



REPORT

OF THE BOARD OF VISITERS, ON THE UNITED STATES MILITARY ACADEMY, AT WEST POINT, FOR 1826.

United States Military Academy, West Point, June 24, 1826.

To the Honorable James Barbour, Secretary of War.

SIR,—The undersigned, agreeably to your invitation, have attended the examination of the Cadets in this Academy, now just concluded; and, during the three weeks of its continuance, have made diligent inquiry concerning the discipline of the institution itself, concerning the modes of instruction practised in it, and concerning its general management and condition; in doing which every facility has been afforded them by the Superintendent and Academic Staff, and the whole establishment thrown open to their inspection, down to its minutest details.

In making the investigations required of them as a Board of Visitors, it has been the purpose of the undersigned to ascertain what was the *object* proposed by the government in establishing the Military Academy here; what *means* have been provided to accomplish this object; how these means are *applied* by the officers to whom they are entrusted; what *results* are obtained from them; and what *changes* are desirable. Under the same heads, therefore, the undersigned will now proceed to lay before the Department of War, whatever information they have collected and whatever opinions they have formed.

I. The *OBJECT* of the government in establishing this academy, was obviously to secure to the country the benefits of a *special school*, where instruction should be given, in every arm used in actual service. The academy here is, therefore, essentially, a military academy; its organisation and discipline are military; and its rules and arrangements form a part of the military institutes of the country. The instruction given under its provisions, is in the art of war, in its widest and most liberal interpretation, embracing the whole of civil engineering necessary to secure an easy communication by land and water between the different parts of a country, and a safe arrangement and construction of its ports. Whatever tends directly to secure this instruction in its best form, is, therefore, essential to such an institution; and whatever else is taught here, must be considered subordinate and subservient.

II. The *MEANS* provided by the government to obtain these objects are, so far as instruction is concerned, of two kinds. 1. Teachers. Provision is made by law, for the support of a Pro-

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fessor of Natural and Experimental Philosophy, with an Assistant; a Professor of Engineering, with an Assistant; a Chaplain, who shall instruct in Ethics; a Professor of Mathematics, with an Assistant; a Teacher and Assistant Teacher of French; a Teacher of Drawing, and a Sword Master. But this provision having been found entirely insufficient for the purposes to be effected, there have been, and are now, detailed from the regular army, to act as teachers, one Major as instructor of Tactics, one Surgeon to be Professor of Chemistry and Mineralogy, nine Lieutenants and six Cadets, as extra assistants in the different departments before mentioned; and one Lieutenant as instructor of Artillery—in all, twenty-eight instructors and teachers, each of whom is constantly and laboriously employed in giving instruction even during the period when the examinations are going on.

2. The remaining means provided by the government for general instruction are a Library, a Philosophical Apparatus, a Chemical Apparatus, and a Military Laboratory; each obviously incomplete and insufficient.

III. The *application* of these means, under the rules and regulations provided by the Department of War, is left to the body of instructors and chiefly to the Academic Board, consisting of the Superintendent and the Heads of the Departments of instruction, in whose practical management of the institution, the undersigned have been able to find only occasion for uniform approbation.

The candidates for the rank and warrant of Cadets, who arrive here by permission from the Secretary of War in the month of June annually, to the number of about one hundred, are examined, and nearly all are accepted; the requisitions for admission being very low. During the six months after their entrance, they are merely on probation. Their studies in this period are mathematics and French. In the mathematics they are at first arranged alphabetically; and in French, according to their knowledge of that language and other languages; after which, they are broken into sections of about twenty each, and their instruction is forthwith begun. In the course of three weeks, the more prominent in each branch, to the number of about twenty, are selected, and formed into a first section, according to merit, and the same process is pursued, as the talents and characters of the candidates are developed, until, in seven or eight weeks, the entire class has been broken into five or six sections, according to merit; the arrangement of each section within itself continuing still alphabetical. During this period of probation, the relative rank of the candidates is continually and materially changing, and they are transferred freely from one section to another, as

their dispositions and capacities are determined. At the end of it, in the month of January, a strict examination is held, at which about one fourth of the class is generally found to have failed; and reported to the Department of War, as unfit to proceed. The successful candidates receive warrants as Cadets, and are arranged, by the result of this examination, strictly according to merit. From this time, the order of merit is the only one known in the entire course. Changes, however, are constantly making in the relative rank of the individuals, and twice in every year, in January and in June, a general and thorough examination takes place, three weeks in length, and at the rate of nine hours a day, when the rank of every individual is settled anew, and a roll of merit prepared, which, after the annual examination in June, is consolidated into a roll of aggregate merit, and published. Those, however, who, at the annual examination, are found not to have satisfied the requisitions of the course, are dismissed, if their failure be from idleness or incapacity; but permitted to repeat the course of the preceding year, if their failure arise from unavoidable interruptions in their studies or from want of years; it being, however, understood, that this indulgence can be granted only once.

A similar course is pursued during each of the four years, the order of merit being the basis of all the instruction given; and at the end of that time, when the class is graduated, it is generally found, that about one half of those who enter the institution fail to obtain its final honors; that, of those who do receive promotion, about one seventh have remained at the academy five years, instead of four; and that the first section of a class, even after the class has been relieved of all the incapable and idle, still leaves one fourth more than the last section.

On this system of the academy and its application, the undersigned would offer a few remarks:

In the first place: the *period of probation* seems to be a provision very important to the success of the Institution. For, it cannot be supposed, that all who come here, are fitted either by their capacities or their characters to meet the reasonable demands of a special school, where they are to be educated for a special, public object; and the requisitions for a mere admission are so humble, and in branches of knowledge so very common, that the first examination cannot possibly become a test of their final fitness for an education so peculiar. This second examination, therefore, which occurs after an experience of six months, the undersigned regard as the most important *single* provision among the rules of the Institution; and they feel assured, that the War department will unite with them in the con-

viction founded on experience and the results of former practice, that to set aside the decisions of the Academic Board under this rule, except in very extraordinary cases, would have no other effect than to expend the public means on those who cannot be educated by them; to lower the standard of merit; to bring the decisions of the Academic Board into disrespect with the Cadets and the public; and gradually reduce the whole tone of the Institution.

In the next place, the undersigned would speak of the *Merit Roll*. Nothing, they conceive, can be more simple and efficient than the whole of its provisions, and nothing more fair and thorough than the mode in which they are carried into effect. Each Cadet obtains rank in each branch of study he pursues exactly according to his proficiency; and this proficiency is determined by the weekly Class Reports of his instructors, by the examinations of the Academic Board, in January, and by the public examination in June. Each Cadet, therefore, has a constant excitement to exertion, and is constantly in danger of losing, by the success of others, what he has himself gained. Moreover, this strong stimulus has a separate influence and operation in each branch of his studies. He is not, therefore, discouraged in any *one* by having his merit in it lost in a general average of his merit in *all*. He is marked in each branch according to his progress in it; and therefore has an appropriate encouragement or censure for his rank in each. Nor is this a merely nominal provision. Of the forty-two members in the class about to be graduated, not one, in January, stood at precisely the same height in their three departments of study; one differed no less than twenty-six places; fourteen differed ten places and upwards; and, in general, the difference was four or five places. In the other classes, the difference was still greater, because the characters and talents of their members were necessarily less settled. Of course, there is, in all, the most fair and honorable excitement and competition; and the results obtained after the long and patient examinations in June and January, are satisfactory, in nearly every instance, to the Cadets themselves, and, probably, just in all.

In the last place, the undersigned would speak of the provision by which about one-seventh of those who are graduated in each class, are permitted to *remain five years* at the Academy. This, they conceive, is the only leniency in the existing rules of instruction, by which they can be safely qualified. Those Cadets who are unable to proceed in the course are cut off at the end of the probation; those who abuse the advantages offered them, are sent away as offences are committed; and those who

grow gradually more idle, instead of more active, fall, at last, to the bottom of their class, and then resign or are removed. Still, there may well be a few, who, from youth, from sickness, or from unavoidable interruptions in their course, are unable, at once, to make good the claims and standing required from them. To these, one more year is both wisely and kindly given; and, in most cases, so improved, as to place them in, at least, a respectable standing among their competitors.

The undersigned have much pleasure in adding to the preceding details, their general conviction, that these provisions and rules which constitute what is most peculiar and valuable in the system of instruction here, are practically applied by the present Academic Staff with remarkable talent, exactness, and efficiency; and that to this system and its zealous execution are to be attributed, a thoroughness in the knowledge obtained by the Cadets, which the undersigned have not elsewhere witnessed, and an equality in the amount of their respective acquisitions, which could not probably, in any other way be obtained.

The system of *discipline* which is brought in aid of this system of instruction, seems to the undersigned no less skilfully adapted to its object and no less efficient, than the instruction itself. It consists, in a great measure, of preventions and warnings. For this purpose a careful police is constantly maintained. During the hours, when the Cadets are not required to be in their quarters, a guard is mounted in each story of the barracks; and during the hours of study, each room is visited at least four times every day, to ascertain the good order of its furniture, and the presence and diligence of its occupants. In this way, even very inconsiderable deviations from the established rules and order of the Academy, are at once detected, and passed to the proper officer, by whom they are entered in a Day Book kept for the purpose. Every Friday evening the contents of this book, for the preceding week, are read on parade for the information of those who have been noted in it, and the next day, those who have excuses to offer, send them in writing to the superintendent, who accepts or rejects them. The delinquencies not excused, are recorded in a register, the results of which, with the names of the delinquents are publicly posted here, and sent to Washington, when they are publicly posted in the War Department. And finally, from these monthly rolls, a general roll of merit according to conduct, is annually consolidated, which will hereafter be published.

A system of preventions and warnings, so well adjusted, makes much punishment of a more positive character, unnecessary. When, however, punishments become indispensable, they are

inflicted either by the superintendent, whose power does not go beyond confinement to quarters, or by a regular Court Martial, whose decisions, when approved at Washington, may extend to dismissal from the institution. These punishments, in order to become as rare as possible, should be inflicted as promptly and certainly as possible; and the undersigned are assured, the War Department will unite with them in the conviction, founded on experience, and the results of former practice, that the decisions of the superintendent should be fully sustained by the government at Washington, and that sentences of Courts Martial on Cadets, when approved by the President, be remitted by pardon only, on the most urgent reasons.

IV. Under the next head—that of the *results* gained to the public by the amount of instruction here given to the Cadets educated by the country, the undersigned feel they have ample grounds for judgement, not only in the general examination, which, during the last three weeks has been constantly passing before them; but, also, in the private recitations, which they have frequently visited.

In the course of instruction, the original object of the institution is kept constantly in view, and, as far fulfilled as the means afforded will permit. The principal and most important series of subjects pursued, is, Mathematics, Natural and Experimental Philosophy, Engineering, both civil and military, and Tactics.

In MATHEMATICS, there are taught, Algebra, common and descriptive Geometry; plane and spherical analytical Trigonometry; shades, shadows, and linear Perspective; analytical Geometry; the Differential and Integral Calculus; the orthographic and stereographic projection of the spheres, and Surveying.

The number of instructors in this branch is now nine, and the amount of time given to it, in and out of the recitation rooms, is six hours, daily, during the two first years.—The undersigned have great pleasure in adding, that much of the instruction in this branch, is given by colloquial lectures, either with or without text-books; a mode which they believe to be better than any other, fitted to produce a lively and deep impression on the mind of the pupil in pursuit of such subjects. The thoroughness of the knowledge obtained here was very apparent both in the examination and in the recitation rooms. The diagrams exhibited by each Cadet, were drawn with great accuracy and skill; and the demonstrations by each at the black board, with very few exceptions, and those almost entirely at the bottom of lowest class, were quickly, easily, and accurately performed. The undersigned feel confident, that very little remains to be desired in this department of instruction.

The next branch taught is NATURAL PHILOSOPHY, comprising problems on the motion of bodies from Newton's Principia; Mechanics; Dynamics; Hydrostatics; Hydrodynamics; Pneumatics; Magnetism and Electricity; Optics, and Astronomy.

This branch of instruction naturally follows Mathematics. It begins with the beginning of the third year, and extends through the whole of that year, at the rate of five hours in every day, under the management of three teachers. The undersigned apprehend that this is not enough; and that time must be taken, for this branch, not, indeed, from mathematics and engineering, between which it is appropriately placed; but from some of the subsidiary branches to increase the amount of knowledge acquired in natural, and particularly, experimental philosophy. From the examination, however, and from the demonstrations given, and the manuscripts exhibited by each member of the second class, the undersigned feel persuaded that the Cadets here, too, have rightly improved all the means and opportunities afforded them, and, therefore, fulfilled all the requisitions that can reasonably be made upon them.

The next principal branch of teaching is ENGINEERING, comprehending architecture, civil engineering and military engineering. Under the head of *architecture* are included the choice and preparation of materials; the elementary parts of buildings; the composition and distribution of buildings; and the art of construction. Under the head of *civil engineering*, are comprehended roads, bridges, tunnelling, inland navigation, rail roads, and artificial harbors and sea ports. Under the head of *military engineering*, are included field engineering, the science of war, and permanent fortifications.

To this branch five hours a day are given during the last year, and three teachers are assigned to it, who instruct in colloquial lectures on text books in the French language. The course, during the last year, was not so complete as the gentlemen connected with it, earnestly desired to make it; but all the time that could be given them, was diligently and zealously filled up. At the examination, a large number of drawings was exhibited by each Cadet, which left nothing to be desired, and in the demonstrations and explanations given by each at the Black Board, the draughts were made with singular skill and accuracy. The undersigned feel sure, that the future services of the Cadets this year to be graduated, will justify them in saying, that the examination in engineering was perfectly satisfactory.

The last principal branch of instruction, is in INFANTRY DRILL AND GENERAL TACTICS, and in ARTILLERY DRILL AND PYROTECHNY. In the *infantry* drill, the Cadets are taught practically all the du-

ties of a soldier in every station; in the platoon, company, field and staff, up to the command and explanation of the movements of a battalion, including the service of guards and police; so that all the duties from those of a common soldier to those of a commander in chief are successively explained and practised; besides which the theory of all manœuvres, from those of a company to those of the largest masses, is taught in lectures and recitations. To this instruction, four teachers are assigned, and the time given to it, is, in all four of the classes, one hour daily and, to the first class, one additional hour every other day, during two months, and two months uninterrupted duty in camp to all the cadets in the academy, every year. The results of this course of instruction, the undersigned have witnessed with great pleasure in the upright and graceful carriage of the Cadets in the field, the steadiness of their individual positions, their exactness in handling their arms, and their precision in the manœuvres and marching of the mass; while in the examination room their knowledge of the rationale of tactics, as a science, was no less ready and exact. In the *artillery drill*, too, which takes place chiefly during the encampment of the Cadets in July and August, and which with *pyrotechny*, is taught by one and the same teacher, about two hours daily for six months, to the first class, the undersigned have witnessed the same thoroughness and skill, whether in the exercise of the piece, in target-firing, in throwing shells, or in the preparation of all kinds of ammunition, signal rockets, fuzees, port fire, fire balls, and incendiary balls.

These four branches, then,—mathematics, natural philosophy, engineering, and military tactics, occupying above three quarters of each day, as they occur during the four years given to study here, constitute the **MAIN COURSE**, on whose success, the success of this institution is always to depend, and, to which, as the undersigned are persuaded, it may, in the hands of its present teachers, be safely left. To teach this course, however, with all the thoroughness, which is necessary to make it practically useful in the service of the country afterwards, a *subsidiary course* is constantly going on, whose purpose it is, to furnish the needful means, for full success in the principal one.

The first branch in this subsidiary course is **FRENCH**, to which three hours every day are given during the first year, and three hours every other day during the second year, under three teachers. It is considered here strictly as a means and not as an end; and its purpose is simply to enable the Cadets to use, easily, books in the French language, which are their text books for both Mathematics and Engineering, and to place within their reach in future life a body of works on which their professional

success must greatly depend, and which can be found in no other language. With this object, therefore, the instruction of the Cadets in French is not carried beyond reading it with perfect facility, pronouncing it well, and translating from English, of all which, the two lower classes gave abundant proof. And this, the undersigned believe, is sufficient. It is not very probable, that an American Engineer or Military Officer will be required to speak any foreign language, and to take from his other studies here, that large portion of time which alone would enable him to make such an attainment, would be to injure the main course of his studies without an adequate object.

The next branch in the subsidiary course is DRAWING, which is taught, in order to render both engineers and officers in the army, what unquestionably they all ought to be, accomplished practical draughtsmen. To this object are given two hours every other day in the second year and two hours daily in the third year; and the number of teachers is two. Drawings have been exhibited from each member of these two classes, which have much surprised the undersigned, not merely from their excellence; but from their numbers, and from the equality in skill produced by an excellent mode of instruction.

The third subsidiary branch is CHEMICAL PHILOSOPHY, CHEMISTRY APPLIED TO THE ARTS, MINERALOGY AND GEOLOGY; taught in order to give the Cadets a knowledge of the materials they must employ whether in civil or military Engineering, and the places where they are to be found. Two hours daily are assigned to this branch in the third and last years; every other day a lecture being given, and every other day a recitation. Two teachers only are now found in this department, the third having been called away for other service during the year, and the instruction thus somewhat injured. But excepting the injury resulting from this circumstance, which was apparent in the examination of one or two sections, the undersigned think there is much reason to be gratified with the success of this department so far as means have yet been afforded to it.

These three subsidiary branches, French, Drawing, and Chemistry and Mineralogy, seem naturally to close up the account of what is essential to attain the special object proposed by the Government in establishing this Military Academy. But besides all this, it has been at different times thought desirable, that the officers, who are here to be formed, should acquire knowledge needful rather in the character of an accomplished citizen. A department has, therefore, gradually grown up, into which several branches have been successively crowded, little connected with each other, or with the rest of the studies pursued here; and for which it seems difficult to find a suitable place in the academic course, but at the expense of something more imme-

diate to the wants and objects of the institution. In this way, there have been introduced, from time to time, English Grammar, Geography, History, Rhetoric, National Law, Constitutional Law, and Political Economy. Some of these have been taught every year; but, in no one year, have all of them been taught, because it was impossible to find place for them all. During the last year, *English Grammar, Rhetoric, the Constitutional Law of the United States, and Political Economy*, have been taught; each imperfectly and superficially from want of time and means; only two hours daily in the fourth year and two teachers being assigned to this entire class of subjects. The undersigned are therefore clearly of opinion, that this department of studies be broken up; not because the studies themselves are unimportant, but because they are such as should be acquired either before the Cadets come to this Academy or after they leave it; and because the superficial knowledge of them, that can be here acquired, is a contradiction to the exact thoroughness, that prevails in every other department of instruction, and is obtained only by an injurious intrusion upon branches essential to the main success of the institution, and the public objects for which it was founded.

In concluding their remarks on this part of their inquiries, the undersigned would add, that the entire examination has been conducted with the greatest patience, thoroughness, and impartial kindness on the part of the Academic Staff; that the Visitors themselves have frequently joined in it; that several of the Cadets, not satisfied with the result of their first investigation, have asked a further hearing, which has been uniformly granted them; and that throughout, in all the classes, the Cadets, conscious of their own familiarity with the subjects they have studied, and aware that their rank would certainly be determined by their appearance at this time, have constantly exhibited the singular spectacle of a large body of young men eagerly soliciting a longer and more strict examination into the whole extent of their acquirements—a spectacle which, indeed, has been most gratifying to all who have witnessed it.

V. But though large means have already been provided by the government, and have been efficiently, faithfully, and wisely applied by the teachers, to whom they have been intrusted; yet it is not to be denied or concealed that OTHER MEANS and occasional CHANGES are wanting to give the Institution the character which it ought to possess, and the character which the increasing wants of the country plainly claim for it.

And—first, it is obvious, that a suitable *Chapel* with fire-proof rooms for the library and the different collections of instruments used here, is greatly wanted. Such a building was recommended by the Boards of Visitors of 1824 and of 1825, and the want

of it must be plain to all who have been here. As to the chapel, it is only necessary to say, that the room now used for it was never intended for such a purpose, and is entirely unfit for it; that it is wanted for other objects; that it never accommodates more than one half the persons who ought to be provided for; and, that, in some seasons of the year, it will not contain even all the Cadets. As to the Library, the Philosophical Apparatus, &c. it is only necessary to say, that where they are now kept, they cannot be properly arranged, cannot be preserved from injury, and are never safe. The undersigned, therefore, are persuaded this striking want needs only to be properly made known, in order to insure a provision, that will satisfy it.

Second, the undersigned have considered the state of the *Hospital*. It is the same building, which, by the Board of Visitors of 1825, was properly considered as *no Hospital*; for it will afford accommodation to hardly half a dozen patients, and is so decayed and ruinous that it will not protect them from the weather. The sick are, therefore, very rarely sent thither; but kept in quarters, often to their own injury, and always to the interruption of their comrades in the same room. In case of an epidemic, this state of things would be extremely alarming, and the undersigned therefore recommend earnestly the erection of a suitable Hospital.

Third, the undersigned join with the Board of Visitors of 1824 and 1825, in recommending a permanent provision for the *Department of Chemistry and Mineralogy*. This department is essential to the prosperity and success of the Academy, and yet the present valuable incumbent, who is at the head of it, is here on the precarious footing of an Army Surgeon, living in a house which will not protect his family from the inclemency of the seasons, without a Laboratory in which his department can be illustrated, and without a mineralogical collection. The undersigned, therefore, recommend that provision be made for a permanent professorship of Chemistry and Mineralogy, and that quarters be built for the accommodation of the incumbent's family: that a Laboratory with a lecture room attached to it be erected; that \$300 be asked for the Chemical Apparatus this year, and \$150 annually afterwards: and that \$1,000, be asked to begin a Cabinet of Minerals. They further recommend that the property, thus provided for in Chemical Apparatus and Minerals, be given in charge to the Professor, who shall furnish Catalogues of it to the Superintendent; that it be inspected annually by the Board of Visitors; and that the Professor be held responsible for any injury or loss arising from his carelessness. And the undersigned urge this recommendation the more anxiously, as they have reason to fear the department will lose its

present important head, if it be not put on the footing the exigencies of the Academy-demand.

Fourth, the undersigned recommend a considerable increase of the *Library*, and the appointment of an Assistant Librarian, because, adequate provision is not now made for the care and preservation of the Books. The Library is already respectable in works on Fortification, Artillery, Military History, Topography, Tactics, Mathematics, and Natural Philosophy. But a Library is the principle of life to every institution for instruction, whose tone can never rise higher than the means for teaching its instructors will carry it, and whose decay is certain, if those new works, which are continually enlarging the boundaries of knowledge are not regularly added to keep the spirit of the Institution up to the spirit of the times. The Library here is very deficient in all branches except those already enumerated, and is deemed to need additions, particularly in Architecture, Civil Engineering, Natural History, and Civil History. The undersigned further recommend, that an examination of the Library, according to certified Catalogues, be made annually by the Board of Visitors, and the Librarian held responsible for all losses, deficiencies, or injuries, arising from neglect on his part. And the undersigned would suggest the sum of two thousand dollars for the present year, and one thousand dollars annually afterwards as the minimum, that will furnish the means needed for such an establishment.

Fifth, the undersigned recommend that four hundred dollars be applied to the purchase of *Instruments for Surveying*, to be delivered, when purchased, to the Professor of Mathematics, and by him held, with all other public property in his department, in the same way and on the same terms suggested in the case of the Chemical Apparatus.

Sixth, the undersigned find neither *Casts* nor *Engravings* for the use of the Drawing School, and hardly know how to account for a deficiency so obvious and so easily supplied. They presume there is no other Drawing School in the world, where some provision of Casts and Engravings is not made, and few where living models are not used. They suggest, therefore, the great advantage of an appropriation of five hundred dollars to purchase casts from the antique and engravings, to be kept by the principal teacher of Drawing, in the same way and on the same terms suggested in the case of the Chemical Apparatus.

Seventh, the undersigned find here no solid *models* from which to teach Civil and Military Engineering, and they recommend, therefore, that a Modeller be employed, with as little delay as possible, to furnish them. In Europe no school pretends to teach these sciences without models in relief to illustrate the problems in stone-cutting and carpentry, the orders and combina-

tions in architecture, the constructions employed in canals, roads, rail-ways, &c, as well as the details of Fortification, and of attack and defence; all of which may be much more easily explained and much more quickly and practically taught from such models, than they can be in any other way. The undersigned, therefore, suggest that the sum of twelve hundred dollars be appropriated partly to the purchase of tools and materials, and partly to provide European models, as guides with which properly to begin a suitable collection.

Eighth, the undersigned are persuaded, that a *Riding-School* and *Gymnastic Exercises* are much wanted here; and they recommend that a building be erected, fitted for these purposes, for a *Fencing School* and for *Military Drills*. A Riding School, it is believed, is always attached to such an Institution in other countries, for the obvious reason that skilful horsemanship is indispensable in the education of a military officer. Here, such a school is peculiarly needed; for the youth of this Institution, leaving their homes at the precise period of life, when such instruction naturally begins, are, in the present state of things, necessarily withdrawn from the opportunities for acquiring this knowledge and skill, which to all others is of much less value, but to all others, is of very easy attainment. Gymnastic Exercises, too, or a thorough physical education, seem to the undersigned to be of great importance in an Institution like this, destined to furnish officers and engineers for the civil as well as military service, to whom a hardy constitution and the easy and dexterous use of all their physical powers is indispensable for professional success. The drill during the summer months is sufficient to give the Cadets healthful exercise and no more; but during the winter this resource fails and their spirits and activity fail with it. Horsemanship and Gymnastic Exercises are the appropriate remedies for this state of languor, while, at the same time the introduction of the Light Artillery Drill which has heretofore been prevented, from want of horses, would now be effected, of course, and the Cadets receive an accomplishment indispensable in the service to which they are destined.

Ninth, the undersigned join with the Board of Visitors of 1825 in recommending that *Cadets be no longer employed as teachers*. They were originally thus employed from the necessity of the case, because a sufficient number of graduates could not be found to fulfil suitably the duties of all the teachers wanted. But this reason no longer exists. There are now many, who have received promotion from this Academy, who might well be employed as its teachers, and can in no way, perhaps, be more useful to their country. Long experience has shown, that Cadets cannot command the respect and confidence which naturally attach to older officers, and do not possess the amount

of knowledge necessary to a full discharge of their duties. The same experience, too, shows that the Cadets who are employed to teach, and, who are of course the most prominent in their respective classes, themselves suffer from want of opportunities to learn because they are so much occupied in giving instruction. To supply, therefore, the places of the Cadets now employed in teaching, and to complete the needful means of instruction, the undersigned would suggest that another French teacher be appointed who shall be a native of France, that two Lieutenants be added to the department of Engineering, one to the department of Natural Philosophy, seven to the department of Mathematics, one to the department of Drawing, and three to the department of Chemistry and Mineralogy. And they would further suggest, that each Lieutenant who is to instruct in this academy, be, if practicable, detailed for at least one complete academic year, and not removed for other service during that year, because it is extremely improbable, that an instructor should feel all the interest he ought to feel in the progress of a section which is to be examined neither on his responsibility, nor as it comes from his hands; and quite impossible that the section itself should be as well taught by a succession of different instructors, as it would be by one uniform mode of teaching.

Tenth, the undersigned recommend, that from and after the year 1828 *no Cadet be received* at this Academy who is *less than fifteen or more than eighteen* years old; since those who are younger than fifteen rarely have maturity of mind sufficient to pursue the studies required of them; while the minds of those who are above eighteen when they enter, have generally taken a direction different from the one required here, and which it is not easy to alter.

Eleventh, the undersigned find the requisitions for entrance very low, and considering the vast number of applications now made for warrants, have no doubt they can be gradually raised with benefit to the country. They, therefore, suggest that from and after the year 1828 *no Cadet be admitted* to enter who does not understand English Grammar and Geography.

Twelfth, the undersigned are persuaded from observation and inquiry that *more instruction* might be given *in Engineering*, and that the only serious obstacle to it, is, want of time. They propose, therefore, that the graduates from this Academy who may receive commissions in the Corps of Engineers, be required to remain here one year after their promotion, and that during that period, they be employed in giving instruction as well as in the prosecution of the studies appropriate to their department.

Thirteenth, the undersigned recommend the appointment of an additional *clerk* with a salary of three hundred dollars per annum, to be employed in the offices of the Adjutant and Superintendent,

because in the office of the Adjutant an oppressive amount of writing is already done, and because the Superintendent for want of a clerk has never been able to preserve copies of his official communications to the government.

Fourteenth, the undersigned suggest as a measure equally recommended by sound policy and justice, that the officers charged with the ungracious duty of enforcing the discipline and police of the Institution—a duty, not less severe and laborious than ungracious;—should receive each the addition of ten dollars per month to his pay, and that to insure an uniform and salutary discipline, as much permanency as possible be given to these appointments.

Fifteenth, the undersigned recommend, that provision be made for the erection of a Gun House, because the artillery here is constantly suffering from exposure to the weather at all seasons.

Sixteenth, the undersigned concur entirely in the strong recommendation of the Board of Visitors of 1824 and 1825, that the *rank and pay of the present Superintendent* be increased; and they repeat this recommendation not on account of the claims of this distinguished officer from his long and extraordinary services in his present situation, because it is well known he rather declines than solicits such a recommendation; but on account of the public service which they are persuaded cannot be suitably sustained by his present income, which is altogether below his station, and the demands made upon him in consequence of his station, and no suitable compensation for the talents and labor he gives in return, with such devotedness and success to the country.

Seventeenth, the undersigned join earnestly in the strong recommendation of the Board of Visitors of 1825, that the Superintendent of this Academy be made directly responsible to the Secretary of War: and hold all his official intercourse with the Department of War directly; and that, if necessary, he be made a part of the General Staff of the army. They think such a provision exceedingly important to the welfare, success, and good order of the Institution, and distinctly called for by the system of direct responsibility and accountableness, established in the other departments of the public administration.

The undersigned have not spoken at large of the Barracks, the Mess House, the Commissariat, the Adjutant's Arrangements, or the Treasury; but none of these have been overlooked; and it is only because the same order and exactness has been found in them, that has been heretofore reported of them, that they are not more particularly mentioned. Indeed, this order and exactness has been found through all the details and arrangements of the Institution, and the undersigned have great pleasure in adding that in every part of it, among the Academic Staff, and among the Cadets THEY HAVE FOUND THE SPIRIT OF SCIENCE

PREVAILING OVER A MERELY MILITARY SPIRIT, and over every thing, that could interfere with the progress of knowledge, and the objects of the government in establishing this special school.

In conclusion, the undersigned would express their strong conviction that the country has great reason for congratulation in the condition and management of its Military Academy. It has now been established twenty-four years. During the first fifteen years of its existence, no regular system was pursued by its Instructors, and no consistent support was afforded it by the government. It was, therefore, always in a fluctuating condition, and rarely enjoyed so much of the confidence of the nation, that more warrants were asked for at the War Department than could be readily granted. But during the last nine years, all this has been changed. In eighteen hundred and seventeen the system of instruction and discipline, now in practice, was introduced, by the present accomplished Superintendent, and has, by the Teachers and Academic Staff, been uniformly and consistently sustained; the favor of the nation has followed and encouraged their efforts; and now, every year, the privileges of this institution are sought for at the War Department, by above a thousand to whom it is not possible to grant them. It is praise enough of the present Superintendent, and those who have so faithfully labored with him, to say, that this change is their work; and the undersigned are persuaded, that nothing further need be asked for the final and entire success of the Institution, than that the government should afford its Academic Staff a full and consistent support in their measures whether of instruction or of discipline.

The undersigned have the honor to offer you the expression of their high consideration and respect.

(Signed)

SAMUEL HOUSTON, *President.*
 JAMES BLYTHE,
 AMOS LANE,
 GAB. HOLMES,
 DUTEE J. PEARCE,
 JAMES DEAN,
 THOS. KENNEDY,
 PHILIP S. MARKLEY,
 JAMES FREEMAN DANA,
 CLEMENT C. BIDDLE,
 J. K. KANE,
 JER. MORROW,
 JOSEPH M. WHITE,
 JOS. G. TOTTEN, Major of Engrs.
 Bvt. Lt. Col.

GEORGE TICKNOR,
Secretary.