

interests of the government. The suggestions made in previous reports for the construction of magazines in the interior, away from our large cities, for the establishment of a gunnery ship, and for a well-organized practice ground, are again presented and urged as measures of paramount necessity. It is also recommended to institute a course of experiments with torpedoes, and establish a corps of operators for future service; and in order to avail ourselves of the results obtained abroad in the manufacture of cannon and small-arms, and their use in naval warfare, that officers of the navy be detailed to visit Europe from time to time, and witness the experiments made at the foundries and arsenals. The results of the investigation made by a board of ordnance officers into the cause of the failure of the Parrott rifled guns during the naval bombardment of Fort Fisher are appended, and will be found highly interesting.

The chief of the Bureau of Navigation submits the usual reports of the Naval Observatory, Nautical Almanac, and the general administration of his department. Most of the nautical instruments, and many other articles of navigation supplies, turned in from vessels put out of commission since the close of the war, appear to be available for reissue with some repairs and adaptations. Allusion is made to the prospect, apparently improved, of yet being able to dispense with foreign bunting for American flags. The preparation of a "Danger Chart" of the Pacific ocean to facilitate navigation is in progress; and increased attention is recommended to the collection of hydrographic data in that important quarter, towards the construction of new charts and correcting old ones. And the importance of a hydrographic office in this connexion, under the direction of the bureau, is strongly urged as a means now wanting of authoritatively promulgating discoveries, &c., in any way affecting the interests of navigation.

The chief of the Bureau of Provisions and Clothing details the measures taken upon the close of the rebellion for promptly reducing the expenses of his department, by discontinuing the purchase of supplies, and the closing of the depots in different sections of the country. The system adopted by the department in supplying the various blockading squadrons during the war with fresh provisions gave great satisfaction to officers and men, and added largely to the sanitary condition of the fleets. To meet the demands of foreign service, store-vessels, which are preferred to storehouses on shore, have been sent to the various headquarters of the squadrons. An increase in the corps of regular paymasters is urgently recommended, and additional accommodations for supplies in connexion with, or near to, naval stations are needed.

The chief of the Bureau of Medicine and Surgery presents the usual tables showing the sanitary condition of the navy. The number of persons under treatment during the year ending 31st December last was 73,555, of whom 1,373 died, and 2,671 were on the sick-list at the close of the year. The total number of deaths from October 1, 1864, to September 30, 1865, was 1,750, being a percentage of about .002 to the whole number of persons in service. The percentage of deaths to the whole number of cases treated is .018, or less than two per cent. During the progress of the war 1,406 persons were killed, 1,638 wounded, and 176 reported missing, making the total number of casualties in the naval service 3,220. But seventy-one persons have availed them-

selves of the provision of the act of Congress providing artificial limbs. The increased cost of living renders the monthly tax of twenty cents upon the salaries of officers and men inadequate to the support of naval hospitals, and unless some other means are devised, an appropriation by Congress will be required to meet the necessary expenses. A new laboratory building, at a cost of \$80,000 is recommended.

The colonel commandant of the Marine Corps reports the order and discipline of the corps as alike creditable to officers and men. During the year the strength of the corps has not materially changed. Though now to a considerable extent employed in guard duty on shore, the greater part of the corps have during the year been actively engaged in the operations of the several squadrons bearing their part in the naval operations of the war.

CONCLUSION.

In former reports, rendering an account of the administration of this department since I entered upon its duties, it has given me pleasure to make known my obligations to the gentlemen who have been associated with me in the conduct of its business. Continued experience has deepened my sense of grateful obligation for their ability, faithfulness, and industry under circumstances which were often not only responsible but embarrassing, and I gladly avail myself of this opportunity to again express my acknowledgment for their support and assistance. In our arduous and vastly extended naval organization and action during the past four eventful years, and especially in the new forms of power which modern inventions have produced, and the new scenes of effort which this unparalleled war has called forth, in which they have been so severely tried and so triumphantly illustrated, an extraordinary opportunity has opened and an unexampled necessity has existed for an administration of the Navy Department at once judicious and efficient.

Under the pressure of such an exigency, I certainly do not claim, and cannot hope, to have always avoided mistakes; but I do sincerely trust that the brilliant and glorious naval record which shines along the line of momentous events during the whole of this period may be accepted as proof that the department has been faithfully devoted to its duties, and that through its counsels and care the force of our navy has, in the selection of officers to wield and work it, been generally and to a very fortunate extent confided to the best and fittest hands. In the conduct of our naval operations to put the right man in the right place has been the constant effort of the department, and the recent history of the navy bears witness, I think, that the effort has not been unsuccessful nor fruitless. It is my pleasing duty to add that the number of highly meritorious officers, eminent in all the requirements and accomplishments of their profession, which our navy list presents, has not unfrequently embarrassed the department in its difficult task of selection.

As peace is being restored among us, the country now puts off the formidable naval armor which it had assumed to vindicate upon a mighty scale that supremacy of the national law which is the very life of our Union. In the details of

the policy and the measures by which our naval power is now brought down to the dimensions and distributed to the important operations of a peace establishment, the country will see with relief and gratitude a large and signal reduction of national expenditure. I need hardly say that this great object is kept constantly and carefully in view by this department.

Such alleviations of the public burdens is the plain dictate of a wise policy. Yet true wisdom directs that this policy of retrenchment in the naval branch of the public service must not be carried too far. It is still wise—the wisest—economy to cherish the navy, to husband its resources, to invite new supplies of youthful courage and skill to its service, to be amply supplied with all needful facilities and preparations for efficiency, and thus to hold within prompt and easy reach its vast and salutary power for the national defence and self-vindication.

Let the government still extend in judicious and moderate measure this fostering care to its navy, and whenever the crisis shall arrive that our national rights or interests are imperilled, we may be assured that the navy will again vindicate the claim which it has already so signally established, to the admiration and gratitude of the country.

GIDEON WELLES,

Secretary of the Navy.

The President.

The increase of naval vessels and their armament has been provided for by the purchase of the island of Seavey's island, which will be retained for further service; the cessation of hostilities does not therefore in this, as in other departments of the government, check the growing wants of, or gradual improvements in, docks and navy yards, which should be progressive with the improvements of the times.

It is an undeniable fact that most of our navy yards are entirely too limited in area, and ultimately they must be enlarged to meet the wants of the navy.

At the Portsmouth yard we have now five new ships-of-war under construction, one large ship recently launched, and a number of other vessels anchored in the stream for want of wharf accommodations. The area of this yard is only about sixty acres, and most of it is already occupied by buildings. I have, therefore, estimated for the purchase of the whole of Seavey's island adjacent to the yard; the purchase of this island will furnish an additional water front, and ample space for the erection of all the workshops and storehouses that will be required to make this a first-class yard. Besides, the bridge constructed across the water between Seavey's island and the navy yard, authorized by act of Congress, with the conditional free use of a way through the yard for the residents of the island, has caused an increase of inhabitants on the island, which will continue, and enhance the value of the ground. This increase of population is a source of great inconvenience and embarrassment to the government by the frequent use of the way through the yard and over the government bridge to Kittery, so that I recommend the purchase of the whole island if it can be obtained at a reasonable price. In case such acquisition cannot be made on reasonable terms, I recommend the prohibition, as provided by said act of Congress, at the discretion of the department, of travel of every kind from said island to and through the navy yard.

At the Boston yard we are equally cramped for room and water front with deep water, and therefore I have ventured again to estimate for the purchase of the wharf and water privileges heretofore presented to Congress as the property of Oakman & Eldridge; by this purchase the pile wharf estimated for at that

REPORTS

OF

THE CHIEFS OF BUREAUS.

BUREAU OF YARDS AND DOCKS.

Annual Report for the fiscal year ending June 30, 1867.

NAVY DEPARTMENT, BUREAU OF YARDS AND DOCKS,

October 12, 1865.

SIR: I have the honor to present the annual report and estimates for this bureau, showing the expenditures under it for the last fiscal year, with estimates for improvements for the next year.

The estimates will appear large, and though it is desirable to curtail the expenses of the government, now that the war has closed, yet it has been developed that much more extended accommodations are necessary than have heretofore been provided. The increase of naval vessels and their armament has been so large that the areas of the yards, the water fronts for vessels, storehouses, and workshops, are found to be insufficient to accommodate the vessels and stores which will be retained for further service; the cessation of hostilities does not therefore in this, as in other departments of the government, check the growing wants of, or gradual improvements in, docks and navy yards, which should be progressive with the improvements of the times.

It is an undeniable fact that most of our navy yards are entirely too limited in area, and ultimately they must be enlarged to meet the wants of the navy.

At the Portsmouth yard we have now five new ships-of-war under construction, one large ship recently launched, and a number of other vessels anchored in the stream for want of wharf accommodations. The area of this yard is only about sixty acres, and most of it is already occupied by buildings. I have, therefore, estimated for the purchase of the whole of Seavey's island adjacent to the yard; the purchase of this island will furnish an additional water front, and ample space for the erection of all the workshops and storehouses that will be required to make this a first-class yard. Besides, the bridge constructed across the water between Seavey's island and the navy yard, authorized by act of Congress, with the conditional free use of a way through the yard for the residents of the island, has caused an increase of inhabitants on the island, which will continue, and enhance the value of the ground. This increase of population is a source of great inconvenience and embarrassment to the government by the frequent use of the way through the yard and over the government bridge to Kittery, so that I recommend the purchase of the whole island if it can be obtained at a reasonable price. In case such acquisition cannot be made on reasonable terms, I recommend the prohibition, as provided by said act of Congress, at the discretion of the department, of travel of every kind from said island to and through the navy yard.

At the Boston yard we are equally cramped for room and water front with deep water, and therefore I have ventured again to estimate for the purchase of the wharf and water privileges heretofore presented to Congress as the property of Oakman & Eldridge; by this purchase the pile wharf estimated for at that

yard could be dispensed with. This property is especially required for the accommodation of coal for the navy and for additional wharf facilities.

Adjoining the New York yard is a valuable property, recently owned by Mr. Ruggles, who, some few years since, obtained a grant from the legislature of New York to extend his wharf out into the channel, to the great detriment of the yard, and which, if carried out, would have seriously if not wholly interfered with the use of the Wallabout waters for naval purposes. The right of Mr. Ruggles was contested by the department, and progress was suspended. Mr. Ruggles has died, and his executors and heirs have agreed to dispose of this property to the government at an appraisal ordered by this bureau, the amount of which was \$90,000. These premises are now rented to government at \$6,000 per annum, to continue until the action of Congress shall decide on the purchase, and are now full of government stores which cannot be accommodated in the navy yard. I have inserted an amount for this purchase, and most earnestly recommend the appropriation.

An arrangement has been made with the authorities of Brooklyn for an exchange of grounds, and awaits the confirmation of the city councils, which, when consummated, will accommodate both parties.

The purchase of an addition to the Philadelphia navy yard, for which funds had been appropriated, has been consummated, the money paid, and the property taken possession of.

The Norfolk yard, which had been made a heap of ruins, is now partially improved, and affords limited facilities for the repairs of vessels and machinery. This yard will require a large outlay when it shall be permanently organized; it was one of our most extensive and important depots.

At Pensacola the navy yard was reduced by the rebels to a waste of ruins. It is the only naval establishment on the Gulf, and will require large appropriations to rebuild and restore it to its former state of efficiency.

The department desires more accommodations for officers stationed at navy yards, and also barracks for seamen. It will be observed that the estimates submitted for these improvements cover nearly half the amount of the whole estimates of the bureau. It is desirable, and would prove advantageous to the service, to have more of the officers quartered in the yards; the only obstacle seems to be want of space, especially for the barracks, and, as the quarters, under the present rule, would have to be furnished, the outlay would be large.

During the war most of our machinery and engines have been constructed by contract with private establishments; this has been in consequence of the want of facilities in the yards, and shows the necessity of erecting proper works for the purpose; some such works are now in progress, and hence the reason why the estimates for machinery are so large.

I desire to explain why the estimate under the head of contingent is so large. The great demand for tools of all kinds, supplies for foundries, support of teams, contingent labor, &c., has been so urgent that the fund has been exhausted before the year expired, notwithstanding the bureau has cut off and curtailed many of the charges, and sometimes, when practicable, charged some of these expenses to other objects; still it has been impossible to keep the expenditures within the appropriation.

The naval asylum has been judiciously managed; the few decrepit veterans who occupy it are generally worthy objects, and have conducted themselves as well as could be expected, located as they are within reach of the temptations of a large city.

The purchase of a cemetery for the naval hospital and asylum has been consummated, and the grounds enclosed and laid out in Mount Moriah Cemetery, where we now bury the dead from those institutions.

I would mention that trespassers will probably soon be found on our reserved live-oak and pine timber lands in the south, and I submit whether timber

agencies shall again be established as formerly for the protection of the government's timber. Those agencies are somewhat expensive, but they in a great measure prevent much plunder of public property.

I again ask leave to present the claims of some of the clerks at navy yards, viz: commandants' and storekeepers' first clerks and clerks of the yards, which are, at the principal yards, now fixed by law at \$1,200; and if modified, it must be done by Congress. These clerks are hard-working men, and perform as responsible duties as those in the departments of the government receiving much higher pay. This class of clerks should receive the pay of second-class clerks in the departments—\$1,400.

It will be observed that some of the minor officers' pay on the civil list has been slightly advanced. They are not estimated at a higher rate, if as high, as the duties of the offices, if properly filled, merit.

The law regulating wages of workmen in navy yards by outside rates causes great embarrassment, as it is often impossible to ascertain the wages uniformly paid by private establishments, the principals in many cases refusing to give the information sought, and I recommend that the law be repealed.

I also beg leave to state that the salaries of the clerks of bureaus in some of the departments, particularly the Navy, are less than those of the department proper, and of bureaus in other departments; and yet, I venture to say they perform as responsible duties and labor as sedulously as any others; therefore I beg to draw your attention to the increase I have submitted for the clerks of the Bureau of Yards and Docks in the bureau's estimate, and trust it will meet your approval. It is unquestioned that all kinds of subsistence and supplies are now held at higher rates than at any time during the war, and at least double the rates prevailing at the time these salaries were established by law. It should also be borne in mind that these salaries, fixed when the cost of living was moderate, have remained the same, while the wages of mechanics and others in public and private employment have been advanced in proportion to the cost of living. It will therefore be perceived that men with small salaries and no other resources, especially those with families, have a hard struggle to live within their means.

I now proceed to remark on the improvements and repairs at navy yards, commencing with

PORTSMOUTH, N. H.

The improvements which have been completed at this yard during the fiscal year ending June 30, 1865, are, machine-shop and smithery, fitting and furnishing machine shop and smithery, capstan for shears, ordnance machinery and shops, boat-house and carpenter's shop, iron store and barracks, &c., on Seavey's island. The amount expended upon these objects during the fiscal year is, for materials \$10,431 77, and for labor \$16,522 50, making an aggregate of \$26,954 27. These works have been in successful use during a portion of the year, and have added much to the efficiency of the yard. The improvements which have been in progress, but are not yet completed, are: plumbers', coppersmiths', and tin shops, quay wall, moving pier, extension of ship-house S, machinery and tools, repairs of floating dry dock, shop for iron-clading, condenser, extension of ship-house R, launching slips, widening road, timber shed No. 28, and for repairs of all kinds. On these several objects there has been expended during the year, for materials, \$97,018 87, and for labor, \$105,834 07, making an aggregate of \$202,852 94. The work upon these objects has been prosecuted with vigor; some of them are nearly completed, and others well advanced towards completion.

There has been expended during the year, for objects coming under the head of contingent, the sum of \$152,845 02.

Plans and estimates are submitted for the fiscal year ending June 30, 1867, for the following objects, viz: iron foundry, shop for iron-clading, condensers,

road and timber slips, raising timber sheds Nos. 28 and 29 one story, enlarging office building, officers' quarters, quay wall, fitting and furnishing plumbers', coppersmiths', and tin shop, machinery and tools, completing plumbers', coppersmiths', and tin shops, repairs of all kinds, and for the purchase of Seavey's island, amounting in the aggregate to \$505,988.

Iron foundry, shop for iron-clading, condensers, and road and timber slips—During the past year the exigencies of the service have been such as to render the construction of the above objects absolutely indispensable, and to meet the pressing demands upon the yard it became necessary to use funds which had been allotted to other objects. The works have been completed and have proved of immense service, and an appropriation is now asked to replace the funds to the credit of the objects from which they were taken.

Raising timber sheds Nos. 28, 29.—At this yard there is a great want of addition at store-room, and as there is no available site on the yard for the erection of a new storehouse, it is proposed to supply the deficiency by raising two of the timber sheds another story; this improvement will be an important and valuable addition to the yard, furnishing room for the storage and safe-keeping of a large quantity of stores, and the appropriation is strongly recommended.

Enlarging office building.—The present office building is not of sufficient capacity to accommodate all the officers of the yard, and it is desirable that the offices should be concentrated. The most economical mode of procuring the necessary office room is to raise the wings of the building one story, and for that purpose an estimate is submitted.

Officers' quarters.—There are several officers attached to this yard, for whom no houses have yet been provided, and the department deems it necessary that all the officers attached to the station should reside within the limits of the yard, so that their services may be had at all times. An estimate is submitted for supplying dwellings for such officers as are without quarters.

Quay wall.—The extension of the quay wall on the northerly side of the yard is of the utmost importance, to furnish wharf and landing space for materials, and is much needed at this yard.

Fitting and furnishing plumbers', coppersmiths', and tin shop.—This important building is now in progress, and before it can be occupied it will be necessary to provide the requisite forges, benches and fixtures for the accommodation of the workmen. An appropriation for this object is highly necessary.

Machinery and tools.—The quantity of machinery and tools at this yard is quite inadequate for the execution of the large amount of work required to be done upon the iron-clads, and an estimate is submitted for the purchase of such as are deemed of the first importance. This item is an important one and cannot be urged too strongly.

Completing plumbers', coppersmiths', and tin shop.—This building is far advanced towards completion, but owing to the great increase in the cost of labor and materials since the original estimate was made, it is found that the funds allotted are not sufficient for its entire completion, and a small additional appropriation is therefore asked.

Repairs of all kinds.—The amount estimated under this head will be required for the necessary repairs of the various buildings, docks, wharves, boats, roads, walks, fences, &c., and is such as a proper regard to economy would dictate.

Purchase of Seavey's island.—The area of this yard is entirely too limited to afford sites for the necessary buildings, and working ground for the workmen engaged in the construction of vessels; an estimate is therefore submitted for the purchase of Seavey's island, for reasons hereinbefore stated.

BOSTON

The works of improvement which have been completed at this yard during the past fiscal year are, machinery for machine-shop, repairing machine for rope-

walk, and temporary storehouse. The amount expended in these objects during the year is, for labor \$16,563 57, and for materials \$7,211 48, making an aggregate of \$23,775 05.

The works which have been in progress, but which are not yet completed, are, paving and drains at new shops, coal-house for foundry, smithery, &c., house and foundation for heavy hammer, joiners' shop and paint-loft, extension of shear wharf, repairs around dry dock and surface drains, railroad tracks, and repairs of all kinds. The progress made upon these objects is satisfactory, and the amount expended during the year is \$250,562 77.

There has been expended at this yard during the past year for objects coming under the head of contingent the sum of \$447,323 48. Plans and estimates are submitted for the fiscal year ending 30th June, 1867, for the following objects, viz: for commencing building for all heavy wood-work; officers' quarters; for the purchase of the right of drainage through the yard, now held by the city of Charlestown; one steam fire-engine; widening main entrance; tools for machine and forge shops; machinery for ropewalk; filling in a portion of timber dock; pile wharf; addition to stable; building for offices; barracks for 5,000 seamen; repairs of all kinds, and purchase of Oakman and Eldridge's wharf; amounting in the aggregate to \$1,883,753.

Commencing building for all heavy wood-work.—A large part of the sawing of ship timber is now done by hand at an enormous expense, and as much of the work upon this class of timber may be done by machinery, it is proposed to erect a building of sufficient size to accommodate the sawing, planing, and turning machinery, with the necessary engines, to perform all the work upon heavy ship timber; the building will also afford sufficient room for the carpenters, coopers, and the fire-engines and hose, and will be located conveniently near to the ship-houses and building-slips, and will add greatly to the facilities for the economical execution of work.

Officers' quarters.—A number of the officers attached to this yard have no quarters provided for them, and as it is considered good policy to have all officers on the station located within the yard, an estimate is submitted for an additional number of houses.

Purchase of the right of drainage through the yard, now held by the city of Charlestown.—When the lands upon which this yard is located were purchased, the city of Charlestown reserved the right of drainage for a portion of the city through the yard, and the drains discharge into the timber dock. Since that part of the city has been built up and improved, this drainage has become a great nuisance, the filth from the city discharging into the timber dock, located near the centre of the yard, and it is very desirable that the right of the city should be extinguished.

Steam fire-engine.—There is but one steam fire-engine at this yard; and where there is so much valuable property stored, it is important that the fire apparatus should be as efficient as possible; an estimate is therefore submitted for an additional engine.

Widening main entrance.—The main entrance to the yard is contracted to about one-half the width of the principal avenue, by the adjoining estate. Convenience and symmetry both require that this should be opened to the width of the avenue, and as the buildings upon the required land are now in a very dilapidated state, no better opportunity for making the improvement is likely ever to occur. An estimate is therefore submitted for the purchase of this property, as marked on the plan.

Tools for machine and forge shops.—An additional number of tools is required for the different shops; great delays have occurred in consequence of the insufficient number of tools, and it has been very difficult to procure them during the past two or three years. This object is one of great importance, and is strongly urged.

Machinery for ropewalk.—During the past four years the machinery in this building has been worked to its utmost capacity; some of it requires renewing and several new machines are very necessary.

Filling in a portion of timber dock.—This dock is located near the centre of the yard, and the space occupied by it is much needed for other purposes; it is proposed to commence filling it up, and for that purpose an estimate is submitted.

Pile wharf.—Great delays and much inconvenience and loss have been experienced from want of wharf room for vessels bringing supplies to the yard. To remedy these difficulties it is proposed to build out a pile wharf near the foundries. This improvement is much needed, and the appropriation is strongly urged.

Addition to stables.—The present stables are insufficient to accommodate all the cattle now employed in the yard; some of them are quartered in temporary sheds, and for the comfort of the cattle, security against fire, and the appearance of the yard, it is required that an addition should be made to the main stable and these temporary sheds be removed.

Building for offices.—For the convenience of the business of the yard, as well as for the safety of the public records and other property of a similar nature, it is desirable to have a substantial building conveniently located and reasonably safe against fire. The present offices are in temporary buildings, inconveniently located and unsafe.

Barracks for 5,000 seamen.—In compliance with your instructions, plans and estimates are submitted for the erection of barracks to accommodate 5,000 seamen on shore.

Repairs of all kinds.—The amount submitted under this head will be required for the proper repairs and preservation of the various buildings, offices, docks, wharves, roads, walls, fences, and other improvements.

Purchase of Oakman and Eldridge's wharf.—An estimate is again presented for the purchase of this property; the reasons for this purchase which have been heretofore stated still exist, and it is considered of much importance that this property should be obtained.

NEW YORK.

The works of improvement which have been completed at this yard during the past fiscal year are, iron fence for officers' houses, repairs and increase of ordnance machinery and shops, and officers' houses. Upon these objects there has been expended during the year the sum of \$25,225 12.

The works which have been in progress during the year, but which are not yet completed, are hoisting apparatus, dredging channels, repairs to dry dock, new derrick, removing small shears, repairs to ship-houses, extension of sewer, quay wall at saw-mill, new foundry, chain-cable shop, railways, drains, paving and flagging, filling low places, improvements on cob dock, machine shop, extension of quay wall near new derrick, iron plating shop, receiving store, machinery for machine shop, &c., repairs of machinery and boilers, repairs of engines in machine shop, machinery for iron plating shop, machinery for new foundry, machinery for smithery and joiner's shop, three steam hammers, water pipes and hydrants, and repairs of all kinds. Upon these various works there has been expended during the fiscal year the sum of \$590,350 29. The work upon the above improvements has been prosecuted as vigorously as possible, and executed in the most substantial and satisfactory manner. There has been expended during the year for objects coming under the head of contingent the sum of \$310,435 99. Plans and estimates are submitted for the fiscal year ending June 30, 1867, for the following objects, viz: machine shop, main building, boiler shop, iron plating shop, receiving store, quay wall, dredging channels, office building, officers' houses, barracks for 6,000 seamen, filling low places on new

purchase, machinery for new machine shop, boiler shop, pattern shop and smithery, special repairs, repairs of all kinds, and purchase of the Ruggles property, amounting in the aggregate to the sum of \$2,597,080.

Machine shop, main building.—A partial appropriation was made for this building, and the work commenced; but the experience of the past four years has demonstrated that the building as first proposed would not be of sufficient size to meet the wants of the yard. The plans have therefore been revised and the building enlarged, and, consequently, the expense increased. To meet this increase and complete the building, the sum now estimated will be required.

Boiler shop.—This building is much needed, the present shop being entirely too small for the work required. It is proposed to build a large boiler shop in connexion with the machine shop, and this item is considered one of much importance.

Iron plating shop.—A small appropriation was made for this building, but, owing to the immense increase in the cost of materials and labor, it was found impossible to erect a proper building for the money. An additional estimate is therefore submitted for the construction of such a building as will supply the facilities for executing this important work in an economical and expeditious manner.

Receiving store.—This building has been authorized, and is in rapid progress; but owing to the great advance in the cost of materials and labor since the estimate was made, as well as from the fact that a portion of the site has proved of such a character as to require heavy piling, it becomes necessary to ask for an additional appropriation. An estimate is therefore submitted.

Quay wall.—This important work is in progress, and an estimate is submitted for its continuation. The old wharves are fast decaying, and this work is to replace them and build a front to the new purchase in a permanent manner.

Dredging channels.—The constant deposits in the Wallabout channel render the frequent use of the dredging machine necessary to maintain a sufficient depth of water for the vessels at the yard. No appropriation was made last year for this object, and the estimate now submitted will be required to continue the dredging machine in operation.

Office building.—The office accommodations are entirely insufficient for the large number of officers now attached to this yard; they are inconveniently arranged, having been increased from time to time to meet the wants of the yard. It is proposed to erect a building for the purpose, so arranged that those officers having frequent business together may be located near to each other. The building is much needed, and an estimate is therefore submitted.

Officers' houses.—This yard is also deficient in quarters for the officers on duty; their presence is often required at night, and it is deemed important that they should be provided with houses in the yard, so that their services may be always available. An estimate is submitted for such houses as are necessary to supply deficiencies.

Barracks for 6,000 seamen.—In compliance with your directions, plans and estimates are submitted for the construction of barracks at this yard for the accommodation of six thousand seamen.

Filling low places on new purchase.—A large part of this new purchase has been filled in and appropriated to useful purposes; a large area yet remains to be filled, and it is proposed to fill it in part from the mud excavated by the dredging machine, and in part with gravel. An estimate for this important object is submitted.

Machinery for machine-shop, boiler-shop, pattern-shop, and smithery.—These new buildings are now in progress, and as much time is generally consumed in the building and preparing of machinery and tools, it is deemed wise to have them in progress so that they may be ready to put in place when the buildings are finished. An estimate is therefore submitted for this important object.

Special repairs.—An appropriation was made some time since for certain special repairs—such as long dock, ship-houses, and old docks; the exigencies of the service since then have not permitted these repairs to be made except in a temporary manner, and the great increase in the cost of labor and materials renders it now impossible to complete them with the funds in hand. The repairs are much needed, and an estimate is submitted for their completion.

Repairs of all kinds.—The amount estimated under this head will be required for the necessary repairs of the various buildings, docks, wharves, and other improvements.

Purchase of the Ruggles property.—The acquisition of this property would be of vast benefit to the yard, and it is believed that no more favorable opportunity will present itself for its purchase.

PHILADELPHIA.

At this yard no works of improvement have been completed during the past year. The expenditures for improvements have been made for dredging channels, repairs, and working of floating dock, and repairs of all kinds. Upon these objects there has been expended during the year \$120,102 06. These are current expenses, and were required to meet the wants of the service. There has been expended for objects coming under the head of contingent during the past year the sum of \$131,813 83. Plans and estimates are submitted for the fiscal year ending 30th June, 1867, for the following objects: dredging channels, dry dock, houses for officers, Bulkley's patent dryer, with building complete, saw-mill, extending south pier 100 feet, and for repairs of all kinds, amounting in the aggregate to the sum of \$349,508.

Dredging channels.—The amount asked for this object is for cleaning out around the wharves, and maintaining a proper depth for the working of the floating dock.

Dry dock.—For the necessary repairs and for operating the dock the amount estimated will be required. This dock has been kept in very active service during the past year, and a very large number of vessels has been raised and repaired upon it. The dock is of the utmost importance, and being of perishable materials, requires constant care and attention.

Officers' houses.—At this yard there are but four houses for officers, and many of the officers are without quarters in the yard, and reside in remote parts of the city. As it is deemed important that all the officers should be within the yard and ready to render service at all times, estimates are submitted for building quarters for such as are not now provided for.

Bulkley's patent dryer, with building complete.—This plan of drying timber has been tested at the Washington yard with very satisfactory results, and it is considered very desirable to introduce it in other yards. At this station one is much needed, and an estimate is therefore submitted.

Saw-mill.—Appropriation has been made for the machinery for this mill, and the machinery obtained, but the amount remaining on hand is not sufficient to complete the building. It is an important appendage to the yard, and will effect a great saving in the execution of work. The appropriation is strongly urged.

Extending south pier 100 feet.—For some time past the deep water has been receding from the yard front, and as the wharves can be extended out into the river, thereby adding to the area of the yard, it is more economical to extend them than to keep the dredging machine constantly employed. Besides, there is no good site in front of the yard for the new floating dock, unless it is placed alongside the old dock; and to do this, the extension of the pier is necessary for the protection of the dock.

Repairs of all kinds.—This estimate embraces the usual amounts required for the proper repairs of the different buildings, docks, wharves, roads, walls, fences, &c., and is necessary for their preservation.

WASHINGTON.

There has been no object of improvement completed at this yard during the past fiscal year. The works upon which progress has been made, but which are not yet completed, are dredging channels, machinery and tools, coal depot, extension of copper-rolling mill, storehouse for provisions and clothing, rail tracks in yard, and repairs of all kinds. The amount expended upon these objects during the year is—for materials, \$128,187 61; for labor, \$63,125 37, making an aggregate of \$191,312 98. These works have been constructed in a substantial and satisfactory manner.

There has been expended at this yard during the past year for objects coming under the head of contingent the sum of \$209,816 01.

Plans and estimates are submitted for the fiscal year ending 30th June, 1867, for the following objects, viz: new paint shop, smithery, extension of iron foundry, machinery, tools, officers' quarters, and for repairs of all kinds, amounting in the aggregate to the sum of \$254,690.

New paint shop.—The building formerly used as a paint shop having been turned over to the Ordnance bureau, it became necessary to use a temporary building for this purpose. The present shop is entirely unsuitable, as the paints, oils, &c., are exposed to the dust and smoke from the smithery. It is proposed to erect a new shop similar to the old paint shop, and an estimate is submitted for the purpose.

Smithery.—The number of forges in the smiths' shop is not sufficient for the execution of the large quantity of work required at this yard. It is proposed to remove the chain-proving and testing machine to another building conveniently near, and thus make room for an additional number of forges, and an estimate for this object is submitted.

Extension of iron foundry.—The foundry facilities are too limited for the performance of the large amount of work required from the foundry, and it is proposed to extend them by erecting sheds along the rear for the accommodation of additional cupolas, for which a small appropriation will be required.

Machinery and tools.—Appropriations have been made from time to time for machinery and tools, but the quantity already obtained is not sufficient for the execution of the large amount of work required in building engines and machinery for steamers. An estimate is therefore submitted for the purchase of such as are most needed.

Officers' houses.—Several of the officers attached to this yard are without quarters in the yard, and by your direction estimates are submitted for providing the houses necessary for their accommodation.

Repairs of all kinds.—The amount submitted under this head will be required for the necessary annual repairs of the different buildings, docks, wharves, and other improvements.

NORFOLK.

The works of improvement which have been completed at this yard during the past fiscal year are, rebuilding machine-shop, mast-house, smithery, and offices. On these several objects there has been expended for materials \$93,645 29, and for labor \$111,227 54, making an aggregate of \$204,872 83. The amount expended under the head of repairs of all kinds, for repairs of dock, engine, foundry, dry dock, marine barracks, provision store, yard cranes, officers' quarters, wharves, saw-pits, carpenters' shop, and other miscellaneous objects, is, for materials \$59,501 37, and for labor \$89,917 11, making an aggregate of \$149,418 48. The amount expended during the year under the head of contingent is \$81,752 46. The work upon these objects has progressed in a satisfactory manner, and from a heap of ruins this yard has already been put in

condition to afford facilities for the repairs of a very large number of vessels. Estimates are submitted for the fiscal year ending 30th June, 1867, for repairing dry dock, masonry, iron and copper store No. 11, timber shed and joiners' shop No. 12, furniture and galley storehouse No. 13, storehouse No. 14, completion of stables, railway tracks and cars, wharves, new dredging machine, scows, and dredging, new masting shears, Ames's wharf crane, building for offices, officers' quarters, machinery and tools, and repairs of all kinds, amounting in the aggregate to the sum of \$484,500. Most of these items are for the repairs of buildings destroyed by the rebels, and all of them are needed at this important station. The walls of these buildings are generally in very good condition, and the cost of repairing them will be moderate compared with the original expense.

PENSACOLA, FLA.

Operations at this yard during the past year have been confined to the repairs of such objects as were absolutely necessary for the performance of such work as was required in the repairs of the vessels of the Gulf squadron; expenditures have been made upon the saw-mill, machine-shop, smith-shop, foundry, officers' quarters, storehouse, cisterns, and miscellaneous objects, the aggregate amount of which is, for labor \$34,615 79, and for materials \$11,779 18, making an aggregate of \$46,394 97. The works have been temporarily repaired, so as in a degree to meet the demands upon this important station. There has been expended during the year, for objects coming under the head of contingent, the sum of \$40,942.

Estimates are submitted for the fiscal year ending 30th June, 1867, for the following objects, viz: for repairing muster office, gate to dock basin, pile engine, officers' quarters, and repairs of all kinds, amounting in the aggregate to the sum of \$422,887.

This being the only naval station on the Gulf, it is highly important that a part of the workshops should be repaired as soon as practicable. The estimates now submitted are such as the immediate wants of the service require, and it is hoped that the appropriation will be made by Congress.

MARE ISLAND.

At this yard none of the objects of improvement have been completed during the past fiscal year. The works which have been in progress, but which are not yet completed, are wharf, grading and paving, drainage and sewerage, tar and pitch house, foundry and boiler establishment, wharf cranes, scows, lighters, and stages, boiler-house in smithery, steam hammer and tools for smithery, cistern and holder for gas-works, saw-mill, stables, coal-house and wharf, repairs of sectional dock, and repairs of all kinds. The amount expended on these objects during the year is \$190,059 78. Under the head of contingent there has been expended during the year the sum of \$102,456 47.

Plans and estimates are submitted for the fiscal year ending 30th June, 1867, for foundry and boiler establishment, houses for officers, cisterns, barracks for sailors, quay wall, grading, cistern and holder for gas-works, and for repairs of all kinds, amounting in the aggregate to the sum of \$484,800.

Foundry and boiler establishment.—This important work has been some time in progress, and parts of it are nearly completed. The amount now asked for is believed to be sufficient for its final completion.

Houses for officers.—This yard being located on an island, it is important that the officers should be provided with quarters in the yard; some of them are already furnished with quarters, and an estimate is now submitted for building houses for the paymaster and ordnance officer.

Cisterns.—In consequence of the absence of good water on the island, it is in-

dispensably necessary to construct cisterns for receiving the rain water, and the estimate submitted is much needed.

Barracks for sailors.—By your direction an estimate is submitted for the erection of barracks to accommodate 7,000 sailors.

Quay wall.—This work is of the utmost importance for the protection of the foundry establishment, and to furnish landing places and wharf room near the foundry and machine shop. The appropriation is strongly urged.

Grading.—This work must continue with the other improvements, and will require annual appropriations for some time to come.

Cistern and holder for gas-works.—The amount allotted to this object is not sufficient for its completion; the object is one of great importance, and a further appropriation is asked for its completion.

Repairs of all kinds.—The amount estimated under this head is such as will be required for the necessary annual repairs of the various buildings, docks, wharves, and other improvements.

SACKETT'S HARBOR.

The expenditures at this station during the past year have been confined to the necessary repairs of the buildings, &c., and the preservation of the public property. The amount expended during the year is \$797 62. The unexpended balance to the credit of this station will be sufficient to meet all necessary expenditures for the next fiscal year.

MISCELLANEOUS STATIONS.

For the erection of wharves, storehouses, and workshops at Port Royal, S. C., there has been expended during the past year the sum of \$76,106 17. This became a very important station as the place of deposit for the vast amount of stores, ammunition, and coal, and as a place for the repairs of the vessels composing the South Atlantic squadron.

At Key West the expenditures upon the coal depot and landing wharf have amounted during the year to the sum of \$38,382 21. This station was made the principal deposit for stores and coal for the East Gulf squadron, and has been of much importance during the war.

At Mound City there has been expended during the year, for temporary buildings, the sum of \$25,382 21. This point was made the place of deposit for stores for the Mississippi squadron, and for repairs of vessels belonging thereto.

The amount appropriated by the last Congress for these miscellaneous stations will be sufficient for the present.

NAVAL ASYLUM.

The increase in the number of beneficiaries, and the greatly advanced cost of all supplies, has caused a deficiency in the amount allotted for their support. There were on the first of July, 1864, one hundred and sixty-four persons, including officers and attendants, borne on the rolls of the asylum. Seventeen beneficiaries have been admitted and fourteen have died.

The expenses of the institution for the year ending June 30, 1865, are as follows:

Subsistence	\$26,972 47½
Clothing, tobacco, &c.....	8,053 46
Miscellaneous items.....	9,411 29
Officers and attendants.....	21,511 65
Total.....	<u>65,948 87½</u>

FLOATING DRY DOCKS.

Under authority of Congress, contracts were made for the construction of two floating dry docks, of size sufficient for docking monitors of the largest class. One of these was for the navy yard at New York, and the other for the navy yard at Philadelphia. Both have been completed and delivered at the yards, and arrangements are now being made to test their strength and capacity.

All of which is respectfully submitted.

HON. GIDEON WELLES,
Secretary of the Navy,

JOS. SMITH, *Chief of the Bureau.*

BUREAU OF NAVIGATION.

Annual report and estimates for the fiscal year ending June 30, 1867.

BUREAU OF NAVIGATION, NAVY DEPARTMENT,
Washington, October 28, 1865.

SIR: I have the honor respectfully to submit the annual report from this bureau, to which will be found appended the annual report of the superintendents of the Naval Observatory and the Nautical Almanac; also the estimates of the bureau proper, and those of the Naval Academy, Naval Observatory, and Nautical Almanac, for the fiscal year ending June 30, 1867.

BUREAU OF NAVIGATION.

At the date of the last annual report from this bureau Rear-Admiral Charles Henry Davis was chief. That officer, having been assigned to the superintendency of the Naval Observatory upon the sudden death of Captain James M. Gilliss, (whose official life had been prominently connected with that institution,) was succeeded in the Bureau of Navigation by the late lamented Captain Percival Drayton. The duties of the Bureau of Navigation have, therefore, been mainly performed, during the past year, under the direction of the former of the two chiefs, up to about the close of the rebellion, while Captain Drayton, my immediate predecessor, was only spared to the service and country to commence the important duty of carrying out the order of the department of the 6th of May, for a general, and as rapid as possible, reduction of expenses in the branch of the service confided to this bureau.

Prior to the cessation of hostilities with the rebels the duties of the bureau differed in no material respect from those of the previous years of the war. The constantly increasing naval force, and the wear and tear of war, made it necessary to provide large supplies of nautical instruments and navigation stores of all kinds for distribution. The dawn of peace brought with it your order for retrenchment, cessation of purchases, and for husbanding all materials adapted to the future wants of a more limited naval establishment.

Although the damage to vessels, frequently in conflict with forts and batteries and land forces of the enemy was very great, it is believed that many of the articles turned into store, under the care and charge of the Bureau of Navigation, may, with judicious management, be made to supply the place of new ones, and that much of the material now on hand may be reissued to cruising vessels. In some of the branches, however, the articles were, from circumstances beyond control, of inferior quality, having been selected mainly for coasting and inland navigation, rendering them, for the most part, unfit for reissue; while in the department of foreign charts and the more expensive instruments, such as chronometers, &c., but few, comparatively, were required or purchased during the continuance of the rebellion.

The nautical instruments, flags, books, and all other articles of navigation supplies, except charts, sailing-directions, and the finer instruments requiring repair, (which are sent to the Observatory,) are stored at the five principal naval stations, in charge of officers, by whom they are distributed upon requisitions, corrected and approved at the bureau, to the vessels as they are put in commission.

The experience of the war proved, if proof were necessary, the great importance of being independent of foreign manufactories for naval supplies. The article of bunting, apparently an insignificant item, in the large expenditures of a four years' war, became one of considerable consequence, both on account of the difficulty of procuring it seasonably, and in suitable quantities and qualities, and of the exorbitant prices demanded for it abroad.

Happily the efforts (to which reference was made in the report from the bureau in 1864) to induce American manufacturers to undertake the fabrication of this necessary article, have resulted so far beneficially as to lead to the reasonable hope that ultimately these attempts will be crowned with complete success. Specimens and samples of American bunting have been presented, which lead to the conclusion that, at no distant day, it will be manufactured in this country of a quality and at a price that cannot be rivalled by the European establishments.

The system heretofore adopted and reported, of confining the purchases of the bureau, as far as possible, to articles of American growth and manufacture, will be sedulously adhered to.

Considerable attention has hitherto been given by the bureau to the compass department of the service. The large number of vessels, constructed wholly of iron, and the daily increasing introduction of large quantities of that metal in the construction of vessels-of-war, render it imperative that every possible appliance which science, experience, and the mechanic arts afford, be employed to lessen the risks of shipwreck arising from defective compasses and ignorance of the causes of local deviation of the magnetic needle on board of our ships.

It is of the greatest importance that all commanding, navigating, and other line-officers should give more attention than formerly to the practical means employed for determining the local deviation, and to applying the corrections to the compasses on board the ships to which they are attached. Ships should not only be swung, as at present required by the regulations of the department, in the first fitting, before going to sea, but no opportunity should be omitted for re-examining and correcting local deviations in every port they visit, and after every material change of latitude or longitude at sea.

These provisions relate to the practical rules and methods in use determining the actual deviation of the compass, and applying it in the ordinary processes of navigation. The more simple these rules the better. Nothing is gained by multiplying forms, or elaborating discussions that make no essential addition to our knowledge, and lead to no valuable result. But it is desirable to push our inquiries beyond these fluctuations in the local attraction, which are due to accidental causes, and to devote our attention to those changes, more obscure perhaps, which gradually bring about that state of the local deviation which is normal in every iron vessel, and also those changes dependent on geographical situation.

With these objects in view, a skilful observer has been placed on board of the *Monadnock* on her voyage to San Francisco to measure the vertical and horizontal deviations under all the variety of circumstances and changes through which she will pass in both hemispheres.

HYDROGRAPHY.

A chart of the Ochotsk sea, which includes the mouth of the Amoor river, has been in progress for some time, but it is found that it cannot be published until