

REPORT OF BOARD OF VISITORS.

UNITED STATES MILITARY ACADEMY,
West Point, N. Y., June 19, 1869.

SIR: The members of the Board of Visitors all met at the Military Academy on the 1st day of June, organized, were introduced by General T. G. Pitcher, the superintendent, to his associates in charge of the Academy, visited the buildings, and witnessed a review of the cadets.

On the following day the examination of the first class commenced and was continued from day to day for about a week. The examination of the lower classes was divided, and two sections were before the Academic Board, each in a separate room, at the same time.

Every opportunity was afforded the Board of Visitors by the superintendent, commandant of cadets, the professors and their assistants, to obtain the fullest insight into all the workings of the Academy, the condition, difficulties and advantages of each department, and the improvements needed.

The board has exercised the greatest liberty of inquiry and observation; in some cases attending examinations and making inspecting visits as a board, all the members being present; in others, by the appointment of special committees, and often as individuals. They freely met the officers, formally and informally. They have intended to allow no fact to escape them necessary to give them a just view of the condition of the Academy. Answers to all their inquiries have been promptly furnished orally and in writing.

STATE OF DISCIPLINE.

The published regulations of the Academy afforded the board a complete view of the programme of duties for officers and cadets, while their minute inquiry and observations, day by day, have brought before them not only the results, as they are presented by exhibitions and special inspections in the class-room, but have afforded a trustworthy test of the actual state of discipline at all periods of the year.

The particularity with which the requirements are detailed in the regulations naturally leads to the inquiry whether they do not imperil that freedom necessary to the best development of a strong, self-poised, though lawfully obedient, purpose and character.

We found the information of the superintendent in regard to officers and cadets, through the various subordinates, by means of orders and reports and personal intercourse, reaching in the matter of instruction and discipline to such minuteness as to suggest almost a ubiquitous consciousness.

The manner of exercising this observation, accompanied by authority, is often determinative of the quality of that unconscious tuition which goes on in an institution of learning, whether in the section room or out, whether the instructor is present or absent; a tuition neither regulated by the curriculum nor by lectures or orders, but rather the resultant of these and of all influences which enter into the life of the students. Its

effect is likely to be wholesome or not in the degree that it is attractive or repulsive, or in proportion as it secures the co-operation or opposition of the minds under cultivation.

An additional danger is suggested to some minds, when it is remembered that the authority accompanying this minute observation here is military.

The conception of military authority is too often derived from those standing armies in which the officer affects the tyrant and the manhood of the subordinate is destroyed, and he becomes a machine of bone and muscle and nerves with barely the intelligence to obey.

Fortunately such a conception of military authority is altogether excluded from the Military Academy.

The purpose which pervades the regulations of the Academy—that of training young men to be safe and successful officers in the army of the republic—we found everywhere illustrated in the aims and efforts of the officers of the Academy.

We discovered no undue assumption or oppression on the part of officers, and no sense of degradation on the part of the cadet.

We found with satisfaction that while the discipline, its observation and authority, were military, it had its moral side, methods and spirit, and was directed by the superintendent along that line, so rarely reached, where a vigorous strictness of rules finds among the young cordial obedience.

Every duty has a value, every requirement omitted has a mark of demerit; each demerit may be excused, if sufficient reason is presented in writing; otherwise it is published in orders.

The following of the military language and routine, in all that relates to government, is calculated to give the cadet the greatest familiarity with military forms, as he may expect to practice them in the future as an officer of the staff or line.

The infusion as far as possible into these forms of a living sympathy with the cadets in all their struggles and defeats and triumphs by the superintendent, and the presentation of those high motives which appeal to those selected and educated by the country for its service, we consider a most important element in the training of the institution, guaranteeing to the country, so far as it may, not merely officers trained in the forms of the military art and as likely to be mercenaries as patriots, but officers obedient to the sternest commands of duty, and alive to the sympathies and inspirations of a nation devoted to liberty regulated by law.

They are better prepared to command patriots, because they are grounded in the principles of national patriotism, and have acquired those habits by which they can but command themselves.

We were gratified to find the extent to which the demerits were free from indications of a spirit, on the part of the cadets, either maliciously to violate the rules or to yield to temptations outside the pale of morality.

The great body of demerits arises from carelessness; the general effort to comply with the rules indicates a cheerful, well-disposed, and wholesome state of feeling among the cadets.

The yielding of cadets at times to habits of intoxication, and the old custom of abusing the incoming class, have been so skillfully treated by the present administration as to give the Academy commendable and increasing freedom from those crying evils.

We cannot commend too earnestly all efforts of the superintendent, commandant of cadets, the professors and their associates, so to conduct the discipline of the Academy as clearly to enforce the broad dis-

inction between those demerits which indicate only incidental carelessness and those which arise from moral perversity or malignity.

The board have been pleased with the system of reporting the conduct and scholarship of cadets regularly to their parents or guardians, but would have been gratified with more evidence that a salutary home influence reached and inspired each cadet in the successful mastery of every part of the course.

A young man does not cease to have a home or to be subject to parental influence because he is sent to an institution of learning. His absence should be the reason for quickening these influences all the more. The school can be most successful only when most aided by the home. Instructors should not be blamed for the faults of parents.

The cadets have, during the four years of academic life, but one furlough to visit friends and mingle with the world. This fact gives point to the reason why parents and guardians should follow the cadet with the closest scrutiny and liveliest sympathy, and never, on account of the lack of any inspiration from them, allow him to fall below the requirements of his instructors, either in conduct or scholarship.

The judicious introduction of larger liberties as a reward of good conduct we believe is working well.

INSTRUCTION.

The instruction in the Academy is carried on under the general direction of the superintendent and the special supervision of the professors. These are assisted by a body of army officers who have been distinguished for their attainments in the branches which they are detailed to teach. The cadets are divided into sections (with the exception of drawing) varying from 10 to 12, and each of these is instructed by an assistant, who is engaged in the section-room three hours each day. The time of recitation is an hour and a half; the professor in charge passes from room to room during the hours of recitation, supervising the methods, discipline, and explanations of his assistants, and frequently taking the topic under discussion into his own hands. Unity of method, vigor, clearness, and industry on the part of the assistants are thus secured. In the judgment of the board, this is one of the best features of the course. It makes the experience and attainments of the professor available for all the cadets, and secures what is better—adequate training and daily supervision for young and comparatively inexperienced teachers. The blackboard is constantly in use, and in subjects which admit of it a sufficient amount of illustration is given to make the principles definite and clear. In their visit to the section-rooms, as well as in their attendance upon their more public examinations, the board desired to ascertain the proficiency of the cadets and the vigor and ability of their instructors. They take great pleasure in bearing testimony to the intelligence and readiness shown by the pupils in recitation and in answering questions, and to the evidence which they gave of scientific comprehension of the subjects of study, taking into view the low grade of attainment with which most of the cadets come to the Academy and the variety and difficulty of the subjects studied. After making all proper discount for occasional dullness and deficiency, the board are unanimous in the conviction that the results manifested in the examinations are in the highest degree honorable to the cadets, and to the officers of instruction and government. The clearest proof was furnished of conscientious fidelity and eminent attainment on the part of the whole corps of instructors. In these remarks the board do not refer

alone to those heads of departments whose reputation for learning and ability are above the reach of their praise or censure, but to those young officers as well, detailed for service as assistant professors. Among these may be found teachers who, in familiarity with the subjects assigned to them, in clearness of conception and accuracy of statement, would do honor to any institution in any country.

The board are impressed with the belief that the salaries paid the officers, both of superintendence and instruction, are inadequate. When we consider the inevitable expenses of a residence at West Point and the eminent ability and long service of the professors in particular, it seems but bare justice that an addition should be made to their compensation. The case of the assistant professors is equally worthy of attention. Many of them suffer practically a reduction of pay from being detailed for duty in the Academy. It is surely wrong that a man should suffer pecuniarily for that reputation for capacity and attainment which leads the War Department to select him as teacher for cadets. An allowance for the extraordinary expenses of a residence here should be made for the principal assistant professors. None but men of undoubted ability and character should be selected for a trust so important, and the valuable services which they render should be recognized by increase of pay while on duty at West Point.

The outline of the course of study has been substantially unchanged for many years. In the mean time great progress has been made in many sciences, both in substance and method, and some new ones have come into existence. The changes thus made necessary in order that the course of study may represent the present state of science have been introduced gradually, but often through the displacement of some studies really important, and by crowding others into inadequate time. Every earnest teacher is constantly watchful for the interests of his own department and will seize every opportunity for extending its range and thoroughness. When the time devoted to each subject is fixed by law, the higher rank in marking, properly given to some studies in comparison with others, from their importance and difficulty, is liable, in some cases, to absorb a disproportionate amount of the pupil's strength. In this way newly introduced studies, and those not under the control of permanent teachers, are liable to be thrust aside, or to become of necessity superficial. From these causes an institution of learning becomes, in process of time, liable to a certain amount of dislocation in its studies. Every living institution should contain within itself the means of adjustment to new or varying conditions. Its healthy development requires the union of flexibility with steadiness and regularity of movement.

Various circumstances impressed the board with the necessity of constant attention to the maintenance of a just proportion among the studies of the curriculum, as well as in their relative value in the marking system of the Academy. It is clear that when two different branches of science are pursued at the same time, the cadet will be likely to give the most earnest attention to that one, proficiency in which will give him the highest rank in his class. Indeed, the temptation to such a course is so strong that studies whose value in estimated standing is low must of necessity suffer. The main motive force of the Academy and its honors is made to bear with greatly different power upon different studies. The effect of this must be to make it extremely difficult for professors teaching departments low in the scale of rank to command the mental vigor of the cadets or respect for the branches which they teach. The board disclaim all disposition to suggest in detail modifications such as these statements might seem to demand. If any such

changes are to be made, they should be introduced cautiously and gradually, under the supervision of those who have had varied experience in the management of the Academy, and who are broadly familiar with those elements of education most desirable for officers in the different arms of the service taken as a whole. The board believes that a large discretion should be given to the superintendent to moderate the commendable zeal of professors for their special departments, and to readjust the relations of all the studies and teachers with a single regard to the highest efficiency of the Academy. They believe that he should, to a certain extent, be charged with the duties devolved in the French military schools upon the director of studies. For the performance of these duties there is no need of special scientific attainments, but only of an understanding of the qualifications of an officer, derived from actual service in the field, a familiar acquaintance with the course of study, a sound moral purpose, good common sense, and discretion in the exercise of power. Holding in view these principles, we believe that all changes requisite to the most efficient organization may be quietly and gradually introduced without any infringement on the rights or dignity of any member of the academic staff, and with the full and hearty concurrence of all concerned. The success of the Academy as a whole in producing efficient officers is the best success of every chief of a department of instruction. That teacher who insists on pressing the claims of his department till an abnormal development results is always in danger of defeating his own purpose in the end.

The board regret that the necessity for studying a high course of mathematics and physics, in order that the cadets may be prepared for the strictly professional part of the course, has left little or no time for instruction in those branches which have to do with method, elegance, and clearness in expression. With the exception of the analysis and definitions put upon the blackboard, the visitors had no means of determining the power of the cadets in the mastery of a good English style, although the exactness required in the use of scientific definitions must tend to generate the habit of clear and compact expression. The board have reason to believe that more training in probable reasoning, composition, and criticism, is exceedingly desirable. In elegance and facility of utterance, judging from the examinations, there is a marked deficiency among the cadets as a whole. The board trace these deficiencies, as they do most of the deficiencies of the institution, to the inadequate preparation for admission and the necessity felt by the instructor of omitting literary culture in order to give capacity and time for the study of the science and art of war. The board are impressed with the conviction that a higher degree of culture in the English language, as used in writing and speech, would add greatly to the efficiency of the future officers of our army. The capacity to draw up orders and reports with absolute freedom from confusion of arrangement and ambiguity of expression is of the highest value to every military officer. In time of war, also, a large proportion of the line officers of the regular army are most usefully employed in some department of staff duty, in which habits of rapid and correct composition are important in the extreme.

While the board bear witness to the care and thoroughness with which the French and Spanish languages are taught, they would suggest the propriety of equal attention being given to our own tongue. In these remarks the board have no reference to the use of technical terms in the various scientific departments. Such thorough instruction as was shown involves and necessitates absolute exactness in terminology. But the board believe that the scientific nomenclature would be mastered with

much more ease to teacher and pupil by a more careful training in language in general.

The board would suggest the propriety of introducing, to some extent at least, written examinations, and for the following reasons: 1. The exercise itself, continued at intervals through the course, would be valuable as tending to form correct habits of expression and analysis. 2. Let it be understood that the mark of a cadet in his examination will depend in part on the correctness, elegance, and clearness of his written expositions of the subjects put before him, and it cannot fail to develop improvement in style and capacity for clear statement. 3. In a written examination, all the cadets in the same section would have the same questions and subjects for examination, and the teacher can examine the papers at his leisure. This will secure more fairness in examination than is ordinarily possible when the topic or propositions for the student in the examination are determined by lot, and must from the nature of the case involve various degrees of difficulty. 4. If these examination papers were passed upon by the academic board, or a committee of experts chosen from without the body of teachers, a more searching test of the completeness and breadth of the instruction given by each teacher, and of the attainment of the pupils, might be applied. The almost universal custom of mingling written with oral examinations in institutions of learning shows the opinion of teachers upon the practicability and desirableness of the course which the board take the liberty to suggest.

It also appears to the board that a short course of instruction should be given in those elements of scientific methods common to all departments of thought and founded in an analysis of the human mind. The logic of evidence is essential to the comprehension of the distinction between demonstrative and inductive reasoning. They believe that a short course of study of this character would give solidity and thoroughness to acquisition in all the departments of physical science, and also lay the foundations for just thinking upon subjects which involve probable reasoning, and which occupy the greater part of the mental activity of men in all departments of life.

The board would also suggest the advantage to the cadets of a short course of lectures upon physical geography as connected with military operations, accompanied by illustrations addressed to the eye. If the time could be spared for such lectures they could hardly fail to be of great service to the pupils, both for the comprehension of the movement of armies in great historical campaigns and as a preparation for field service. The study or criticism of the campaigns of the great masters of the art of war must be shallow and inadequate which is not founded on a minute knowledge of the physical features of the countries in which they occurred.

The board also regret that the crowded state of the course leaves little or no time for studies in civil and military history. It is well understood that, with the present entrance examination, all literary studies must be brought within a very narrow limit. But the board cannot believe any system of education worthy of our national character which ignores the great principles that underlie the history of human progress and civilization. The soldier is the executive arm of the civil power. His duty cannot be intelligently performed without a comprehension of the conditions and formative law of that civilization and social order which it is his duty to invigorate and defend.

It seems also desirable that some instruction be given in hygiene and its application to the health of large armies or minute care of soldiers

in small commands. Such instruction, grounded in scientific physiology, could hardly fail to add to the efficiency of an officer. If it is said that such care belongs to the specially educated medical staff, we reply that the best advice and suggestions of surgeons are often made nugatory through the want of sufficient knowledge on the part of officers to enable them to appreciate intelligently the principles on which such advice is founded. The soldier is under the authority of the medical officer only after he becomes really ill. That care which prevents disease must, to the greatest extent, be exercised by the military officers. Elementary knowledge sufficient for the adequate discharge of a duty so immediate in its bearing on the well-being and efficiency of an army in the field should be acquired by every officer. For similar reasons some amount of instruction should be given in the principles which should control officers in the care of horses in health and disease. Humanity and economy concur in proving the necessity of such knowledge. Elementary knowledge of this sort, diffused through an army, would have saved millions in the late rebellion.

The board would also call attention to the necessity of constant additions to the apparatus addressed to the eye for the illustration of subjects of study. The recent additions to the collection illustrating ordnance and gunnery seem to be specially useful. The selection from Oliver's representation of "various warped surfaces," and the models of machines, bridges, and field works, are examples in point. These illustrations should be increased from time to time with the advance of science and the improvements in the art and science of war.

The size of the collections for illustrating the various branches of natural history is far below what is requisite for instruction in the present state of science. Illustrative specimens of botany and zoölogy are entirely wanting. The cabinet of zoölogy and mineralogy falls short of five thousand specimens. Many of these are duplicates and represent but a small portion of the crust of the earth, and few species of fossils and minerals. The board are clearly of the opinion that the cabinet ought to be largely and immediately increased. In order to secure this result at the least expense to the government they would submit the following suggestions:

1. Immense quantities of material illustrative of natural history have been collected at the expense of the United States, and to a great extent under the direction of army officers. The duplicates in these collections might be made available for the cabinet, through the payment merely of the expense of transportation from the places of deposit in Washington or elsewhere to the Academy.

2. Officers of the army on duty in various parts of the country could easily make collections, illustrative of the natural science, for the benefit of the Academy at West Point, if provision were made for the purposes of transportation.

3. The Board of Visitors would therefore recommend that authority be given to make such selections of duplicate specimens illustrating the various departments of natural science, in collections belonging to the government, as are needed for the cabinet of the Academy, and that provision be made for the expense of selecting and of transporting these specimens and arranging them in a scientific manner.

4. The board also recommend that an appropriation be made to pay for the transportation of such collections as shall be made by the graduates of the Academy, provided that such specimens shall be deemed valuable for the cabinet by the head of the department of natural history.

5. The board also recommend that a sum of money be appropriated to meet the expense of making exchanges of duplicates with the owners of collections in our own or other countries, and also for the purchases of specimens when needed.

6. The board recommend that provision be made at an early day for the erection of a fire-proof building to contain the cabinet, and that provision also be made for the scientific arrangement in glass cases of the cabinet which may be formed, and that they shall be accessible to cadets at all hours when not on duty.

In making suggestions for possible improvement, and pointing out defects in the Academy, the board make no intimation of want of zeal, intelligence, or efficiency against any of those able men who have shaped the organization and instruction of the Academy. It is probable that no persons would hail the introduction of real improvement more readily than the superintendent and academic staff. As they have all along hinted, the board are unanimously convinced that almost every deficiency which they have noted is due to the crowded condition of the course of study, made necessary by the exceedingly low standard of examination for admission. Over this the officers have no control. The standard is fixed by law. We but reiterate the recommendation of former boards when we urge the elevation of the standard of the entrance examination. Young men who are simply able to pass this examination would be obliged to study from two to three years to be prepared to enter the ordinary regular course in American colleges. The French military schools require of their cadets a diploma from some French provincial college, either in letters or sciences, and, in addition, to pass a competitive examination in physical science and the French and German languages. The attainments in physical sciences alone, apart from the education in letters required at the college, demanded for a high rank in this competitive examination, are equal to those necessary for the first two and a half years of a cadet at West Point, taking a place in the first section of his class. Now, the board do not adduce this example for imitation here, but to show by way of comparison the nature of the raw material upon which the teachers of the Military Academy begin their work. They are expected to take men of a grade of attainment two years below what is requisite for admission to a college, and to give them a liberal and professional education in four years—to do work which, in other professions, would require at least seven years. All honor to teacher and pupil for what is accomplished in this short time at West Point! This state of things accounts for the fact that more than one-half the cadets who enter are rejected before graduation for incompetency. It accounts for the fact that the government pays nearly double the necessary cost for each cadet graduate. It accounts for the deficiencies of the curriculum in variety and breadth. It makes necessary the rejection of those studies of which we have spoken as necessary to the mental equipment of the well-educated army officer. The remedy for these evils is obvious: Raise the standard for admission, and the professors at West Point will be the first to move in meeting deficiencies. They will be the first to move in giving breadth to the course and opportunity to the cadets for more free mental and moral action.

The board decline to mark out any specific plan of action for elevating the standard for admission to the institution. The competitive element should in all fairness enter into any one selected. *The first thing to be thought of is to educate the public mind to its necessity.* Every friend of the Academy, every graduate jealous of its honor, should aim to elevate its course of study, until its cadets shall go into our army as well-disci-

plined and furnished as those of any power in the world. It is not the policy of our republic to maintain a large standing army. We educate men at West Point who in time of war shall furnish the organizers and educators of a citizen soldiery. These men should be something more than professional martinets or *condottieri*. They should have an education in ideas, in the law and methods of human progress, in those great principles which underlie the moral order of the universe, and a moral discipline so comprehensive and thorough that their scientific discipline and military knowledge shall be consciously held subservient to the highest well-being of our country; that their hearts shall beat responsive to that patriotic emotion which, in the presence of domestic rebellion or a foreign enemy, makes every American citizen a soldier.

In regard to the department of ethics and law, now in charge of the chaplain, the board are unanimously of the opinion that a complete reorganization should be made. The chaplaincy, in their judgment, should be separated entirely from this department, stand upon its own merits, and be confined to its appropriate duties.

The subject of law is one of the most important branches of study pursued in the Academy. It should constitute a distinct department, and be committed to an able man, taken from the army or from civil life as may be deemed most advisable. The present range of study, as laid down in the curriculum, embraces constitutional law, international law, martial law, the practice of courts-martial, and the principles of ethics in their bearings upon the true conception and proper administration of law in these several particulars. It must be seen at a glance that this branch of the general course of instruction is so important and comprehensive as to demand great ability in any one who should occupy this chair; for no class of men require a more thorough knowledge of the principles and administration of law than those who are clothed with military power, the exercise of whose authority is usually prompt and absolute, and from which there is often no appeal.

However eminent and faithful one may be in discharging the proper duties of a chaplain, it is seldom that his habits and training qualify him for the duties of a professor of law. Nor is it desirable on other grounds that these functions should be combined. The board are clear in the conviction that the moral and religious influence of the chaplain over the cadets would be heightened were his duties strictly confined to that sphere usually filled by the teachers of religion.

It appears from several previous reports of the Board of Visitors, and especially from the elaborate report of the commission appointed by Congress in 1860 to inquire into the condition of the Military Academy, that ethics had long been regarded by the cadets as a study particularly distasteful. The testimony of officers and cadets is to this effect, and that the pursuit of moral science should be discontinued altogether. This has been for a long time substantially the case. The duties of the chaplain have been too onerous, and but little time could be given to them. The natural consequence has been that some branches have fallen into disrepute, and a desire has been fostered to get rid of them altogether. In place of yielding to this desire, however, the board recommend the change herein mentioned. A proper scheme of ethics and a true system of moral science must be the basis of all law, civil or military. These branches in the hands of a competent jurist, it is believed, may be so managed as to remedy the defects of the present system and remove complaints; while, at the same time, giving to the chaplain such duties only as relate more particularly to moral and religious matters,

the change will enhance the salutary influence which such an office is designed to secure.

The board regret to learn that the Rev. Dr. French, chaplain and professor of ethics and law, has been laid aside from his duties for several months by serious illness. It seems desirable that some temporary provision should be made for maintaining religious worship during the time that the chaplain may be thus incapacitated.

The instruction in tactics as taught in the several arms of the service, infantry, cavalry, &c., was highly satisfactory, and we may add that, so also was the practice as exhibited in the specimen drills. Upton's tactics we consider a decided improvement.

We were gratified to observe the extent to which, wherever possible, the instructor carried the practice along with the theory, as in surveying, topography, and gunnery.

The instruction of the able professor in drawing we believe would be more available for a large number of graduates, if more time were given to drawing by the eye from nature, and less time to copying.

POLICE.

A casual observer, in looking about the buildings and grounds of the Academy, is at once impressed with the neatness that prevails. The closest observation with the officers, and in their absence, fully sustains these first impressions. The vigilance of the superintendent and officers appeared to be all that could be desired. Yet the board remarked that the present lack of a complete system of underground drainage may in time lead to results incompatible with the present cleanliness of the grounds and healthfulness of the Academy. The barracks and cadet mess-hall are at present the only buildings properly drained.

ADMINISTRATION.

The full expression of opinion elsewhere by the board upon details, which may be included under this general head, is sufficient indication of the favorable impression received by them in regard to the administration of the affairs of the Academy.

Improvement in affairs small in themselves, such as the introduction of high in the place of low shoes for wear by the cadets in the snows of winter, and of water instead of horse-power for cutting the wood for the Academy, is indicative of the spirit the board observed in all the affairs of the institution, allowing no waste, no going from better to worse, but giving signs of economy, wisdom, and progress everywhere.

The success of the present superintendent in the discharge of his varied and difficult duties the board have noted as a proof of the wisdom of that change of the law by Congress, through which the selection of the superintendent is no longer restricted to any one class of officers, but may be made from the entire army. We marked with satisfaction the earnest efforts of his associates to co-operate in the execution of his plans.

An officer of the Academy incompetent and unfit for his place cannot be too promptly removed; but the board are of the opinion that those who have been tried and found successful, especially in the more responsible positions, should not be unnecessarily displaced.

FISCAL AFFAIRS.

A most thorough examination into the condition of the accounts of the Academy showed them to have been kept with the utmost exactness.

Purchases of supplies on account of the institution appear to have been made very judiciously, and at reasonable rates, and the strictest economy appears to have been observed in all other expenditures of its funds.

The management of the fiscal affairs of the Academy cannot well be too highly commended.

THE HOSPITAL FOR CADETS.

The hospital is in charge of Brevet Brigadier General T. A. McParlin, surgeon, United States Army. Its condition showed the best of care and skill. The new bedstead introduced is an improvement.

The building used for a hospital, ample for the few patients likely to occupy it, in the excellent health generally prevalent at the Academy, would be inadequate should any epidemic enter the ranks of the cadets. Its wards do not admit light sufficient for the sick, and its filth passes into cesspools beneath, there being no underground drainage.

The board do not recommend an immediate appropriation for a new hospital, but see the reasons which will, before long, render such a step expedient.

THE LIBRARY

Was found to be in excellent condition. It comprises about twenty-three thousand volumes, principally scientific works, selected with reference to the studies pursued at the Academy, but with a judicious infusion of historical and biographical books. Of course the library will soon become comparatively unimportant, unless appropriations are made from time to time which will enable it to keep pace with the advancement of science. The board are of opinion that the sum of two thousand dollars will accomplish this purpose for the coming year.

It hardly need be stated that a perfect catalogue greatly enhances the value of a library. It is the key which unlocks its treasures. Such a catalogue has been prepared with great labor, and without cost to the government, and is now ready for the press. But there are no funds which can be applied to the printing of it, and to accomplish this purpose the board earnestly recommend an appropriation of one thousand dollars.

The board in this connection would invite attention to the case of Mr. André Freis, who for nearly twenty-seven years has had almost the sole charge of the library, and who has labored indefatigably and most intelligently in the discharge of his duties, to the entire acceptance of all connected with the Academy. His place could not be easily supplied, and yet, during this long period, his compensation has been very little above that of a common soldier. It cannot be the wish of the government thus to under-pay a servant who, from his attachment to his duties, has been willing thus far to render such services for such a pittance as has been paid him. In our opinion one thousand dollars a year would be a small compensation to such an agent, engaged in such duties.

SIGNAL SERVICE DRILL.

On Wednesday, June 9, the board witnessed the signal service drill, embracing the drill and practical working of the field (electric) telegraph train and communication by visual (flag) signals. General Albert J. Myer, chief signal officer of the army, was present. The drill was in charge of Lieutenant Colonel P. S. Michie, instructor in military signaling and telegraphy, assisted by First Lieutenant J. E. Hosmer, acting signal officer and assistant instructor. The detachment consisted of the first class of the corps of cadets.

The attention of the board was especially drawn to the illustration of this branch by the fact that it was the first drill of the signal service which has been given before a full Board of Visitors. The electric telegraph drill was that of the section train of a field telegraph train. The capacity of a full field train is to erect four lines of field telegraph of ten miles length each, simultaneously, and at the rate of three miles of line per hour. A section train consists of three vehicles—a battery wagon, a wire wagon, and a lance truck. The battery wagon prepared for headquarters of an army is of the style of a small ambulance, fitted with electric batteries, and with four desks, electric instruments, and appliances for working in the field from separate lines of telegraph or from an office. The wire wagon contains ten miles of wire in coils, and a reel for reeling it out rapidly as the wagon is driven in extending the line or for recovering and recoiling the wire when the line is taken down. On arriving at the end of the line where one is erected, this wire wagon, which has also a desk and instruments, becomes a telegraph office, communicating with the headquarters office. The lance truck carries light poles or lances in which to erect the wire, with insulators, crow-bars, and all essentials for the erection of a telegraph line. The train and the detachment serving with it are organized and maneuvered under a system of drill in which each cadet has duties marked out, and discharges them, by orders peculiar to this service, with precision. The illustration before the board consisted of the rapid erection of a line of telegraph, complete, around the plain, at the rate of over three miles an hour, the attachment of the electric instruments, and the operation of the line, the cadets performing all parts of the work and sending and receiving messages over the wire by the sounds of the electric instrument. Fort Putnam and the battery wagon upon the plain were made the points of communication. The messages were dictated by the board, and were successfully transmitted. Every facility was given for the thorough examination of the train and for putting its utility to practical tests. The communication by visual (flag) signals was in operation as a part of the drill simultaneously with the working of the field telegraph train. Signal stations were established on the plain, at Fort Putnam, and at a point across the Hudson River about seven miles distant in an air-line. The equipment, consisting of a couple of flags and torches, a staff, and a telescope, can be carried and used anywhere. Between all the points named messages dictated by the board were sent by the motions of single flags with speed and accuracy, the cadets sending and receiving the messages and discharging the duties of signal officers and flagman. The electric lines and the lines of visual signals were worked in conjunction, messages being sent by electricity over the wires and replied to by visual signals from the stations in view of the board, to illustrate the combination of the two modes to be used in case of necessity. The lines were also worked separately, to show the efficiency and the uses of either mode by itself. At the conclusion of the

drill the cadets were ordered in from the stations in a moment by a few waves of the flag, while the field telegraph line was taken down, reeled up, repacked, the wagons formed "in train," and, with the detachment, marching upon the road with even greater speed than it had been erected. The drill was a highly satisfactory evidence of the perfection to be hoped for in this department of science when full opportunity has been had for development, and of the progress of the Academy in keeping up with improvement in military science.

The board are unanimous in commendation of the introduction of this branch of study at the Academy. The uses of field (electric) telegraph trains must be of such constant importance in every army, and there are so many instances in which communication by visual (flag) signals must be essential to successful military operations, that a knowledge of both as embraced in the practice of the signal service is desirable for every well-educated officer. The board recommend that the Academy be kept supplied with all improved apparatus for this duty. They would also recommend that a fixed value in standing be given the study as an incentive to exertion on the part of the cadets.

ADDITIONAL ITEMS OF APPROPRIATIONS.

The north wharf attracted our attention as too small, decayed, and altogether unfit for the use required at that point, and we recommend an appropriation of five thousand dollars for rebuilding it.

The cemetery, as a burial place for those in the service of the country, may properly be classed among the national cemeteries and be improved as they are. An appropriation should, in our opinion, be made for its enlargement, which is indispensable if it is to be further used for its present purpose, and for its improvement.

The board recommend, also, such increase of the pay of the assistant in care of the cabinet and apparatus for Professor Kendrick's department, as the superintendent of the Academy may deem just.

The board have so far expressed their views upon the general state of the Academy and the modifications desirable under the present system.

In conclusion, we would say that the institution has accomplished all that could reasonably be expected of it under its present organization.

But it is apparent to the most casual observer that the Academy fails to meet the requirements demanded of the military school of a great nation like ours. Whilst the organization of this school may have in the past fully met the requirements of those times, the great advance that has, since its organization, been made in science and in the art of war, as well as the increased power of the republic itself, which has made it one of the controlling elements among the nations of the earth, alike imperatively demand that its military school should be raised to a standard of excellence not surpassed by the schools of any other nation.

In pursuance of this thought the board, at the risk of transcending the duties especially prescribed in their letters of appointment, are disposed to add, by way of supplement to their report, some suggestions looking to a reorganization of the Academy upon a more liberal, useful, and efficient basis than its present one.

Some of the leading features that should be observed in reorganizing the Academy may be stated in general terms as follows:

The Academy should be greatly enlarged.

The number of pupils admitted to the school should be largely increased.

There should be arranged in the institution two separate courses of

study: one for a general class, which should include the course of studies arranged for all the pupils admitted, the other for a special class, which shall be composed of those selected for this course from the most proficient in the general class.

The course of studies for the general class should be limited to the instruction necessary for a thorough comprehension of the elementary principles of the art of war, and the standard of admission should be so adjusted that the course would be completed within three years. The course of instruction for the special class in all that relates to the science and the art of war should be limited only by the boundary of human knowledge in relation to those subjects.

Whilst the government should retain the right to require the services of all graduates of the Academy, the reciprocal obligation on the part of the government to accept the services of such graduates should be abolished.

The government, each year, should select such number as the public service might require from the graduates of the general class for that year who by their proficiency in their studies, and by their mental and physical qualities, could best serve the republic in a military capacity, and confer upon those selected military appointments as provided for by law.

These appointees should be assigned to duty with their commands respectively, and should be continued upon active duty for a period of not less than two years. Upon the expiration of this service, such number as the public service required should be selected from these appointees by competitive examination for admission to the special class of the Academy.

Promotions in the military service should be so regulated by law as to serve as rewards of merit to those who are admitted to the special class, and as especial rewards of merit to those who are most proficient in its course of study. Those officers who are not selected for admission to the special class should be continued with their commands, and should be subject to a line of promotion subordinate to the members of the special class.

The graduates of the general class who fail to receive appointments will be returned to civil life.

It is not proposed to submit reasons in detail for the maintenance of these propositions. A few general remarks it is hoped will be sufficient to suggest the course of reasoning by which the board have arrived at the conclusions stated.

One great obstacle with which this institution has had to contend is the want of public sympathy in its behalf. Its objects, purposes, and labors are not understood or appreciated by the general public. They have no means of forming any just conception of the merits of this school, and of the service it has rendered and is rendering to the country.

In the past it has annually drawn from every part of the country a greater or less number of the most promising young men of every community, but as a general rule it returns to these communities none of those who remain at the institution until they are graduated. The graduates are at once attached to the army for military service, and the discharge of their official duties, as army officers, practically severs them from all social, political, and business association with the masses of the people. In this way the institution is deprived of the friendly aid of those best qualified to testify in its behalf.

The only pupils returned by the school to the masses of the people,

with rare exceptions, are those who, for sufficient reasons, it is compelled in self-defense to discharge from its classes. As a matter of course, these are invariably found to be active enemies of the school. Their relatives and friends sympathize with them, and the public estimate of the Academy is largely made up from their reports.

By largely increasing the number of pupils admitted to the Academy, a large majority of the graduates of the general class would necessarily be annually returned to civil life. In every community in which any such graduate might reside the Academy would, very probably, have an active friend, and the country would have a skilled soldier, capable of organizing the militia into well-disciplined armies in the least possible time and at the minimum of expense. Such agencies among the people at the outbreak of the rebellion in all probability would have saved to the republic thousands of lives and untold sums of money, which were uselessly squandered in consequence of the want of proper knowledge on the part of those who were compelled to assume the duties of officers in organizing troops.

The large number of pupils that it is proposed should be admitted would also furnish a much greater range for selecting the very best material that the country contains for the future military officers of the republic. And the constant observation that must necessarily be maintained over them during their course of study in the general class would supply a test that would unerringly indicate those who ought to be selected for such positions.

It is not deemed necessary to assign any specific reasons for requiring the graduates of the general class who have received commissions in the army to serve with their commands for a limited period of time before being examined for admission to the special class. Experience has so clearly demonstrated the necessity for such a course, that it may now be considered as accepted by our leading military officers as a self-evident truth.

War is the last resort by which all questions that cannot be otherwise adjusted between nations must be finally settled. In the present age of the world, successful war can only be achieved by means of armies directed by the highest scientific knowledge. It is therefore of paramount importance to every government that aspires to command a controlling influence among the nations of the earth that the commanders of its armies should combine with the greatest mental endowments the highest possible attainments in the science and art of war.

The primary consideration with a nation should be to command a power with which it could successfully defend itself against all assailants, and to vindicate at all times the national honor. Humanity requires that these ends should be accomplished with the least possible loss of life, and a due regard to economy demands that they should be attained at the minimum expenditure of money.

Military officers are called upon to perform many important and delicate duties subordinate to those above referred to, requiring the most varied knowledge directed by the utmost tact and skill.

To properly qualify officers for these responsible positions and for the efficient discharge of these important duties, the best material that is contained in the general class, tried and proved by actual service with their respective commands, would be selected by competitive examination for admission into the special class, there to be instructed in all that is known among mankind in reference to the objects to which they have devoted their lives. The graduates of this class should be rewarded by the trust, confidence, and emoluments that they would have

fairly earned at the nation's hands by the ordeals through which they have passed.

It may be proper to add that a minority of the board, while entertaining no doubt as to the expediency of greatly enlarging the number of cadets, fails to yield its assent to all the suggestions and propositions made in the concluding and supplementary part of the foregoing report.

C. H. WARREN,

Massachusetts, President.

JOHN EATON, JR.,

Tennessee, Secretary.

DAVID HUNTER,

United States Army.

M. B. ANDERSON, *New York.*

WALTER Q. GRESHAM,

Indiana.

BENJ. F. LOAN, *Missouri.*

R. L. STANTON, *Ohio.*

The Hon. SECRETARY OF WAR,
Washington.