (modified Ferguson) .		3	2	6	11
Hypertrophied tissues of nose, ex- cision of	1	1			2
Incision and drainage of sarcoma, left buttock				1	1
Liberation of Lane's link				1	1
Nasal spurs, excised	2	4	6	6	18
Nasal turbinates, excised	2	2			4
Nasal polyrus, excised	1		1	1	3
Readjustment of fragments of frac- tured tibia by application of two Lane plates	1				1
Reduction of fractures	1				1
Reduction of dislocated shoulder . .			1		1
Salpingo-cophorectomy				1	1
Suturing of wounds	3	32	24	18	77
Tendon ends, distal phalanx, thumb reunited		1			1
Tonsillectomies	2	1	3	64	70
Transplantation, pterygium			1		1
Trephining and removal of broken bones of skull			1		1
Trachelorrhaphy				1	1
Ventral, suspension				1	1
Warts, nostrils, excised				1	1
Total	22	95	76	232	425

Table VI.—Laboratory work, radiograms, eye refractions, vaccinations, etc.

Radiograms	340
Eye refractions	121
Examination of blood	83
“ feces	6
“ milk	4
“ pus	90
“ sputum	32
“ throat cultures	18
“ urine	443
“ water	12
Surgical dressings	5006
Typhoid prophylactic	330
Vaccinations	256
Prescriptions filled	6604

Table VII.—Dental Operations.

	Officers and enlisted men.	Cadets.	Civilians entitled to treatment.	Totals.
Lieutenant Boak:				
Operations	815	1497	734	3046
Fillings	630	1251	611	2492
Bridges	6	3	1	10
Crowns	13	56	13	82
Total	1464	2807	1359	5630
Lieutenant Carpenter:				
Operations	420	556	468	1444
Fillings	165	350	175	690
Bridges	4	17	12	33
Crowns	16	51	14	81
Fractured jaws	2	3	2	7
Orthodontia appliances	4	33	6	43
Total	611	1010	677	2298

Table VIII.—Deaths.

Cause.	Enlisted men.	Civilian adults.
Fracture of skull	2	
Exhaustion following operation for persistent jaundice and vomiting	1	
Asphyxiation, due to chronic asthma		1
Narcosis of ilium and sacrum		1
Cancer of uterus		1
Organic heart disease		1
Sprue		1
Total	3	5

The Library.

Dr. Edward S. Holden, the distinguished scholar and librarian of the Military Academy, died at West Point March 16, 1914. He was for thirteen years librarian and during his incumbency he changed the library from a more or less chaotic state as to cataloguing, arrangement, references, &c., to one of the best equipped and most convenient of all college libraries. He also secured large increases to its shelves of standard literature and publications, records, charts, &c., of historical and professional value, and under his wise management the interest in and use of the library by officers and cadets have grown apace with his improvements. The Academy was most fortunate to secure this distinguished graduate as its librarian, and to him the thanks of the cadets and the alumni of West Point are due for his wise, untiring and successful efforts to improve the library and awaken an interest in the valuable and comprehensive works in its collection.

James E. Runcie (Major of Volunteers), 1st Lieutenant, U. S. Army, retired, and a graduate in the class of 1879, has been appointed as librarian and has recently reported for duty. Owing to his brief connection with the library the following extracts are taken from the report of the assistant librarian, Mr. William L. Ostrander:

Owing to the limited time at the disposal of both officers and cadets, it is essential that the books of the library shall be very carefully catalogued and all cross-reference cards made that will aid in the prompt location of a desired subject. This end has been kept constantly in view and every endeavor has been made to meet these demands. The catalogues are constantly being revised. During the year both the author and subject catalogues have been carefully worked over, cards rearranged and all the drawers "guided" so that it is easy to locate a desired name or subject.

A new charging system was installed on May 1, 1914, which will save much time in the issue of books, and in addition the library will have at all times a complete record of the circulation of each book that it contains, showing the number of times a book has been issued and by whom read. This information will be both interesting and important and will be a great help in the selection of books for purchase.

Some changes have been made in the arrangement of the library. During the year the new map-room has been completed and occupied, and into this room have been moved the library's collection of maps and the current periodicals. It is a most delightful room for the purposes for which it is used, being well lighted, quiet, and readily accessible from the new academy building as well as from the library. The old periodical room has been made into a

stack room with biography shelves on the walls and the literature of all countries in the stacks in the center of the room. All of these books can be readily reached from the floor without resorting to either ladders or galleries. In the main room, the circulating desk has been moved to the south side facing the two entrance doorways and commanding an unobstructed view of the greater portion of the entire first floor. This leaves the apse to be used as a quiet reading room.

The sky-lights over the two circular stairways have been removed which materially improves the lighting of these two stairways. It will be necessary to do a little plastering and painting during the summer in order to make this change more effective.

It is believed that the value of a book is greatly enhanced by the reader being able to handle it readily and determine from a personal examination whether it covers the desired ground. In order to do this, all books should be easily accessible from the floor. It is proposed to place additional stacks in the present reading room, which will enable the library to take from the galleries all the books on philosophy and religion. It is also recommended that the library regulations be amended so that all of the rooms of the first and second floors of the library will be thrown open to cadets. These changes will place practically every book within the easy reach of all users of the library.

Electric clocks will be placed in the new map-room and also in the main room of the library so that they can be readily seen.

The Library Bulletin was started in October, 1912, with the idea of getting people interested in the library's collections. The Bulletin contains each month a list of the accessions during the preceding month and items of interest relating to the library. It is believed that the Bulletin is gradually fulfilling the purpose for which it was intended. While a large proportion of the circulation consists of fiction, it is noticeable that the readers of fiction gradually tire of that class of books and drift off into subjects more interesting—literature, history, science, etc. After acquiring the reading habit, it is easy to keep the reader interested. Many books on the drama have been added to the library's collections during the year, and the circulation of these books has indicated that they have proved very acceptable to our readers. It is gratifying to note that the general circulation of the library shows an increase of about 15% over the preceding year.

The library is available to 119 officers stationed at West Point and their families, to 585 cadets, to all enlisted men recommended by their detachment commanders, and also to 85 civilians to whom its privileges have been extended by order of the Superintendent.

During the year 2,779 books have been received and catalogued, making the number of books now contained in the library 93,200. Maps, bound volumes of periodicals and various U. S. Government publications are not specially accessioned.

The friends of the library have been generous during the year, many gifts having been received and duly acknowledged. The most important of these are noted below:

From Mrs. John Haynes Lord, a valuable manuscript of Oliver Cromwell and other gifts.

From Mrs. James Marsden Lawton, manuscript of her father, General Robert Anderson.

From Mrs. Mary Fifield King, a considerable number of letters by or to Colonel Sylvanus Thayer.

From the Estate of Edward S. Holden, an oil portrait of Dr. Holden.

To all who have thus remembered the library renewed thanks are hereby extended.

A valuable manuscript signed by George Washington was acquired at auction during the year. This manuscript relates to the defences of West Point and was issued from the Robinson house immediately after the detection of General Arnold.

The library has also added to its collections a splendid copy of the first edition (1755) of Johnson's dictionary.

A model of the U. S. Dreadnought FLORIDA, loaned by the Navy Department, is on exhibition in the apse of the library. This has been viewed with interest by the residents of the Post as well as visitors.

The library has been working short-handed during the year, but all of the assistants are able and willing, and it is a pleasure to testify that each has done his best. The current work has been kept well in hand, but there is much to be done for which no time has yet been found.

On March 16, after thirteen years of faithful and devoted service as Librarian of the Military Academy, Dr. Edward Singleton Holden, a graduate of the Class of 1870, died. Only those who can recall the condition of the library before Dr. Holden took charge of it can form any proper estimate of the amount and character of the work which he accomplished in the closing years of his busy and distinguished career or of the value to the Academy of the results of the labors to which he devoted himself with a zeal that was born of the affection which he cherished for the school in which his early years were passed as student and instructor. Dr. Holden has left other monuments that will preserve his fame wherever great ability and wide and deep learning are esteemed, but the monument which will appeal most directly to the graduates of the Military Academy and will ensure for his name a place in their grateful memories of their school will always be the Library.

Water Supply.

The following report of Major G. A. Youngberg, Corps of Engineers, in charge of the water supply, is so complete that no comments are necessary:

The water supplied to the Post during the past fiscal year has been drawn from the combined catchment areas of Popolopen and Queensboro Brooks up to October 21, 1913. On that date the new intake on Queensboro Brook was put into service and the Popolopen water has since been excluded with the exception of ten days in June, 1914, when it was again used to rapidly fill the reservoir. This had been drawn down to a low level to facilitate the construction of a vault over the control gate near the reservoir.

Sanitary conditions in the Popolopen water shed have improved with the suspension of construction work on the state road running from Highland Falls to Central Valley and the consequent abandonment of the labor camps situated in this district. On the other hand work has commenced on the Arden road which traverses the Queensboro valley and two labor camps are now situated in close proximity to that stream.

These are frequently inspected and deficiencies in sanitation are immediately brought to the attention of the proper authorities.

The improvement effected in the raw water by the exclusion of the Popolopen supply is indicated by the long runs between successive scrapings of the filter beds and the consequent reduced cost of operation. The water has at all times been clear and very soft, but for a short time in August an objectionable odor, best described as "fishy" developed in the water in the reservoir. This was due to a floating vegetable growth occasioned by the fact that the fountain was cut off for several weeks for repairs and the raw water admitted through the large main at one side. The result was that the water was not sufficiently aerated nor agitated and the conditions for this class of growth was peculiarly favorable. The odor disappeared very quickly with the removal of the floating vegetable matter and further growth was checked by turning on the fountain.

The surgeon has continued his monthly examinations of the raw and filtered water. His reports show that from a bacteriological standpoint, the condition of the water, both before and after filtration, has at all times been satisfactory.

The statistics of supply and consumption are as follows:

Lusk Reservoir has been full and overflowing the entire year with the exception of 26 days at various times when the level was slightly reduced by reason of repairs in progress on the pipe line.

The minimum daily consumption was 1,005,000 gallons on January 23, 1914, and the maximum was 1,553,000 gallons on June 14, 1914.

The average daily consumption has been slightly in excess of 1,225,000 gallons, a marked increase over that of the preceding year. A study of the conditions that have obtained at this Post during the past four years indicate no warrant for the extremely high per capita consumption and forces me to the conclusion that the distribution system must have some very bad leaks in it which are not apparent on the surface. Such breaks could readily be detected by a pitometer examination of the system, which could be most cheaply made by contract with some firm engaged in this class of work.

During the year the intake dam on Queensboro Brook was constructed and the supply main extended 1240 feet from below the old intake to the new dam. This work was done under contract with the Garrett and Graham Company, Inc., and was executed in a very satisfactory manner.

The supply system is now in excellent condition, and aside from leaks in the supply main which cannot be predicted, should require no special outlay for several years other than the routine maintenance charges. However, it is very probable that an analysis of the sand used in the filter beds will show that it is not now the most effective mixture of sizes that can be devised to secure a high efficiency percentage in filtration. Even with the present mixture, im-

provements in filtration efficiency would result if the filters could be resanded by hydraulic means instead of the present wheelbarrow and shovel methods. This would require certain new apparatus and in the present condition of the raw and filtered water the improvement in efficiency percentage would be an unnecessary refinement. The question of higher efficiency is therefore scarcely beyond the academic stage. Hydraulic methods would however greatly reduce the costs of scraping and resanding these filters, and from this viewpoint alone the advisability of such an installation is worthy of careful consideration.

Chaplain.

The Academy was very fortunate in securing last September the appointment of the Reverend Henry Percy Silver as its Chaplain. His good influence and popularity in the Corps of Cadets and among the officers and enlisted men and their families have shown the wisdom of his selection for the place. I regard the duties and influence of a chaplain at West Point as about the most important of any in the military service. There are some six hundred cadets besides a population of nearly a thousand people on the Post to whom he ministers. He not only conducts the church services, Sunday schools, young men's clubs, girls' friendly society, and other social improvement organizations; assists the Cadets' Young Men's Christian Association, which has an attendance of from 100 to 200 at its meetings and a membership including nearly the entire Corps of Cadets. His good influence in these and all the other pastoral duties common in all parishes cannot be over-estimated.

The pay of the Chaplain is not at all adequate for this important position at West Point, and should be increased from that of a captain (\$2,400) to that of a major (\$3,000) and I shall ask for this increase in my next annual estimates for the Military Academy.

The Chapel Organist and Choirmaster.

The organist and choirmaster is another person who is inadequately paid. For three years my predecessor and myself have urged without success an increase in his pay from \$1,200 a year to the pay and allowances (without the rank) of a second lieutenant, and these efforts are warmly approved by the Secretary of War. The present incumbent, Mr. Frederick C. Mayer, is a musician

and an organist of rare ability, and besides has a temperament and individuality that appeal most strongly and favorably to cadets; and it is because of these attainments and qualities that he is able to maintain a voluntary choir of over eighty cadets for chapel services and train them in music to a degree that has made this feature a pride and delight to all who attend the church services at West Point. Like the services of our present chaplain the good and inspiring influences of the present choirmaster and organist cannot be over-estimated, and the modest increase asked in his pay is by no means a full measure for the benefits received by the cadets and others at West Point.

Detachments.

The following detachments are maintained at West Point as necessary in connection with the instruction of cadets, maintenance of buildings and grounds and as clerical and other help about the offices of various departments at the Academy:

- The engineer detachment,
- The artillery detachment,
- The cavalry detachment,
- The army service detachment.

The engineer detachment is under the charge of the instructor of practical military engineering and the engineer officers detailed to assist him. It furnishes the personnel for the assistance of these officers in instructing cadets, as well as the labor connected therewith in ponton bridges, surveying, signaling, telegraphy, etc., all as indicated in the report of the instructor of practical military engineering on page 33. It also does guard and other military duty.

The army service detachment is under the quartermaster and furnishes laborers, skilled and unskilled, for the up-keep of buildings and grounds, police and the usual work about a military post.

The cavalry and artillery detachments are each under the command of a line officer detailed for that purpose and who are each assisted by a lieutenant of the line. They have charge of stables and animals and the horse and battery equipments used in cadet as well as their own instruction, they also furnish men to assist in such instruction and they perform both stable and post guard duty.

The officers with these two detachments are in the same relation to troops (except in name) as if they were serving in their own company and arm. They not only perform exactly the same and all kinds of duty of their rank and arm of the service but are instructors of cadets in these very duties on the drill ground, in marches, in camp and in field maneuvers. I can see no justice in these officers being regarded, as they are, as on "detached duty" while at the Academy. Each of these two detachments has an enlisted strength as large as the companies of their own arm, more animals and equipment to care for, has separate stables, barracks and a company organization the same and administered the same as companies of a regiment.

Ordnance Detachment.

The following report is submitted by the commanding officer of this detachment, Lieut. Colonel W. H. Tschappat:

The work devolving on this detachment consists chiefly in furnishing the enlisted personnel required in the ordnance museum; in maintaining in proper condition all seacoast guns and batteries installed on the Post; in repairing, altering and handling target material for small arms practice, and in keeping in good order the grounds and buildings pertaining to the ordnance laboratory.

The recommendation made in the last annual report that the strength of the detachment be increased by six men is again submitted.

For army service detachment see report of the quartermaster on page 43 of this report.

The U. S. Military Academy Detachment of Engineers.

The following is quoted from the report of Major G. A. Youngberg, Corps of Engineers, who has had charge of this detachment. His recommendations regarding recruits for this detachment, enlargement, &c., of the engineer barracks, and mounts for this detachment are concurred in—twenty mounts should be provided for its exclusive use:

This organization is under the command of the Instructor of Practical Military Engineering and performs duties in connection with that department as well as provides men for the purposes of Post guard and police.

The authorized strength is 100 enlisted. The average strength during the

year has been 96.10 men. Changes in the personnel have been very numerous, influenced in a measure by the fact that the detachment was reorganized in 1902, the twelve years interval being an exact multiple of the former three year term of enlistment. Fifty men have left the detachment for various reasons, but of these, seventeen have reenlisted. The vacancies have been supplied mainly by the transfer of recruits from Fort Slocum and Columbus Barracks, although several old soldiers from other organizations have been transferred to the detachment or have come to this Post for reenlistment. It is my opinion that the average of the detachment as to intelligence, physique, and soldierly qualities generally, is somewhat better than at the date of the last annual report, but the technical duties devolving upon the command, especially those of surveying, reconnaissance and signaling are such as to require for their proper performance an even higher average of excellence than is obtained by the present system of assigning recruits.

The peculiar conditions at this Post furnish strong argument for the assignment of seasoned soldiers of high quality rather than recruits serving in the first few months of their enlistment. The service here is very dissimilar to that in the ordinary garrison. Men not familiar with the military service, in the very nature of things, enlist under a more or less thorough misapprehension as to actual conditions and enter the service with various erroneous ideas of the peace duties of a soldier. Recruits of this class, reporting at this station, find conditions so different from their preconceived notions that they are disappointed and become discontented with resulting ill effects on the discipline.

The engineer barracks are substantially the same as they were a year ago except that small ventilators have been placed in each squad room to connect with disused chimney flues. The squad rooms are small and crowded and the building could not shelter the detachment at full strength were it not for the fact that many of the men are married and provide quarters at their own expense in Highland Falls. The building should be enlarged and equipped with a suitable dining room, recreation room and separate rooms for the sergeants. The small squad room should be abolished with a view to better supervision and maintenance of discipline.

The mounted section contemplated for this detachment has not yet been organized. The lack of mounts in the mounted branches of the mobile army has made it inexpedient to attempt to provide mounts for this section during the past year but, until such a section is organized and trained, this detachment will be unable to perform satisfactorily its duties in the instruction of cadets in reconnaissance and signal work or to illustrate the manner in which these duties are performed in the service at large.

Improvement to Roads and Grounds.

These improvements refer to the bridle paths and roads connecting the wooded and hilly section of the reservation with the main roads.

This work has been prosecuted during the year in accordance with the origi-

nal plans of Olmsted Brothers who designed the improvement referred to. During the summer and fall of 1913 the work was confined to the road connecting Fort Putnam with Redoubt No. 4. Due to the extremely steep hill-slopes, this road takes a very circuitous course in order that the ruling grade shall not be excessive. To avoid heavy cutting and thus marring the natural beauties of the terrain the foundation is almost entirely a rock-fill. The cost of construction per lineal foot of road built has therefore been high compared with costs on roads previously constructed under the annual appropriation.

The present season of 1914 has been employed in renewing earth cover on roads previously built, in opening up drains and in making other necessary repairs.

With the opening of the proposed State road to Cornwall, the Storm King route, the northern part of the reservation will become readily accessible and it may then be advisable to develop the Olmsted plan for that area rather than undertake new roads nearer the Post. This plan may also require some modification to meet new conditions imposed by the construction of this road as it is understood that it does not follow the route proposed by the landscape architects in their plan for this portion of the reservation.

The roads now open have become very popular for recreation purposes with pedestrians and horsemen and have been of use in hauling out cordwood cut under the direction of the woods-foreman. They constitute a decided improvement and fully justify the small amount of money spent upon them.

The Board of Visitors.

The Board of Visitors from the House Committee on Military Affairs visited the Academy on May 26 and 27, 1914. It consisted of the following members:

Honorable William J. Fields,	Kentucky,
Honorable Daniel J. Griffin,	New York,
Honorable Fred S. Deitrick,	Massachusetts,
Honorable Percy E. Quin,	Mississippi,
Honorable Frank L. Greene,	Vermont,
Honorable Willis J. Hulings,	Pennsylvania,

and the following members from the Senate Committee on Military Affairs visited the Academy on June 23 and 24, 1914:

Honorable Luke Lea,	Tennessee,
*Honorable James K. Vardaman,	Mississippi,
Honorable William S. West,	Georgia,
Honorable Thomas B. Catron,	New Mexico,
*Honorable James H. Brady,	Idaho.

*Not present.

As on the previous year both Boards of Visitors felt compelled to make but a short stay here because of pressing duties in Congress.

Ever since the law of March 4, 1909, became effective these visits have been made by committees selected from the Military Committees of Congress and because of their other pressing duties their visits invariably have been too brief to obtain a thorough understanding of the conditions and necessities of the Academy.

I believe better results would obtain if these committees were composed in part of prominent men in educational work and that these committees should visit the Academy in October or November while the academic duties are in progress, and remain here several days. Another matter in this connection appeals to me of importance—some years ago it was the custom for the Board of Visitors to make a written report setting forth their views and recommendations as the result of their inspection. If these boards, composed as I recommend, could remain here sufficiently long to become thoroughly acquainted with the workings and needs of the Academy and would make an independent written report thereon, I am sure it would be of assistance to Congress in making many of the appropriations for the Academy and would also be of value to the Academy in its educational work.

Alumni.

There were 215 of the Alumni who visited the Academy this year during graduating week; a larger number than ever before, except during the Centennial year—1902. Special efforts were made to induce them to come and it was gratifying to see so many of them with us, and to feel the splendid influence of their abiding faith and pride in our Alma Mater.

It is my hope that the Alumni will return in increasing numbers from year to year and give cheer and support to those here on duty, mingle their pride with ours and each others as loyal sons of the Military Academy. There is much that the Alumni can do for the Academy in the support of its high ideals and best traditions, and they can do this better, whether in the service or out of it, if they will return often to their Alma Mater and imbibe anew the

“Spirit of old West Point.” That spirit is the same as in former days for there is and has been but one spirit at the Academy—a spirit of pride and affection of honor and faithfulness.

Acknowledgments.

The Superintendent’s advisers and assistants in the conduct of the affairs of the Academy are the Academic Board, the Staff and its assistants. Their advice and help have been efficient and loyal and always given in the spirit of harmony and cooperation for the best interests of the Academy.

To them and all others concerned in the administration of the Academy all thanks are due for such success as has been attained.

Respectfully submitted,

C. P. TOWNSLEY,
Colonel, Coast Artillery Corps,
Superintendent.

To
The Adjutant General of the Army,
War Department,
Washington, D. C.

