

the powerful armaments that European fleets, singly or combined, may be enabled to bring across the Atlantic, over the bars of our ports and harbors, to attack them.

The details of the operations during the year at the several works on the Atlantic, Gulf of Mexico, Lake and Pacific coasts, derived mostly from the reports of the superintending engineers, are annexed.

PRISON DEPOTS.

The prison depots also called for the labors of engineer officers. Point Lookout, at the mouth of the Potomac, was subject to sudden attack from marauding parties and detached cavalry from armies operating against Baltimore and Washington, which, with the immense body of prisoners, made it necessary to fortify the position against attempts to liberate them, by forts commanding both the interior and exterior. Major Stewart, assisted by Lieutenant Cantwell, and afterwards Colonel Brewerton, constructed these defensive works.

THE PRISON DEPOT AT JOHNSON'S ISLAND,

Cleveland harbor, Lake Erie, had to be defended against attempts of the prisoners, and succor by water, from expeditions organized in the friendly and neutral territories of Great Britain in Canada. Major Casey and Captain Tardy were assigned to and performed this service, constructing a water battery at the mouth of the harbor, against a force approaching by water, and temporary field forts on Johnson's island.

SURVEYS, MAPS, AND TOPOGRAPHY

The surveys for the armies in the field, embracing the topography of the country passed over and particular sites occupied, have been referred to in other parts of this report.

The extent of the labors performed by the officers on duty in the bureau has been the engraving, lithographing, photographing and issuing 24,591 sheets for officers in the field and various branches of the service requiring this information, leaving still on hand a few copies of each publication for reference and the calls of the War Department.

The survey of the northwestern lakes has been in progress for several years, to obtain for the commerce of the States whose industry is promoted by that extended interior navigation the safety that a perfect and correct knowledge of the shores and bottom alone can attain. It is being conducted under the direction of Major Reynolds, of the corps of engineers, upon the same scientific principles and with the same care and accuracy that has been bestowed upon the coast survey and other national geodetic surveys. During the year two maps have been prepared from the field-notes published and issued to the navigators of the lakes. One gives the west end of Lake Superior, and the other the northeastern part of Lake Michigan. Three others have been prepared and are now ready for engraving, giving the Portage river and the bay of L'Anse, on Lake Superior; and a third giving the north end of Green bay.

Twenty-eight hundred and twenty (2,820) sheets of the maps of the lake surveys have been issued for commercial, harbor improvement, and military purposes, during the year, making the whole number of maps called for and issued since these surveys were commenced 27,411 sheets.

Special surveys have also been made during the year, maps issued and forwarded for the use of the department, of Niagara river, Erie, Conneaut, Ashitabula, Grand river, Cleveland, Black river, Sandusky, St. Joseph's, Grand Haven, Chicago, Racine, and Sheboygan.

SURVEYS.

The principal labors of the parties engaged in these surveys during the year are comprised in the measurement of 269½ miles of shore-line, 164½ square miles of topography, 187 miles of soundings, and 1,200 square miles of off-shore hydrography on 1,586 miles of lines of soundings, the measurement of a base line of 4,173 feet in length, difference of longitude between several distant points by electric observations, and observations by flashing lights; also astronomical observations for the latitude of eight points.

Recommendation.—These surveys are called for by numerous parties and individuals, as well as by commercial men, for private as well as for public use. It is indispensable that some rules and system be established to keep the issue of these valuable maps within such limits as will insure the great objects of the survey, the diffusion of this information to promote national industry, at the same time to prevent them falling into the hands of persons collecting for other purposes than the public good.

I recommend that the department be therefore authorized to issue these maps, after supplying the wants of the government, at the cost of paper and printing, as is now and for years past has been authorized for distributing the Coast Survey maps. This will prevent an improper use, and enable all persons capable of using them to obtain copies.

The estimate for carrying on the work for the next year is \$184,604 42, which exceeds the amount appropriated for last year's operations about \$60,000.

It is proper to say that this increase of estimate does not contemplate any advance in the wages of assistants, but is simply due to the increased cost of materials and supplies.

On our Pacific coast Major Williamson, of the corps of engineers, has explored and reconnoitred parts of northern California and southern Oregon, giving the topography of its roads, and continues observations for barometric correction of altitudes, having also in view an investigation of the formula for determining heights by this instrument. He has traversed and explored the heights of the Nevada range in northern California, said to be 10,000 to 11,000 feet above the level of the sea, and the military roads between the coast and this range of mountains to facilitate the military operations of the commanding general. During the year he also examined the various sites on Admiralty inlet and Puget's sound, that might hereafter become useful for military purposes, and selected such as should be reserved from sale by the land office.

PRESERVATION AND REPAIR OF ATLANTIC HARBORS AND SEA-WALLS.

An appropriation was made in 1864 for renewing the construction of the sea walls in Boston harbor to preserve the head-lands from further destruction by the ocean waves, and, as a consequence, injury to the harbor for commercial use, while at the same time it preserves important sites that hereafter will be occupied by batteries bearing on the channel leading to the city of Boston. The following narratives of the operations on these islands are drawn from the report of Colonel Graham, the superintending engineer. The same officer was charged with the application of the appropriation of \$100,000 for the preservation and repair of the harbors on the Atlantic. The accompanying summary gives his views on this subject in relation to the Susquehanna river below Havre-de-Grace, dredging the Patapsco river, Portland Harbor breakwater, navigation of the Hudson river below Troy, and Delaware breakwater. Colonel Graham recommends additional appropriations for the Atlantic harbor improvements.

REPAIRS OF SEA-WALLS ON DEER AND LOVELL'S ISLANDS, IN BOSTON HARBOR.

Deer Island sea-wall.—The walls on this island are three in number, viz: the north wall, middle wall, and south wall; respectively 1,743 feet, 839 feet, and 383 feet in length.

There were six places averaging 60 feet each in length, where the backing and flagstones of the platform had fallen in, and many places where large blocks of stone had been forced out from the body of the walls into the sea.

In September, 1864, a violent storm from the northeast washed away the clay backing from the north wall, to such an extent as to throw the cavities into one of 300 feet in length, besides forcing twelve large stones from different parts of the wall into the sea, and bulging the body of the wall both inward and outward, which weakened it so much, as to make it impossible for it to stand another such shock. No time was lost in taking down the whole of the injured portion and commencing the relaying it from the foundation, in hydraulic cement. Ninety feet lineal were rebuilt in this manner before the close of the working season. Much damage was done during the winter and spring storms.

During the summer to the close of the fiscal year, 50 feet lineal, in addition, were taken down and rebuilt. A small balance only remains on hand for this work; and the estimate of the engineer in charge for its continuance is \$25,359 86.

Sea-wall on Lovell's island.—This wall is for the protection of the northern end of the island from abrasion by the action of the sea. It is 803 feet long. The smallness of the appropriation granted for the joint repairs of the walls on this and Deer island rendered it impossible to do more on the former one than to procure the materials for erecting the necessary buildings for carrying on the work.

The estimated cost of repairing the sea-wall on this island is \$43,891 68.

SEA-WALLS AT GREAT BREWSTER'S ISLAND, BOSTON HARBOR.

There are two walls, 372 and 340 feet in length respectively, on this island; and additional walls for its protection and to prevent serious injury to the ship channel from the wash of large quantities of soil into it, to the extent of 1,550 feet lineal, are required.

During the winter a large number of tools were made at the blacksmith's shop on Great Brewster's island. Derricks were procured, a well was sunk, and a rail track 800 feet long was graded for drawing stone and other heavy articles, and in addition 1,500 cubic yards of stone and gravel were collected preparatory to commencing operations in the spring, since which time the work has been steadily and satisfactorily progressing.

About \$26,000 of the appropriation has been expended, leaving a balance of \$39,754 42 available for further prosecution of the work.

The engineer in charge estimates that additional funds will be required for the continuance of this work, to the amount of \$111,222 20.

REPAIRING, ETC., HARBORS ON THE SEA-BOARD OF THE UNITED STATES.

Dredging channel of Patuxent river from Fort McHenry to the mouth of said river.—The absence of the dredges necessary to perform this work (they having been loaned to the Quartermaster and Navy departments for military purposes) rendered it impossible to make any progress with the work. The officer in charge has visited and reported upon the existing obstructions, however, and they will be removed at as early a day as practicable.

Susquichanna river below Havre-de-Grace, Maryland.—Upon inspection of the channel at this place by the engineer in charge, obstructions to the navigation were found to exist for vessels drawing over six feet of water, but owing to

circumstances above cited, (the want of dredges,) no progress was made in their removal.

Portland Harbor breakwater, Maine.—The engineer in charge reports that the work of repairs on this breakwater has progressed satisfactorily, and recommends that it should be extended at once 400 feet further out. He estimates for the further prosecution of the repairs the sum of..... \$21,338 35
For extending the breakwater 400 feet..... 83,772 70

Making a total of..... 105,111 05

Improvement of the navigation of the Hudson river below Troy, N. Y.—Owing to the want of dredges, no progress was made in this work during the last year. It will be commenced at the earliest practicable moment.

The Delaware breakwater.—A minute survey of this work will be required before repairs can be commenced. The pressing duties of the officer to whom this work was assigned prevented his giving it his attention in time for the commencement of the work. It will receive attention as soon as possible.

In addition to the above-mentioned works, there are others whose repairs should be attended to, but it is evident that the appropriation is utterly inadequate to the purpose.

REPAIRS AND COMPLETION OF SEA-WALL AT BUFFALO, N. Y.

A special appropriation for this object, of \$37,500, was made in July, 1864, and the work was commenced as soon as possible.

The operations during the year ending June 30, 1865, have consisted in repairing the breaches in the old wall, quarrying stone, and laying the foundations for the proposed extension of the sea-wall.

The total amount expended during the year was \$8,494 92.

PRESERVATION AND REPAIR OF LAKE HARBORS.

A general appropriation of \$250,000 under this head was made by Congress, approved June 28, 1864, and after due consideration it was distributed among the harbors most essential to the interests of commerce in proportion to their importance.

Owing to the lapse of time since any repairs were made upon harbor improvements, (some fifteen or twenty years,) the works had fallen into decay, and in many instances, become entirely dilapidated; and under these circumstances, especially when considering the utter inadequacy of the appropriation, the question of applying it to the most advantage was one of great difficulty.

Some of the most important harbor works had scarcely anything left to "repair or preserve," and in a strict construction of the act would have been cut off from any benefit in the appropriation, while from others much of the old work had to be removed before anything new could be commenced. It will be evident, therefore, that although much has been done generally, the amount of work at particular points must appear small.

The following summary from the reports of the officers in charge will exhibit the state of the works at the close of the year. Should it be the determination of Congress to persevere with the repairs and preservation of these artificial works to improve the navigation of the lake harbors, the department will be prepared to give the sums recommended by the superintending engineers for the different localities.

Repairs of pier at Oswego harbor, N. Y.—Major C. E. Blunt, corps of engineers, reports that operations for this object have been carried on during the

entire working season. The sinking of new cribs, repair and ballasting of old ones, and replanking the outer surface of the pier, constitute the work done. Similar repairs will continue to be necessary to a greater or less extent from year to year.

The amount expended during the year was \$14,588 17. The sum still available from the appropriation made last year for repairs and preservation of lake harbors will probably be sufficient for the coming year.

Genesee River harbor, N. Y.—Captain J. A. Tardy, corps of engineers, reports that preparations for repairing the west pier at this harbor were commenced in the fall of 1864, and during the year ending June 30, 1865, the amount expended was \$11,141 43. By the close of the present working season the balance of the available funds will have been expended.

Light-house pier, Buffalo, N. Y.—Captain J. A. Tardy, corps of engineers, reports that nothing was done during the fall, owing to the lateness of the season. Active operations for repairs could not be commenced before July, 1865. This pier is very much out of repair. Piles on the harbor side and at the extremity need replacing. Stone-work is much injured and thrown out of place by the action of the ice.

Harbor of Chicago, Illinois.—A special survey with a view to its improvement, as well as to the preservation and repair of existing works at this point, was made during the season. The officer in charge of the work, Colonel T. J. Cram, corps of engineers, however, could not, under the restrictions of the act making the appropriation, apply any portion of it, and the city authorities appropriated \$75,000 to be expended in continuing the dredging of the direct channel through the outer bar of the mouth of the harbor, which they had already opened to some extent, and in extending the north pier 400 feet, under the plan approved by this department and suggested by the officer in charge.

This important harbor presents great engineering difficulties to insure permanency to any system for its improvement that heretofore has been devised. The present system is designed to open a channel across a shoal that the continued effort of nature is forming. While the present method of prolonging jetties, thus extending the river channel across the shoal, has the effect of cutting a new and deep channel across such shoal, such improvement has no effect in preventing, in a limited period, the formation of another shoal across the opening of these piers into what was originally deep water. Nor have they any effect in retarding the causes of such formation. It is by checking the perpetually shifting sands along the shores that we must arrest this perpetual injury to the harbors. No place demands more care and attention to this important subject than Chicago. Most of the other lake harbors are affected in this manner and from similar causes. The attention of the superintending engineers and others interested in this subject, so important to the commerce and trade of the lakes, will be drawn to some means of rendering the expenditures for these harbors more durable.

Racine harbor, Wisconsin.—Colonel Cram reports that the work at this harbor has consisted in levelling back the sand heaps from back of the north pier, in putting in new timbers and filling with stone the shore portion likely to be breached, (north pier,) in repairing and filling with stone sixty feet of same pier further out, in securing outer crib or pier-head in place, and preventing it being overturned, and in replacing broken timbers of the pier-head of south pier.

The additional work contemplated for the remainder of the season will, it is hoped, render the work at this harbor secure for several years to come.

Milwaukee harbor, Wisconsin.—Colonel Cram reports that the work accomplished at this harbor was as follows, viz: in replacing iron bands and bolts, repairing the timbers of the south pier-head, and in removing by dredging a lump which had formed in the natural bed in the middle of the channel just at the entrance.

With the additional work yet remaining to be done, the harbor will be in good condition.

Sheboygan harbor, Wisconsin.—Colonel Cram reports that sufficient material for the repairs at this harbor could not be accumulated to justify the commencement of the work until April, 1865.

During the summer much of the work has been successfully done, a part of it having to be put under water, and therefore difficult to accomplish. It is contemplated to complete the work during the coming season.

St. Joseph's harbor, Michigan.—Colonel Cram reports that the repairs at this point, consisting of closing the breach in the north pier and removing the wood-work and filling it with stone to a level three feet above the water, were successfully accomplished with immediate beneficial results.

This harbor is a very important one, being the only harbor of refuge the United States has ever expended money upon on the east shore of Lake Michigan, and should be fully repaired and improved.

Erie harbor, Pennsylvania.—Colonel Cram reports that the repairs of the works at this place were completed, including the strengthening the low place in the peninsula at the head of the bay.

Grand River harbor, Ohio.—Colonel Cram reports that the breach in the west pier of 150 feet in length has been completely repaired, leaving an additional 150 feet of the outer damaged and decayed part to be repaired next season. The breach of 90 feet in length in the outer portion of the east pier, and likewise a very considerable portion of the inner part of the old east pier, have also been repaired, and nearly all the material that will be required for the remainder of the repairs authorized has been delivered on the spot. The entrance to the harbor has been very materially improved by what has already been done, and it is probable that a channel of nine feet over the outer bar will be made by next spring.

Cleveland harbor, Ohio.—The work at this point has been much abused by corporate authorities and private individuals, in the use of it for their own advantage; and as this abuse is, in spite of remonstrance, daily on the increase, it is highly probable that the piers will in the end be entirely destroyed.

In consequence of the officer in charge (Colonel Cram) not being able to get entire possession of the east pier from the hands of those who are using it for private pecuniary advantage, no repairs have been put upon it.

The west pier and the pier-head have been very thoroughly repaired, and both have been filled with stones, with the exception of a part of the inner sustaining work put in to strengthen and preserve the old west pier. Before the close of the present season, most or all of the filling will be in, and there will remain no more to be done until next winter, when, taking advantage of the ice, about seventy old piles will be pulled up.

Ample depth of water now exists on the bar, which has been attained by the city in large expenditures for dredging.

Black River harbor, Ohio.—Colonel Cram reports that during the season the west pier has been repaired, and also all the under-water work of the east pier has been successfully put in. Before the close of the season, it is anticipated that all of the east pier will be completely built up and planked over to a point necessary to stop the sand from running into the harbor.

Vermillion harbor, Ohio.—The amount required to repair this harbor being so large, it was not deemed advisable to commence it with the limited means at the disposal of the department.

Sandusky harbor, Ohio.—No vestige of the old work could be found upon inspection of this harbor, and as the act making the appropriation did not contemplate new works of improvement, it was not deemed proper to apply any part of the appropriation.

Repairs of harbor works at Burlington, Vermont, and Plattsburg, New York, Lake Champlain.—The sums of \$13,000 and \$2,000 respectively were allotted from the appropriation for "repairs and preservation of lake harbors" to these two points, to be expended in repairing the breakwaters, and at the latter place to direct the repairs so as to admit of placing a small harbor light on the north end of the breakwater. After examination on the spot, it was not judged expedient by Major Blunt, the engineer in charge, to commence work before the falling stage of the lake in 1865. Nothing was consequently done before the closing of the fiscal year.

Some dredging was reported as desirable by the engineer in charge near the Plattsburg breakwater. It was not, however, judged expedient to have it done at present.

The outlay of money at Burlington to make the breakwater adequate to the wants of the large and increasing business of the place would be so great, that it is not thought expedient at present to ask for any further appropriation.

MILITARY ACADEMY.

During the past year sixty-eight cadets completed their studies and military exercises at the academy, and were commissioned as lieutenants in the army.

This is the most numerous class that has ever graduated at the institution since its organization in 1802.

For many years the number of graduates has not sufficed to fill the annual vacancies in the army.

The number of officers in the several branches of the staff, and of regiments now comprising the regular army, has greatly increased from time to time, while the number of cadets authorized by law has remained unaltered since 1843. The result is that neither the staff corps, nor regiments of artillery, cavalry, and infantry, can be furnished with the numbers to perfect their company organizations, and military science and art cannot be disseminated throughout the country in proportion to the increase of population and national interests to be protected. The total number of cadets now at the academy is 235, and the total number authorized by existing laws is 293. From various incidents to which the appointments are subject, this ratio does not materially alter from year to year.

The average cost of the institution for the last twenty years has been \$160,711 83. The cost during the past academic year was \$201,217. These sums include the pay of cadets, officers, and professors, and all contingencies.

The annual average appropriation for twenty years is \$166,684 63, and for the present year is \$257,505. This excess arises from the increase of the pay of cadets, and for increase cost of forage for artillery and cavalry horses, &c.

Recommendation.—To meet the wants of the military service, and to diffuse a knowledge of the science and art of war more extensively throughout our widely extended domain, I recommend at this time an increase in the total number of cadets of two additional appointments from each State and Territory, and the District of Columbia; thus making the number of appointments to be authorized under the law to be one from each congressional district and Territory and the District of Columbia, ten from "at large" annually by the President's selection, and two in addition from each State and Territory and the District of Columbia.

The difficulties that have been experienced for years past in training the minds and bodies of the young gentlemen sent to the academy to prepare them for usefulness as members of the military profession, arise mainly from the qualifications of the candidates being so exceedingly limited. While at the present time it may not be expedient to increase the standard for admission, I do urgently recommend that a selection from at least five candidates to be nominated for

each appointment may be authorized by law, when every section of the country would more certainly have its due proportion of graduates entering the army annually. Should this principle be authorized by law, the examination of the candidates could be ordered in several sections of the country, at convenient military posts, and thus save a great annual expense now incurred by partially educating and returning deficient cadets to their distant homes, insure a much greater proportion of members who could master the course of studies, and avoid the numerous and frequent discharges from the academy for inability to acquire the requisite information and proficiency for a graduate of this institution.

FINANCES.

During the year ending June 30, 1865, the expenditures of the department for fortifications on the Atlantic, Gulf of Mexico, Pacific coasts, and on the northern lakes, including bridge trains, trenching tools, and for all other military purposes, amounted to.....	\$5, 174, 335 23
For civil works, as lake harbors, harbors on the Atlantic, survey of the lakes, they amounted to.....	218, 400 00
And for the Military Academy, not including the pay of professors and cadets.....	86, 685 00
Making a total annual expenditure of.....	5, 479, 420 23

The accounts of the disbursing officers of the department have been regularly forwarded from month to month. These accounts had accumulated in the department during the past four years beyond the means allotted to the financial branch to examine, correct, and forward to the Treasury Department for final settlement.

During the year twelve hundred and three monthly accounts, amounting to \$11,834,308 35, have been thus examined and forwarded to the Auditor for final settlement, and there remain on hand at this time three hundred and ninety-eight monthly accounts to be examined, amounting to \$4,492,964 85. At the rate of progress made during the past year in the examination of these accounts, the work in a short time will be brought up to the months in which they are received from the officers. No defalcation or losses in any way exist in the disbursements and accountability of the officers of the department.

At the present time all property purchased for the armies in the field, either worn or of a perishable character, is being sold, and the avails will be returned to the treasury. The amount of sales to this date is \$34,123 12. The residue of this property is being stored in engineer depots for further use, at the Jefferson Barracks depot, Missouri, and at the Willett's Point depot, New York, under charge of engineer officers and troops of the engineer battalion.

The property of the department in the hands of its agents is accounted for quarterly, and the returns examined in this bureau.

The number of returns examined during the year is.....	220
And remaining to be examined.....	43

Making the number of property returns rendered by officers..... 263

RICH'D DELAFIELD,

General, and Chief Engineer U. S. Army.

Hon. E. M. STANTON,

Secretary of War, Washington, D. C.

REPORT OF THE VISITORS TO THE WEST POINT ACADEMY.

WEST POINT, N. Y., June 26, 1865.

SIR: The board of visitors invited this year to attend the annual examination of the United States Military Academy, and to inquire generally into the condition of the institution, respectfully submit the following as their report:

The members of the board, being nearly all present, on the 2d instant entered at once upon the discharge of their duties. Within a few days, others arriving, the whole number was complete, with the exception of one gentleman on the list who has not appeared; and from that time until the termination of their labors, to-day, they have continued to devote themselves, with more or less constant participation of each, to the business for which they assembled.

This somewhat protracted session has been occasioned, not merely by the usual great variety of subjects presented for investigation and consideration, but by the size of the graduating class of cadets, more numerous than any heretofore ever sent from the academy, and the necessarily longer time required for their examination. The board believe, however, that the time has not been unprofitably employed.

The board, after organization, and at other times during their stay, have visited and carefully inspected the various buildings, grounds, library, scientific apparatus, and other property attached to and used for the purposes of the academy, and have, during a considerable portion of each day, attended the examinations of the several classes, and have also witnessed the exhibition of the drill of the cadets in the various branches of military service.

The training, drill, and discipline of the cadets in all that relates to the duties of the soldier appear to the board to be of the first and highest order; and they doubt if a finer or more creditable exhibition in those particulars can be made by a body of military students at any other institution in the world.

The average proficiency of the young men of the graduating class, as indicated by their answers and performances in the examination room, was only fair, or at least not above the ordinary measure of other first-rate educational establishments in this country.

This is perhaps principally owing to an attempt to crowd too much into the last year of the academic course; a difficulty which may in some degree be remedied by a proposed new arrangement of the subjects taught during the four years given to instruction here. But it was evident that there was more than a proper and allowable difference between the sections of the class in question; and that some of those lowest on the list would hardly be considered as coming up to the standard necessary to secure the honors of a noble national institution like this.

In one particular, especially, the members of the board could not help but remark a too prevailing deficiency, even in the highest classes. There was an almost general want of distinctness and precision in the language in which the cadets expressed their answers when under examination, exhibited even in frequent and inexcusable errors of pronunciation and of grammatical construction. While the board did not yet expect proof of finished cultivation and scholarship, it is thought that more pains taken on the part both of instructors and pupils might have avoided at least such common and careless inaccuracy, and would have secured a habit of exactness not to be altogether overcome or confused, even under the ordeal of examination.

The subjects of discipline, instruction, police, administration, and fiscal affairs, to which the attention of the board is by law especially directed, were referred to standing committees; and the reports of those committees are hereto appended, as parts of this report.

As a means of obtaining direct and reliable information to guide them in their inquiries and reflections, the board considered it proper, also, at an early day after their organization, to apply to those officers immediately connected with the government and instruction of the academy. Accordingly, the following resolution was passed, and a copy thereof communicated to the superintendent and each member of the academic staff:

"Resolved, That the superintendent of the Military Academy and the several members of the academic staff be invited to communicate to this board their views and suggestions in writing, for the future management and requirements of the institution, and what changes, if any, are necessary for its increased usefulness."

And afterwards, by further resolution, the same invitation was sent to each member of the military staff of the academy.

In compliance with this request, answers have been received from the superintendent, and from the majority of the members of the academic and military staffs, which, as being of more or less interest, and some of them containing valuable views and statements, are also appended and submitted herewith. Several of the officers have not, however, made any reply, nor thought proper to give the board the benefit of their suggestions.

In this connexion it is thought proper to record a difference of opinion in relation to their respective powers and duties, which has arisen between the board and the superintendent of the academy, and the disposition made of the question. This record is due to those who may come after us, as serving to define and construe the power and practice of any future board of visitors.

Understanding that an order had been issued by the superintendent to the several members of the academic and military staffs, requiring them to transmit such communications as the board of visitors had invited them to make, only through him as "the usual official channel," the board considered it a just interpretation of the duty in which they were engaged, to pass and convey to the superintendent the following resolutions:

"Resolved, That this board, deriving its existence and authority by appointment of the President, under the provisions of a law of the United States, is charged by that law, and by the instructions of the appointing power, to inquire into, and report for the information of Congress, the actual state of the discipline, instruction, police, administration, fiscal affairs, and other concerns of the Military Academy; that the information sought for by the board, in the discharge of their duties, by inquiry and request for written or other communications from the members of the academic and military staffs, or from any other officers or persons within the command at West Point, is of the nature of testimony; and this board does not recognize the right of the superintendent of the academy and commandant of the post to supervise the said testimony, whether written or oral, or to require the same to pass through his hands, but denies the propriety of his claim to any such supervision or inspection.

"Resolved, That the secretary immediately communicate a copy of the foregoing resolution to Brigadier General Cullum, the superintendent of the academy."

These resolutions being forwarded by the superintendent to the War Department for instructions, the board are gratified to learn, from copies of correspondence communicated to them, that the Secretary of War is of opinion that "the department has no authority over the board of visitors to direct its course of procedure for acquiring information upon the points concerning which it is required to make report." If it were otherwise, it must be very obvious that circumstances might some time exist under which a board of visitors might be crippled of its usefulness, and defeated in the pursuits of the very information it might be most important to obtain. These remarks, however, and the course of the present board in this matter, are not to be understood as meaning any impeachment of the present superintendent, so far as relates to the general exercise of the duties of his office, or as intimating any disposition manifested on

his part to interfere with or limit the general scope of the inquiries instituted by them. On the contrary, the most perfect facility in every other respect for pursuing their investigations has been most courteously, and at all times, afforded by General Cullum himself, as well as by all others sharing in the government or management of the academy. There was only an issue made with him in regard to the proper legal power of the visitors, in which they believed him honestly mistaken in his intervention; and they considered it a duty to themselves and to the government to maintain and vindicate their right of free investigation. But, to their surprise and regret, they find that General Cullum does not understand the letter of the Secretary of War to him as sustaining the position taken by the board, but still persists in requiring the information given by his officers to come only through him. Several such communications, when the call for them was renewed, have been thus forwarded just as the board is closing its session. By reference to the most of these it will be seen that the writers are remarkably reticent or unwilling to speak in regard to the academy in any way; and it is only to be left to conjecture how far such declining to testify may or may not have been affected by the fact that their letters must pass under the examination of their commanding officer.

Referring to the accompanying reports of the several committees charged with the consideration of special subjects, and to the suggestions furnished by officers of the academy, it is not deemed necessary to repeat the details contained therein, nor enlarge the views and reasoning on the different points presented. The members of the board are agreed in the following general conclusions and recommendations, which they propose as embodying all that they think most important now to be urged for the future increased usefulness of the institution:

1. We are of opinion that the law should be so changed as that the superintendency of the academy may be thrown open to the whole army, instead of confining the selection, as now, to an officer of the engineer corps. The institution having ceased to be only, or mainly, a school for engineers, as at first established, and having become the one great national military and polytechnic institute of our country, the reason for such exclusiveness no longer exists, and it is recommended that the appointment be free hereafter to every arm of the service.

2. Looking to the probable organization and increase of the army of the United States, and finding that with the present accommodations, and at a comparatively small increased expense, a greater number can be educated than are now admitted to the academy, we recommend that the corps of cadets be increased to four hundred; but this increase should of course be made gradually and in successive years, so as to keep up a due proportion and equality of numbers in the different classes. We desire, however, not to be understood in this recommendation as proposing to interfere with a system which we trust will be adopted for commissioning a large proportion of officers from the ranks or from civil life, on proper examination. The demand will be ample enough to require both sources of supply; and we are clearly satisfied that, in justice to the many meritorious officers and soldiers of volunteers who have shown their patriotic devotion to the country in its late hour of trial and need, selections should be made, and commissions given to all those who can establish claims to appointment by reasonable proof of capacity and acquirements, taken in connexion with actual service in the field. On this point, too, we beg leave to suggest that it might be a wise and just act of legislation for Congress to extend the age of admission to the academy to twenty-four years, for the benefit of those young men who have been not less than two years in the military service of the United States during the late war of rebellion, thus making their cases exceptional to the general rule.

3. Since the act of 1812 the standard of admission to the academy has been limited to reading, writing, the four ground rules of arithmetic, proportion, and

vulgar and decimal fractions. We adopt the recommendation contained in the report of the Committee on Instruction, that the standard for admission be raised by the addition of English grammar, descriptive geography, particularly of our own country, and the history of the United States. With the standard thus raised, not only a better class of students would enter the academy, but a great and very much-needed relief to the crowded courses of the first and second classes would be obtained by the transfer of studies proposed by the committee, which could be effected in consequence of the time saved by the previous acquirement of the branches recommended.

4. As connected with this raising of the standard of qualification for admission to the academy, we recommend such change of the law as will require appointments of cadets to be made, under proper conditions and restrictions, one year in advance of the date when they are to enter the institution. This will secure readiness for examination and many of the advantages that would be derived from the establishment of a preparatory school.

5. We repeat the recommendation made so often by former boards of visitors, that some legislative provision be made for competitive examination of candidates for cadetships. Such examinations, for convenience and economy, ought to be held in the several States or districts from which the appointments are to be made, under the supervision of the members of Congress, who by usage have the nominations, and at the expense of the government, which expense need be but trifling in amount, as compared with the great advantages to be gained by the selection of the most promising aspirants.

6. Candidates may now be admitted between the ages of 16 and 21. We recommend that in future no one be received who is under 17 or more than 22 years of age. The severity of the physical training and discipline is such that youths of 16 often do not possess the requisite strength and power of endurance. A greater maturity of mind and body of those entering seems desirable.

7. Our attention has been attracted to the fact that under existing regulations the cadets are forbidden to wear whiskers and moustaches. This may seem to be a matter of small consideration; but we are of opinion that while the present close-shaven faces detract from the manly and soldierly appearance of the corps, nothing is gained by this rule, but, on the contrary, perhaps something lost in point of health. We recommend that the regulation be so amended as to allow the entire beard and whiskers to be worn, only requiring that they be kept closely and neatly trimmed, and with as much regard as possible to uniformity of style.

8. In view of the fact that a very large proportion of the cadets who are returned to the academy, after having been found deficient and dismissed by the academic board, fail in their subsequent examinations and are again dismissed, we are decidedly of opinion that the best interests of the institution require that great caution and discrimination should be used in returning those who have thus failed.

9. In accordance with the report of the Committee on Administration, we desire to record our strong disapprobation of the too prevalent habit of profane swearing, as existing among the cadets, and earnestly to recommend that every proper expedient be used to check and suppress a practice so unbecoming and pernicious; and we also advise the establishment of public daily prayers for the cadets, at such hours as may not conflict with other exercises in the academy, and in accordance with the practice of other colleges in the country.

10. It will be observed that the Committee on Administration have in their report animadverted with severity on the practice of "hazing," consisting in the gross imposition by the cadets of the classes above on those newly arrived or of the fourth class, as well as their forced exaction from those neophytes of the performance of the most menial offices. The Committee on Discipline have

commented on the same subject, and urged the continuance of measures for its effectual suppression. It is, in fact, the English system of "fagging," carried here sometimes to barbarous extremes. No good, but much harm, can come of such selfish and oppressive custom, and we trust that the Secretary of War will continue to sustain the authorities of the academy in their efforts, by abridgement of furloughs and other fitting punishments, to entirely break it up.

11. We concur in the view taken by the Committee on Discipline of the propriety of introducing into the system of punishments of cadets a more marked distinction between gross offences, or such as involve moral turpitude, and such as are more strictly conventional, and in violation only of necessary regulations. Many delinquencies of the latter class, which are now punished by demerit marks, and which marks accumulate against the offender, who may be only careless and mischievous, but not bad or unpromising, and go to affect his class standing, it appears to us might better be followed by some fitting penalty on the spot, and so done with. For such comparatively trivial offences a prompt and certain punishment would be better, without reserving the added chances of degradation or dismissal, except in cases of repeated petty misdoings, where the penalty might still be loss of future standing, not for the original breach of rules, but for the spirit of incorrigibility manifested by perseverance in such behavior.

12. We recommend that a first assistant professor of the Spanish language be provided for, to be put on the same footing as first assistant professor in the other branches of study. The board are gratified to learn, from the clear and full statement reported by the Committee on Fiscal Affairs, that the accounts of the academy and post have been kept during the past year in the most accurate and satisfactory manner.

Among the objects of proper expenditure to be brought to the attention of Congress, the board of visitors especially urge for favorable consideration the great necessity for an improved system of ventilation and heating of the barracks and other academic buildings; an improvement in the apparatus for cooking for the cadets; repairs of the hospital building, including the introduction of baths for the sick; the construction of water-closets in the library building, and a supply of new furniture for the recitation rooms, much of that now in use having become dilapidated and worthless. The need of appropriations for these several purposes is set forth fully in the report of the Committee on Police, and the board concur in their recommendations. The Secretary of War can cause exact estimates of the cost of these several proposed supplies and improvements to be furnished to him, if he should prefer not to depend on those submitted by that committee.

The board concur also with the recommendations made by the Committee on Fiscal Affairs, that sufficient appropriations be made for the removal and enlargement of the gas house and works, which are now inadequate to the wants of the academy and post; for the removal and reconstruction of the magazine, which is now in strange and dangerous proximity to the engineer barrack and other buildings, and for a thorough repair of the officers' quarters.

Another improvement proposed by the Committee on Administration has been thought by the board worthy of special mention and commendation. It is an extension of the cemetery. If the argument for enlargement of that most interesting and sacred spot should not prevail over the objection of economy, it is hoped that a sum may be obtained at least sufficient to repair the present dilapidated enclosure and clear up the neglected paths, so as to show decent respect for the last resting place of the honored brave, and the smitten hopes of our country, whose graves occupy that beautiful plateau.

Among many improvements made during the administration of the present superintendent is one of peculiar and touching interest: it is the device of placing on the walls of the chapel neat marble tablets, or mural monuments, inscribed with

the names of those dead army officers who have in the past been made illustrious by rank, or gallant deeds of arms, or have fallen in battle. It was a happy thought to be executed at this particular place. It is most fitting that the United States Military Academy, the nation's great school of arms, should be made to perpetuate such names and histories; thus keeping before the eyes and present in the memories of the young men here educated the noble example of faithful service and devotion to our common country.

The board recommend that the tasteful and enduring record thus begun shall be continued, and that means be furnished to extend the same mark of respect to all the officers of our army, regulars and volunteers alike, who have suffered and fallen in the war just closed in a glorious and successful struggle to vindicate the honor and maintain the life of the nation. Happy for the recreants who fought to destroy their government if, in the light shed from such a brilliant roll of the faithful, their names and treasonable career could be thrown into deeper shadow of oblivion!

For continuing the erection of these memorial tablets, including a mural monument to Washington, for which an appropriate design has been made, the board earnestly recommend an appropriation by Congress of five thousand dollars.

Such a sum will also enable the superintendent to finish a now incomplete arrangement for the preservation of many of the most interesting trophies of war which have accumulated here; and especially to inscribe suitably with the names of the battles in which they were taken some of the finer pieces of ordnance that have been captured during the rebellion and sent here for keeping. Let these lasting lessons, engraved on stone, and bronze, and iron, fill and stimulate the hearts and minds of those whose special task it must be hereafter to aid in upholding and defending our flag and all that it represents.

Let those who may come here in the future to prepare for such duty from States once in insurrection hail the sight of these proofs that the parricidal attempt of their fathers was a failure. And let all unite in cultivating by every help and influence that which now, more than ever before, seems to be a growing and strengthening sentiment at this national school of military and general science, that the truest and most precious interests, duties, and inheritance of the soldier and the citizen are one, the same, and can never be separated.

ROBERT C. SCHENCK, of Ohio,

President of the Board

F. A. CONKLING of New York,

Secretary of the Board

JOHN M. FESSENDEN, Massachusetts.

ALFRED P. ROCKWELL, Connecticut.

J. F. DRIGGS, Michigan.

THOMAS COTTMAN, Louisiana.

D. H. BINGHAM, Alabama.

MORTON S. WILKINSON, Minnesota.

J. D. LYMAN, New Hampshire.

CHRIS. C. COX, Maryland.

A. G. MACKEY, South Carolina.

J. B. THOMAS, California.

A. P. KELSEY, Maine.

J. W. NYE, Nevada.

HENRY W. LEE, Iowa.

DAVID L. SWAIN, North Carolina.

WYLLY WOODBRIDGE, Georgia.

REPORT OF THE CHIEF OF ORDNANCE.

ORDNANCE OFFICE, WAR DEPARTMENT.

October 20, 1865.

SIR: I submit the following report of the principal operations of the Ordnance department during the fiscal year ended June 30, 1865, with such remarks and recommendations as the interests of that branch of the military service seem to require.

The fiscal resources and the disbursements of the department, during the year, were as follows, viz:

Amount of appropriations remaining in the treasury June 30, 1864.....	\$4,978,791 97
In the government depositories, to the credit of disbursing officers, on same date.....	1,797,387 16
Amount of appropriations from 30th June, 1864, to 30th June, 1865, including the fixed annual appropriation for arming and equipping the militia.....	38,800,000 00
Received since June 30, 1864, on account of damages to arms in hands of troops, from sales of arms to officers, and of condemned stores, and from all other sources not before mentioned.....	207,476 97
Total.....	45,783,656 10
Amount of expenditures since June 30, 1864.....	\$43,112,531 27
In the government depositories, to the credit of disbursing officers, June 30, 1865.....	2,671,124 83
Amount of appropriations remaining in the Treasury same date,.....	
Total.....	45,783,656 10

The estimates for the next fiscal year call for appropriations only for continuing the armament of our permanent fortifications, and for the work already begun for increasing the manufacturing and storage capacity of the arsenals, including a distinct provision for the proper storage and care of gunpowder. These are all measures not confined to the necessities of war, but requisite for keeping up a suitable preparation for any contingency, and for preserving the large and valuable munitions of war which the country now possesses.

The manufacturing capacity of the arsenals was steadily increased from the date of my last report until May, when the sudden termination of hostilities made it apparent that the immediate demand for munitions of war, beyond the supply then on hand and contracted for, had ceased.

Measures were promptly taken to reduce the manufacture and purchase of supplies, and to provide for necessary storage, and for preserving the vast quantities of ordnance and ordnance stores which had been issued to the armies and captured from the enemy. Extensive temporary buildings have been erected at some of the principal arsenals, and much of this property has already been received and securely stored in them.

Large and commodious fire-proof workshops are now being erected at Allegheny, Watervliet, and Frankford arsenals; and so much of these buildings as will not be required, in time of peace, for manufacturing purposes, can be advantageously used as storehouses, of which the want of an adequate supply is now manifest.

It is in contemplation to erect extensive fire-proof workshops at Washington

arsenal, which is considered an eligible position for a first-class arsenal. A portion of these shops can likewise be used for storing the large quantities of ordnance supplies which are now necessarily kept in insecure temporary buildings at that arsenal. Money for this object has already been appropriated by Congress.

The importance to the country of having the armaments placed in the forts as rapidly as they can be prepared to receive them is so evident, that I have caused the manufacture of sea-coast gun-carriages to be continued as rapidly as practicable at the two arsenals which possess the proper facilities for making them; and orders have been given to the several founders, who have been engaged in making heavy guns for this department, for as many guns as carriages can be made for.

I have been informed by the chief engineer that he will be prepared to receive guns in the forts faster than carriages can now be made, and it is in contemplation to increase the capacity for manufacturing sea-coast carriages.

Experimental wrought-iron field and siege gun-carriages have also been made and tested, with results so satisfactory as to render it certain that these carriages may be advantageously substituted for the wooden carriages, and it is proposed to make no more gun-carriages of wood.

The smooth-bore cannon of large calibre which have been used during the war have given satisfaction, and are regarded as perfectly reliable. The great importance of having reliable rifled guns of large calibre is universally admitted, and the attention of this government, and of the nations of Europe, has been directed to that object; but so far, it is believed, without entire success in its accomplishment.

The many failures, by bursting, of the celebrated Parrott guns in the land and naval service have weakened confidence in them, and make it the imperative duty of this department to seek elsewhere for a more reliable rifle gun.

Mr. Horatio Ames, of Falls Village, Connecticut, invented a plan of making wrought-iron guns, which many believe would possess those qualities which are so very desirable for guns of heavy calibre, and although the cost of these guns was necessarily very great in comparison with the cost of cast-iron guns, a conditional order was given to Mr. Ames to manufacture fifteen of them for the government; the condition being that the guns should be superior to any rifled guns in the service. One of these guns was fired under the direction of a board of officers, who unanimously expressed the opinion that the "Ames wrought-iron guns possess, to a degree never before equalled by any cannon of equal weight offered to our service, the essential qualities of great lateral and longitudinal strength, and great powers of endurance under heavy charges; that they are not liable to burst explosively and without warning, even when fired under very high charges; and that they are well adapted to the wants of the service generally, but especially whenever long ranges and high velocities are required." The board also expressed the opinion that the fifteen Ames seven-inch guns possessed sufficient weight and strength to receive an eight-inch bore, and recommended that the gun which had been fired under their direction should be reamed up to eight inches and subjected to further trial.

They further decided, that Mr. Ames had fulfilled the obligation incurred by him in his contract to furnish the gun, and that so many of the guns as should endure a proof of ten rounds with the service charge, and pass the proper inspection, should be accepted and paid for.

Two of the fourteen guns burst in proof, exhibiting serious defects in their manufacture—defects in welding—which I had been apprehensive could not be avoided. The guns which endured the proof of ten rounds were accepted and paid for by this department.

The gun which was fired under the direction of the board was bored up to eight inches and fired twenty-four times with service charges, when it burst,

exhibiting the same defects that were developed in the other guns which burst. The failures in subsequent firing indicate that these guns cannot be relied upon, and that no more of them ought to be made for the department.

Believing that, with our present knowledge of the properties of metals and our skill in working them, reliable rifle guns of large calibre can be made of cast-iron, I have, with your sanction, caused a pair of eight-inch rifle guns of the supposed proper model and weight to be made. These guns are now at Fort Munroe, undergoing extreme proof, and should their endurance be satisfactory, it is proposed to have other guns like them made.

NATIONAL ARMORY.

The capacity of this establishment for the manufacture of muskets was not increased after the date of my last report, and upon the conclusion of hostilities, in view of the large number of muskets on hand of a model which will probably become obsolete very soon, the manufacture was reduced as rapidly as it could be done with economy; and at present no new muskets are being assembled. Only those parts which were in different stages of advancement are being finished.

In my last report I stated that it was in contemplation to change the manufacture at the national armory as soon as the best model for a breech-loading musket could be established, and that details for effecting this measure would receive the early attention of this bureau. Extensive experiments have been made by a board of officers, and also under my direction and supervision, to effect that object; but as yet, no arm has been presented which I have been willing to recommend for adoption. The selection of a proper model is considered so important a measure, that I have preferred to act slowly and with great care in its selection, rather than take a false step and have to retrace it. I hope to be able very soon to recommend a model for your approval.

A plan for altering the muzzle-loading musket into efficient breech-loaders has been devised by the master armorer at Springfield armory, which appears to be superior to any other that I have seen. I have taken measures to have five thousand muskets altered according to it, and will have some of them issued to troops for trial as soon as the alterations can be made.

The muskets of the prescribed pattern which have been turned in by the troops are being cleaned and repaired.

The number of Springfield muskets on hand and suitable for issue will reach nearly one million, while the number of foreign and captured muskets will exceed half a million. As none of the latter class will probably be required for issue, and as the care and preservation of them will be attended with considerable expense, they should be sold whenever suitable prices can be obtained for them. This recommendation will apply to other ordnance stores of a perishable nature, which are in excess of the wants of the department.

In my last annual report I called your attention to the danger of keeping large quantities of gunpowder at our arsenals, which are generally in the vicinity of closely populated districts, and recommended that a suitable site for a depot capable of storing at least one hundred thousand barrels of gunpowder should be acquired. The conclusion of the war has left this department with vast supplies of gunpowder and prepared ammunition on hand, all of which has to be stored at the arsenals, and much of it in buildings which are entirely unfit for the purpose; thereby endangering the safety of the arsenals, and in some cases of private property in the vicinity. This evil cannot be corrected too soon, and I earnestly call your attention to the necessity of obtaining from Congress authority to purchase a suitable site for a powder depot.

In my annual estimate I have asked for an appropriation for the purchase of

a site and the erection of magazines. Only so much powder as may be necessary to supply the current wants of the army should be kept at the arsenals.

The military reserve at Jefferson Barracks, Missouri, being a suitable position for a powder depot, for supplying the Mississippi valley, and a portion of it having some years ago been assigned to this department for the erection of powder magazines, I have taken measures to have three magazines, capable of containing five thousand barrels each, erected on it; and two of them will be finished this fall.

In my last annual report I stated that, in pursuance of the provisions of the act of Congress approved April 19, 1864, possession had been taken of Rock island, for the purpose of building and maintaining thereon an arsenal for the construction, deposit, and repairs of arms and munitions of war. The United States has not yet acquired a title to the property which has been taken possession of. It is important that the provisions of the act of Congress above referred to should be carried into effect, and a complete title to all of Rock island acquired by the United States before any permanent buildings are commenced. I recommend that this be done with as little delay as practicable. Evidences of title to the land, of which possession has been taken, have been forwarded to you for examination by the Attorney General, as is required by the act above referred to.

Adjacent to Rock island, and connected with it by a dam, is a small island, known as Benham's island, of which possession has not been taken. It appears to have been the intention of Congress in passing the act above referred to that the United States should have full and complete possession and control of Rock island for military purposes. Should Benham's island, or any other small islands or accretions in the river, lying between Rock island and the shores of Illinois and Iowa, be held by private parties, with the right of way across the island as is now claimed by the owner of Benham's island, the principal object of the law will be thereby defeated.

If additional legislation is necessary to give the United States full possession and control of the whole of Rock island, including the adjacent island, I recommend that it be asked of Congress.

The buildings erected as a prison and barracks on Rock island have been turned over to the Ordnance department, and are now used as storehouses, &c.

Several of the southern arsenals have been reoccupied, and it is the intention of the department to reoccupy all of them, except the Fayetteville arsenal, in North Carolina, which was destroyed.

An extensive powder-mill at Augusta, Georgia, and a large armory (unfinished) and a laboratory at Macon, Georgia, which were built by the rebel government, have fallen into possession of this department. The necessary measures for preserving the property have been taken.

The number of permanent United States arsenals and armories, exclusive of temporary depots established for war purposes, most of which have been, and all of which will soon be discontinued, is now twenty-eight. In addition to the command and supervision of these, the officers of this department are charged with the inspection of materials and manufacture of ordnance, gunpowder, and such small-arms and equipments as are made for the government at the foundries, powder-mills, and other private establishments. These duties furnish constant employment for all the officers of the ordnance corps now authorized by law, the total number of which is sixty-four. The arsenals alone require, as a minimum number in time of peace, fifty-six, and the bureau and inspection duties at least eight more. During the late rebellion the want of a greater number of regular ordnance officers, educated for and experienced in their peculiar duties, was seriously felt; and the necessity, arising from the inadequate provision in this respect, of the frequent employment of acting ordnance officers, caused much embarrassment and confusion, and was detrimental to the public service

and interest. These now require that the additional offices of the ordnance department authorized temporarily by sections 4 and 12 of the act of March 3, 1863, shall be continued as part of the military peace establishment.

The tabular statements accompanying this report show in detail the ordnance, arms, and other ordnance supplies which have been procured and issued through this department during the past fiscal year. The armies in the field were amply and well supplied in this respect. The permanent fortifications have had their armaments kept in order, and strengthened and increased by the addition of guns of heavy calibre and great efficiency.

Very respectfully, your obedient servant,

A. B. DYER,

Brigadier General and Chief of Ordnance.

Hon. E. M. STANTON,
Secretary of War.

Statement of ordnance, arms, ammunition, and other ordnance stores procured and supplied to the army, and the quantity remaining on hand at the close of the fiscal year ending June 30, 1865.

Articles.	On hand June 30, 1864.	Purchased, fabricated, and turned in by the army during the year ending June 30, 1865.	Issued to the army and expended in manufacture during the year ending June 30, 1865.	On hand June 30, 1865.
Field guns of different calibres	875	1,235	354	1,756
Siege guns and mortars of different calibres	346	424	32	738
Sea-coast guns and mortars of different calibres	812	612	593	831
Cannon balls, shells, and other projectiles for field guns	278,324	969,130	676,815	570,639
Cannon balls, shells, and other projectiles for siege guns and mortars	193,297	332,305	14,779	510,823
Cannon balls, shells, and other projectiles for sea-coast guns and mortars	469,619	317,658	178,235	609,042
Artillery carriages for field service	618	725	448	895
Artillery carriages for siege service	134	131	109	156
Artillery carriages for sea-coast forts	790	545	797	538
Mortar beds	142	329	7	464
Calissons	616	639	307	948
Travelling forges	70	116	87	99
Battery wagons	67	97	42	122
Muskets and rifles	1,167,405	426,571	398,404	1,195,572
Carbines	22,676	142,201	99,051	65,766
Pistols	34,821	70,744	37,503	68,062
Swords and sabres	80,645	112,067	64,692	128,030
Sets of infantry accoutrements	335,434	336,130	271,925	419,639
Sets of cavalry accoutrements	68,428	127,850	93,281	102,997
Sets of horse equipments	26,938	142,497	95,030	74,425
Sets of artillery harness for two horses	3,029	4,069	1,255	5,843
Saddle blankets	79,229	238,388	197,940	120,277
Rounds of ammunition for field guns	793,455	702,156	286,925	1,208,686
Rounds of ammunition for siege guns and mortars	53,009	42,738	15,236	80,511
Rounds of ammunition for sea-coast guns and mortars	4,805	54,465	4,631	54,639
Rounds of ammunition for small arms	209,315,880	261,636,538	188,784,530	282,167,888
Perussion caps	150,931,237	178,211,512	238,063,778	91,078,971
Friction primers	1,251,842	2,242,900	1,583,640	1,911,102
Fuzes	980,854	1,300,012	719,678	1,561,188
Pounds of powder	2,329,230	6,619,925	5,582,330	3,366,825
Pounds of nitre	8,120,240		21,254	8,098,986
Pounds of sulphur	622,054		213,122	408,932
Pounds of lead	30,668,929	19,743,668	10,751,494	39,661,103
Pounds of lead balls	6,128,502	11,295,637	11,906,308	5,517,931

A. B. DYER,

Brigadier General, Chief of Ordnance.

ORDNANCE OFFICE, October 20, 1865.

REPORT OF THE SIGNAL OFFICER OF THE ARMY.

OFFICE OF THE SIGNAL OFFICER,

Washington, October 20, 1865.

SIR: In answer to your communication of the 7th instant, I have the honor to submit the following annual report of the operations of the signal corps for the year ending October 20, 1865:

On the 1st of November, 1864, the corps was represented in the field by the following detachments, thoroughly equipped, active, and energetic, to wit:

Detachments	Officers of signal corps.	Acting officers.	Non-commissioned officers.	Privates.
Office of the signal officer	3		2	9
Department of Washington	6	1	5	66
Signal camp of instruction	16	4	3	86
Army of the Potomac	12	3	13	167
Department of Virginia and North Carolina	15	8	14	137
Department of the South	7		13	39
Department of the Cumberland	9	10	10	87
Department of the Tennessee	6	7	7	140
Department of the Ohio	4	4	1	42
Military division of West Mississippi	10	15	10	210
Department of Kansas	2	5	2	51
Middle military division	8	8	2	168
Department of the Susquehanna	4	1	2	64
Total	102	66	84	1,266
		168		1,350

Such was the disposition of the corps, and the following, in general terms, the nature of services performed:

The duties of the corps during the past year were better understood than in previous years, which gave to it more tone and character, and enabled it to approximate in most of the military departments to its true position.

In one—the department of the Gulf—it combined all the branches of the corps of information which it was designed, and of right ought to be. Here it added to aerial telegraphing, telescopic reconnoitring, and general scouting, the entire secret service department, thus having all information usually gathered from these sources flow into one common centre, where it was compared, classified, reduced to logical form, and then laid before the commanding general to be acted upon. The advantage arising from thus concentrating these services is specially apparent in the fact that particular reports and doubtful information could be thoroughly sifted and tested in two, three, or more, different modes, by the one officer having control of the several means for collecting knowledge of the enemy's movements and designs.

In other military departments, as I have stated, the corps only approximated to this more perfect system of economy. But as the value of concentration in military organizations was being daily more and more recognized, these duties, if the war had continued, would undoubtedly have been eventually assigned to the corps, wherever a detachment of it would have been placed upon duty.