

REPORT
OF
THE SECRETARY OF THE NAVY.

NAVY DEPARTMENT, *November 25, 1843.*

SIR: I have the honor to present to you the annual report of the condition and operations of this department of the public service.

The navy, at the present time, consists of the following number and description of vessels: One ship of 120 guns; nine ships of the line, of 90 guns each; one razeed, of 62 guns; twelve 52-gun frigates; one 50-gun frigate; two 48-gun frigates; eleven first-class sloops of war, of 24 guns each; three 22-gun sloops; five 16-gun sloops; two sloops for store-ships, 6 guns each. There are also four first-class sloops on the stocks, nearly ready for launching; eleven 10-gun brigs and schooners; three ditto used as store-ships, and one for a receiving vessel at Charleston; the steamship *Mississippi*, of 12 guns; the *Fulton*, of 8 guns; the *Princeton*, (Ericsson's propeller,) of 12 guns; the *Union*, of 4 guns, (with Lieut. Hunter's submerged wheels;) the *Poinsett*, of 2 guns; and an iron steamer, the *Michigan*, of 6 guns, nearly ready to launch on Lake Erie. There are likewise four small schooners employed as packets, or receiving-vessels. In all, seventy-six vessels, of the various descriptions.

The *Washington*, 90-gun ship, has been broken up the last year; and the frigate *Hudson* is unfit to repair. The sloop *Concord*, 24 guns, was lost in the Mozambique channel, on the eastern coast of Africa, on the 2d of October, 1842. The commander, William Boerum, the purser, B. F. Hart, and James Davis, an ordinary seaman, were drowned, while crossing the bar at the mouth of Lorango river, in the captain's gig. The surviving officers and crew were conveyed, in a vessel chartered for the purpose, to Rio Janeiro, and thence to the United States.

I regret to report that the schooner *Grampus* has not been heard from since the 14th of March last—when she was off Charleston, S. C.—and is supposed to have been lost, with all hands, in some of the severe gales which occurred about that time.

I have also the unpleasant duty of reporting the loss of the steamship *Missouri*. This frigate departed early in August, for the purpose of conveying the Commissioner for China (the honorable Caleb Cushing) to Alexandria, in Egypt, *en route* to the court of Peking. While she was lying in the harbor of Gibraltar, (into which port she had put for the purpose of replenishing her fuel,) she took fire on the evening of the 26th of August, and the utmost exertions of her officers and men, during the trying and perilous event, were unavailing in extinguishing the flames;

and this costly ship—an ornament to the navy—was entirely destroyed. The larger part of her officers and men have reached the United States in a ship chartered to bring them home. Her commander (Captain Newton) remains, with a portion of her force, to secure what can be recovered from the wreck. All the accounts of this disaster concur in representing the officers and crew as having made the utmost exertions to extinguish the flames; and that their conduct during this perilous period, when an explosion of the magazine was momentarily expected, was marked by great coolness and intrepidity. Captain Newton's official report (a copy of which is hereto appended) having been laid before you, further investigations into the causes of this loss are postponed until after his return.

The ship Franklin, requiring heavy repairs, has been laid up at the Charlestown yard, awaiting a more favorable season for prosecuting such work. The razeed Independence has been ordered to the same yard for a like purpose. The Constitution frigate, at Norfolk, and the sloop-of-war Yorktown, at New York, are undergoing repairs, preparatory to sea service. The brig Dolphin, at Norfolk, is awaiting repairs.

Inquiries were instituted, early in the summer, as to the cost of building an iron steamer of about 1,000 tons, at Pittsburg, with Hunter's submerged wheels; and, in the execution of this plan, a contract was entered into, early in October, with Messrs. Tomlinson & Co., for building it, at a definite price per pound; and the whole cost not to exceed, in any event, \$150,000, with a guaranty of speed at the rate of nine miles per hour, from her steam power, in smooth water.

Some months since, an order was given to build a small iron steamer at the Washington navy-yard, on Hunter's plan, to be partly of galvanized iron; but, owing to the heavy drafts upon the appropriation, for other purposes, that work is now suspended.

Instructions were also given, in April last, for the building of six sloops-of-war of the largest class; two of which have been launched, and the others are on the stocks, nearly ready for launching. The work on two of these has been suspended for the present. In addition to these sloops on the stocks, there are, of the vessels previously named as constituting a part of the naval force, the following on the stocks, viz: the Vermont and Virginia, 90 guns each, at Boston; the Alabama, 90 guns, at Portsmouth, New Hampshire; the New York, 90 guns, at Norfolk; the Santee frigate, 52 guns, at Portsmouth, New Hampshire; and the frigate Sabine, 52 guns, at New York.

The vessels afloat have been employed, during the past year, as follows: In the home squadron, the razeed Independence, commanded by Captain Stringham until May, and since that time by Captain McKeever; the sloop Falmouth, commanded by Commander J. McIntosh up to August, when he was relieved by Commander J. R. Sands; the sloop Vincennes, commanded by Commander F. Buchanan; the sloop Vandalia, commanded by Commander W. J. McCluney, who was relieved, in consequence of ill health, in September, and succeeded by Commander J. S. Chauncey; the brig Dolphin, commanded by Commander J. D. Knight, who was relieved, in October, by Commander H. Bruce; the brig Somers, commanded by Lieutenant J. W. West; the brig Boxer, commanded by Lieutenant O. Bullus; the brig Bainbridge, commanded by Lieutenant Z. F. Johnston, who was relieved in September, and succeeded by Commander J. Mattison; and the schooner Grampus, Lieutenant A. E. Downes;

the whole under the command of Commodore Charles Stewart. The cruising ground of this squadron extends from the Banks of Newfoundland to the river Amazon, and includes the Gulf of Mexico and the Caribbean sea.

In the Mediterranean squadron, conformably with previous arrangements, an exchange of commands has taken place between Commodores Morris and Morgan.

Commodore Morris sailed from the coast of Brazil in the Delaware, 74, Captain Charles S. McCauley, on the 19th of February, and arrived in the Mediterranean on the 9th of April, when the command of the Mediterranean squadron was transferred to him by Commodore Morgan; and the latter sailed in June, with the Columbus, 74, Captain Benjamin Cooper, for the coast of Brazil. The frigate Congress, Captain P. F. Voorhees, has been employed in the Mediterranean during the whole year, and is expected to sail in January next for Brazil, to interchange with the frigate Columbia, Captain E. R. Shubrick, now on that station. The sloop Fairfield, commanded by Commander A. Bigelow during a part of the year, and subsequently by Commander S. W. Downing, has also been attached to the Mediterranean squadron. This vessel will return to the United States upon the arrival out of the new sloop-of-war Plymouth, now about to sail, under the command of Commander H. Henry. The sloop Preble, Commander S. B. Wilson, having finished her cruise in the Mediterranean, arrived at Boston the 31st August, and is ready again for sea. The sloop Lexington has been employed as a store-ship for this squadron. She has made one voyage with provisions and stores, and is now on her second trip.

The term of Commodore Morris's command having expired, Commodore Joseph Smith has been selected to succeed him, and has sailed for the Mediterranean in the new frigate Cumberland, Captain S. L. Breese; which vessel will be the flag-ship of the squadron. Upon the arrival out of the Cumberland, Commodore Morris will return to the United States in the Delaware, 74.

The cruising ground of this squadron embraces the Mediterranean sea.

In the Brazil squadron, in addition to the Delaware, 74, there have been employed the frigate Columbia, Captain Edward R. Shubrick; the sloop John Adams, Commander Conover; the sloop Decatur, Commander Farragut, (which vessel returned to the United States on the 18th of February;) and the schooner Enterprise, now in command of Lieutenant J. M. Watson. Commodore Morgan arrived at Rio de Janeiro, in the Columbus, 74, on the 2d of August, where he was met by Commodore Daniel Turner, who had been appointed to succeed him in the command of the squadron. This latter vessel is now the flag-ship of Commodore Turner, but she will return to the United States on the arrival out of the frigate Raritan, now preparing for sea, under the command of Captain F. H. Gregory. The sloop Boston, Commander Pendergrast, has sailed from Boston to relieve the John Adams.

The brig Pioneer, lately used as a receiving vessel at Baltimore, is now fitting out at Norfolk as a store-ship for this squadron. Lieutenant Shaw has been ordered to command her.

The cruising ground of this squadron extends from the mouth of the river Amazon to Cape Horn; along the equator, eastward, to the south-

western boundary of the African station, Cape Negro; thence, along the coast of Africa, to the Cape of Good Hope.

The Pacific squadron, at the commencement of the year, consisted of the frigate United States, Captain James Armstrong; the sloop Cyane, Commander Stribling; the sloop Yorktown, Commander Nicholas; the sloop Dale, Commander Dornin; the schooner Shark, Lieutenant Eagle; and the store-ship Relief, Lieutenant Sterett: the whole under the command of Commodore Thomas Ap C. Jones. On the 24th of January, Commodore Jones was recalled, and Commodore A. J. Dallas ordered to succeed him in the command of the squadron. Commodore Dallas sailed from Norfolk in the sloop Vandalia for Chagres, and arrived at Callao in the latter part of July. On the 8th of August, he had not met with Commodore Jones, who was absent on a cruise to the Sandwich Islands.

The Yorktown returned home on the 2d of August, and the Dale on the 19th of October, having on board the remains of Commodore A. Claxton, who died while in command of the squadron. The places of these vessels have been supplied by the sloop Levant, Commander H. N. Page, which sailed from Norfolk on the 2d of September; and the Warren, Commander J. B. Hull, on the 19th of October. The new frigate Savannah has been equipped for sea, and sailed on the 19th of October, from New York, under the command of Captain A. Fitzhugh, to join this squadron. When she reaches the Pacific, the United States will probably return home. The store-ship Erie, Lieutenant Manning, sailed from Boston on the 9th of February, with provisions and stores for this squadron. Upon her arrival at Rio, Lieutenant Manning was relieved from the command, and Lieutenant N. W. Duke ordered to succeed him. The Erie has arrived on the station. The vessels of this squadron have been ordered to return to the United States, in future, by way of China and the Cape of Good Hope.

This squadron cruises along the whole west coast of America, and westward from the meridian of Cape Horn to one hundred and eighty degrees west longitude, and southward between those meridians.

The East India squadron has been composed of the frigate Constellation, Commodore Kearney commanding the squadron, and the sloop Boston, Commander J. C. Long; which latter vessel, after visiting the most important ports and islands in the China seas and the Pacific, returned home by Cape Horn in the month of August. The Constellation left China in the early part of the year, and was at the Sandwich Islands in August last, to sail in a few days for the United States, *via* California and Cape Horn.

A squadron, under the command of Commodore Foxhall A. Parker, has been fitted out in the place of that commanded by Commodore Kearney. The frigate Brandywine, bearing the flag of Commodore Parker, and the sloop St. Louis, Commander H. H. Cocke, sailed from Norfolk on the 23d of May. These vessels arrived at Rio de Janeiro on the 19th of July, and sailed thence on the 5th of August. A leak was discovered in the bow of the St. Louis, which obliged her to put back to Rio for repairs, at which place she arrived on the 7th of September. It was expected that the vessel would sail again in a few days. The new brig Perry, which was launched in May, has been despatched, under the command of Commander S. F. Dupont, to join this squadron.

The African squadron is composed of the frigate Macedonian, Captain

Mayo; the sloop *Saratoga*, Commander Tattall; the sloop *Decatur*, Commander Abbott; and the brig *Porpoise*, Lieutenant Stellwagen: the whole under the command of Commodore Matthew C. Perry. The brig *Consort* is now fitting out at Boston as a store-ship for this squadron.

The cruising-ground of the squadron extends from Madeira and the Canary Islands, to the Bight of Biafra; and from the coast of Africa to the thirtieth degree of west longitude.

The following vessels have been employed on special or detached service:

The brig *Truxton*, Lieutenant Upshur, sailed from Norfolk in June last for Constantinople, to bring home the remains of the late Commodore David Porter. She is daily expected to arrive in the United States.

The brig *Oregon*, Lieutenant (now Commander) Powell, which had been employed on a survey of the Gulf of Mexico, between Apalachicola bay and the Mississippi river, under a resolution of Congress dated the 20th July, 1840, arrived at Norfolk the 27th July last—the season being too far advanced to permit a further continuance of operations. The steamer *Poinsett*, also engaged on this survey, remained out; and the work has been resumed under Lieutenant R. Semmes.

The schooner *Flirt*, Lieutenant J. A. Davis, made a trip to Chagres in April, with a mail for the Pacific squadron; returned to Norfolk in July, and has since been despatched to Galveston, Texas.

The schooner *Phoenix*, Lieutenant Sinclair, has also been employed as a despatch vessel, and has recently returned from Chagres.

The brig *Lawrence*, built at Baltimore by contract, has been fitted out, and placed under the command of Commander W. H. Gardner, and has just departed from Norfolk, on a cruise to the Windward islands.

The sloop *Marion*, Commander W. M. Armstrong, returned from a cruise in the West Indies in May last, and is now ready for sea at Boston. The small steamer *Engineer* has had a new boiler put in her, and is now used as a tender to the receiving-ship at Norfolk.

The vessels employed as receiving-ships are the *Pennsylvania*, Captain Zantzinger, at Norfolk; the *Ohio*, Captain Hunter, at Boston; the *North Carolina*, Captain Dulany, at New York; the *Experiment*, Commander Varnum, at Philadelphia; and the *On-ka-hy-e*, Commander Knight, at Charleston, South Carolina. The *Ontario*, lately used as a receiving-ship at New Orleans, and the *Wave*, at Baltimore, have been laid up, for the present, at Norfolk.

Two war-steamers, with submerged propellers, have been launched during the year—the *Union* and the *Princeton*. The *Union* is constructed upon the plan of Lieutenant Hunter—with submerged horizontal wheels upon the sides. The trial of this vessel was considered quite satisfactory to the department. The boilers, however, having been somewhat faulty, new ones are to be substituted; when it is not doubted, by the ingenious inventor, that a high rate of speed will be secured. Lieutenant Hunter's official reports are appended, as also the letter of the department on a trial of this vessel.

The *Princeton*, with Ericsson's propellers, (a vessel of a most beautiful model, both for appearance and efficiency, constructed under the immediate direction and supervision of Captain R. F. Stockton,) has made a highly successful experimental cruise, under his command, to and about New York; the official report of which is hereto appended.

Should these experiments, on further trial, equal the expectations now confidently entertained of them, a new era will commence in steam navigation, and particularly in the use of war-steamers. Vessels that can move, at the pleasure of their commanders, against wind or tide, and whose machinery is beneath the reach of an enemy's fire, will be able easily to overcome and destroy any war-vessels of the ordinary structure.

Improvements, of some magnitude, and of much utility, have been made, the past year, in the navy-yards at Portsmouth, N. H., Charlestown, and Gosport; and others are proposed, in the different yards, the ensuing year; for all the details of which I refer you to the appended report of the Chief of the Bureau of Navy Yards and Docks.

For the service of the next year, the employment of the following force is proposed :

For the home squadron, three frigates, six sloops, two steamers, and five brigs and schooners—making, in all, sixteen vessels. For the Mediterranean, three frigates, four sloops, one brig, and one store-ship—nine vessels. For the coast of Africa, four sloops, two brigs or schooners, and one store-ship—seven vessels. For the coast of Brazil, two frigates, three sloops, one brig, and one store-ship—seven vessels. For the Pacific, three frigates, four sloops, two brigs or schooners, and one store-ship—ten vessels. For the East Indies, two frigates, two sloops, one brig, and one store-ship—six vessels. For the Lakes, one steamer. For special service, the steamers Mississippi, Princeton, and Union, and the small iron steamer now building at the navy-yard, Washington.

This increased force seems to be called for, to afford adequate protection to our national interests embarked in our increased and growing commerce on the distant stations. The force proposed to be added to the home squadron (the cruising-ground of which extends from Newfoundland to the river Amazon, in South America,) seems to be necessary in guarding our own shores; in protecting the immense capital employed in the coasting trade along our whole seaboard, from the St. Croix to the Sabine; and in giving countenance and assistance to our foreign commerce with the West India islands and with the ports on the American continent.

The ships proposed to be employed are built and afloat. The officers necessary to command them are mostly in commission, and under pay. The deterioration of the ships is little more while in service than when laid up in ordinary. The officers degenerate by idleness, while they are improved by service. The expense of manning and sailing these ships, of course, is greater than when laid up. But we can have competent and skilful officers, good and efficient sailors, only by a long course of active sea service. That is the school in which they are taught, and in which they acquire a knowledge of their duties. To build a navy, without the experience, skill, and force necessary to sail and efficiently to manage it, in the event of a war with a maritime power, would be, in effect, but adding to the force of the enemy at the nation's cost, and to the national disgrace. I have, therefore, no hesitation in recommending the employment of a sufficient number of vessels to require the services of every officer that can be spared from shore duty, and capable of sea service.

A slight increase of officers in the subordinate grades will be needed to keep this force afloat. I would recommend that the number of midshipmen be kept as high as it was at the beginning of this year. About

ten more pursers could be beneficially employed. Several of the sailing-masters being, from age or infirmity, unfit for sea service, a small increase of the number is desirable. I would recommend that the proviso limiting the number of officers of the navy, which was passed on the 4th of August, 1842, be repealed, so far as it regards the warrant officers, excepting midshipmen; the present number being insufficient for the wants of the service.

The appropriation for increase, repairs, &c. for the year 1843-'4, having been heavily drawn upon in payment of contracts made, and in the execution of plans, and the completion of works in progress anterior to the commencement of the present fiscal year, it was deemed necessary, in October last, to discharge a large portion of the persons employed under this head; leaving, however, it is believed, enough funds unexpended to meet most of the outstanding demands against the department chargeable to this appropriation. The act of Congress of the 31st August, 1842, which forbids the transfer of appropriations from one to another branch of expenditure in this department, has operated injuriously. Were these transfers permitted, it is believed that sufficient means might be found among the various unexpended balances of appropriations to pay most, if not all, needful outlays in the fitting, completing, and repairing of vessels, and for payments on uncompleted contracts; and I am fully persuaded that the public interests would be promoted were Congress to authorize these transfers early in the ensuing session.

There were several contracts made, some of them years since, for the supply of timber and various materials for the navy, which have expired without having been completed. Heretofore, the department has been in the practice of extending the time for completing these contracts, where the interests of the United States have not suffered by such extension. The law of the 3d of March, 1843, requiring all contracts to be given, by advertisement, to the lowest bidder, seems to prohibit their further extension. There are many contractors who would have large sums due them, on the completion of their contracts, for previous deliveries, being the ten per cent. reserved on the amount of those deliveries; but, in consequence of the non-extension and non-fulfilment of those contracts, these amounts remain unpaid. As the United States have suffered no loss by these delays, and as the parties expected an extension, according to former usage, it appears to be a proper case for the interposition of Congress for their relief. Congress provided for analogous cases, by an act dated February 10, 1832; and the passage of a similar act at this time would enable the department to effect an equitable settlement of these cases.

It is not proposed to make any contracts the ensuing year for live oak, nor for any other timber, except absolutely required for immediate use; the department intending to build only four small timber vessels during that time, and the timber for which being mostly on hand.

The docking of timber for long periods, a large portion of the time but partly covered with water, seems of very questionable utility; and there are some positive injuries arising from the practice. The timber is taken from the water, and, before allowing it time to dry, is hewn and put up for the frame of the ship. The planks are sawed from it, to cover the frame. The consequence is, great shrinking and liability to warp, requiring additional expense for calking, from the shrinkage of the planks, and greater liability to leakage. It tends also to generate the dry rot, which

disease (if I may so term it) appears to be a fungus, a parasitical plant, like mould, germinating in the wood, and destroying the tenacity of its fibre; which fungus would be less liable to germinate in dry than in moist wood. It is indeed doubted if it could germinate at all in perfectly dry wood.

A deficiency is apprehended in the appropriation for provisions and clothing for the current year. The sum granted by Congress for this purpose was less than that asked for by the department, and not sufficient to provide for the persons actually in service at the passage of the law. Efforts are making to bring the expenditure within the proper limits; but, owing to the recent establishment of the Bureau of Provisions and Clothing, and the state of its accounts with the ships on distant stations, the department has not yet been able to learn the precise condition of its expenditures.

About \$15,500 worth of provisions, clothing, and small stores, has been lost by the burning of the steamer Missouri, the loss of the schooner Grampus, and the wreck of a freight vessel at Port Praya.

The estimate from the Bureau of Ordnance and Hydrography is some five hundred and twenty-four thousand dollars more than the sum asked for last year; of this, about one hundred and sixty thousand dollars is to pay for outstanding contracts made by the Board of Navy Commissioners some years since, and yet incompleated. It includes also an estimate for a sufficient number of powder-tanks for all the ships and brigs of the navy, launched or not launched, that are not now provided with them. It likewise includes an estimate for two hundred cannon of a large size.

In the Bureau of Yards and Docks, the estimate for the improvement of yards is about \$180,000 over that of last year. The estimate for coal is on the supposition that each steamer will employ steam power four months in the year; and the sum asked for is a very liberal allowance even for this length of service.

In the plot of ground on which the navy hospital at Chelsea, Mass., stands, there are many acres more than are of any use for the purposes of that establishment, and producing no income. If this were sold, a handsome sum might be added to the hospital fund, and an income be received from it. I therefore respectfully recommend that Congress authorize the sale of so much of this land as will not be needed for the hospital purposes; and I would further suggest that the Navy Department be clothed with authority to invest the navy hospital fund, now amounting to over \$200,000, and yielding no income, in some safe and productive securities.

A resolve was passed by the late Congress, appropriating four thousand dollars towards establishing an agency in the State of Kentucky, and one in the State of Missouri, for the purchase of American hemp for the use of the navy. An agent was appointed on the 1st of July last for the State of Kentucky; and, in obedience to directions, he visited the United States ropewalk at the Charlestown navy-yard, for the purpose of gaining information as to the kind and quality of water-rotted hemp used in the navy, and the mode of testing its strength. The appropriation for this branch of the naval service (increase and repair) having been mainly expended in other contracts, the department has recently directed the agent to make no purchases; and, in this state of the appropriation, it has not been thought expedient to appoint any agent for the State of Missouri.

Mr. Von Schmidt, an intelligent gentleman, well acquainted with the

culture of hemp in Russia and in this country, has been employed, by the direction of the department, the last season, on the culture and preparation of hemp in this vicinity. He is now engaged in constructing a machine for breaking it and separating the fibres from the stalks without rotting. Should he succeed, (of which there is a fair promise,) a great saving of labor will be made; and the hemp thus prepared will be much superior, in quality and strength, to hemp prepared by the old method of rotting. Mr. Von Schmidt's report is appended. He has also been employed to translate the pamphlet on the culture and preparation of hemp, published at Odessa, in Russia; and to which the attention of Congress was invited, by a communication from this department, dated 1st of March, 1843. The expense of this translation, for which there is no appropriation, is three hundred dollars. The translation is submitted with this report.

I respectfully suggest a modification of the ration, so as to dispense with the spirit-portion now allowed. That the frequent and habitual use of ardent spirits injuriously affects the human system, is a truth believed to be now generally understood and admitted by all intelligent physiologists. Its evil influences are not less on the moral than on the physical condition of man. A large proportion of the punishments inflicted upon the seamen is for drunkenness, or the immediate effects of drinking ardent spirits—insubordination in its various forms. In abolishing the spirit-ration, punishments and disease will be less frequent, and the whole moral and physical condition and character of the men will be improved. I therefore cannot too strongly recommend that no spirits be allowed in the rations of those who enlist in future, and that the right of commuting the spirit-ration for money be continued to those already enlisted.

Measures are in train for establishing a more perfect system of accounts for the naval storekeepers, by which a more rigid and effective responsibility will be enforced in keeping and disposing of the public property in the yards.

In the execution of this plan, an additional clerk at each navy-yard is necessary. The sum estimated for each clerk is \$800 per annum, and the services to be rendered will vastly more than compensate for the outlay.

Great expense has been incurred, at times, by alterations in the inboard arrangements of ships, without the authority of the department. The cost of such alterations thus made has been directed to be charged in future to the officer making them.

Navy agents have been directed to pay no bills, except from funds in hand belonging to the appropriation to which the bills are chargeable. By this arrangement, the department will keep a better knowledge and more perfect control over the condition of the appropriations.

The allowance of additional pay to officers performing the duty of a higher grade, is often a subject of contention and perplexity, and is liable to abuses. The utility of such allowances is somewhat questionable; but, if expedient to continue them, the law might be beneficially modified. It should define more accurately what constitutes a higher command, and perhaps also provide that no extra pay be allowed, unless expressly stipulated in the order directing the officer to perform such duty.

Pursuant to the act of Congress of March 3d, 1843, Captain Rousseau, Commander Adams, and Lieutenant Stephen Johnston, have examined and surveyed the harbor of Memphis, in reference to its capability for "a naval depot and yard for the building and repairing of steamships and

other vessels of war at that place." The report of these officers has been received, and accompanies this.

An appropriation of one hundred thousand dollars was made at the last session of Congress for the purpose of building a floating dry-dock, sufficiently large to raise a second-class frigate, on such plan as the Secretary of the Navy should approve, to be used at Pensacola. After various inquiries, the examination of various plans, and the consideration of the offers of persons proposing to build it, no plan was presented on which a suitable dock could be built within the limits of the appropriation; and the department did not feel authorized to enter into a contract requiring a larger expenditure than the sum appropriated for the purpose. The plan presented by S. D. Dakin, for a sectional dock, had the preference of the department; but one of a suitable size, with the necessary machinery to work it, could not be built within the sum appropriated. A detailed report on the subject, with an estimate of the cost of such a dock, to be used as the elevating or floating power, and connected with a level rail-track, by which ships can be taken upon the land with ease and safety, will be submitted in another communication, when all the necessary facts and calculations shall have been received from the persons having that subject in charge. Mr. Sanger, the engineer of the Bureau of Yards and Docks, in compliance with the resolve of Congress, is making the necessary examinations as to the practicability of using the Croton water as an elevating power for a dock at New York. When his survey shall have been completed, the department will report upon that subject.

In the estimates are included the cost of the apparatus for a laboratory at the Washington navy-yard, and for the employment of a chemist and pyrotechnist. It is believed that great advantages may be derived by employing scientific persons in testing the quality of copper and various other materials, and in the preparation of many articles used in the service, which have heretofore been found, when used, of inferior quality. It is highly important that a competent person be employed in the preparation of fuses, rockets, and other fire-works, indispensable in the naval service. So deficient is the service in this knowledge, that the fuses necessary for its use are obliged to be purchased.

The medical department of the naval service requires talent, education, and moral worth, properly to fill it, of as high order as in other branches of that service; but the surgeons and assistant surgeons have no military rank. A modification of the law, by which medical officers in the naval service shall be entitled to rank, in a manner similar to that prescribed in the army, might be beneficially made.

Commander Wilkes, with the officers under him, has been assiduously engaged in preparing the hydrographical results of the exploring expedition for publication. Before the end of the year, forty plates of charts will be ready for publication, comprising upwards of seventy general and local surveys of the groups and islands of the Pacific. Many more are ready to be given out to engrave.

Commander Wilkes reports that the narrative preparing by him, under the authority of Congress, will be ready for the press previous to March next.

The naturalists and others are also employed in the description and arrangement of the several branches of natural history. For their pay, and that of the persons necessary in the keeping and attendance of the hall,

and to complete the arrangements, a small appropriation is asked. The whole is making as rapid an approach to completion as can be expected in such duties. The report and estimate of Commander Wilkes are submitted herewith.

In the general estimates for the half current year ending June 30, 1843, and the fiscal year ending June 30, 1844, fifteen thousand dollars are required "for the erection of building for depot" of charts and instruments. That sum is embraced in the amount appropriated for enumerated contingent expenses in the act of 3d March last; but "the erection of building for depot" is not specified therein, and the law prohibits the application of any part of the amount appropriated for "other objects" than those enumerated: therefore, legislation is necessary to perfect and legalize the application of the \$15,000 to "the erection of building for depot"—the object for which the amount was specified in the estimates, and for which purpose it is applied.

I append the report of the superintendent of the building, in which he asks for an appropriation of \$20,000 for grading the grounds, &c. The house he has estimated for would be convenient, but is not deemed essential at this time. It is proper to remark, that this building is adapted in its form and structure not only for a depot for charts and instruments, but for an astronomical observatory, and for other scientific investigations.

It cannot but be gratifying to you to learn how great an interest has been evinced by the learned societies and scientific men of Europe, as well as at home, upon the establishment of an institution by the Government, in which a portion of the duties will be the advancement of science. Great liberality of feeling was expressed towards the officer sent abroad for the purchase of instruments; and, as another mode in which their great satisfaction was shown, extremely valuable presents of books were made to its library through him.

Contracts awarded to the lowest bidder have been made the last year for some heavy ordnance; but the contractors have failed to fulfil their engagements, and, consequently, the guns have not been procured. The policy of giving contracts for supplies of such importance to the lowest bidder, in preference to known and experienced founders, is of questionable utility. But such is the present requirement of the law. The lowest priced guns are not always the cheapest. The loss of lives, during the last war, and since that time, from the bursting of guns on board our ships, is said to have been nearly as much as the loss from the enemy's shot. Ammunition, as well as guns, is, by law, to be procured in the like manner, from the lowest bidder. Powder, made from the nitrate of soda, in lieu of the nitrate of potash, appears as well, and is about as strong, when first made, as that manufactured from saltpetre, but deteriorates daily, and is nearly worthless in a few months; and yet this inferior ingredient cannot be detected, except by a chemical analysis. True economy, hence, would seem to dictate that a different rule than that of giving contracts to the lowest bidder, regardless of the skill and character of the manufacturers, should prevail in procuring the ordnance, arms, and ammunition for the service.

A series of experiments have been made at the Washington navy-yard, by Professor Johnson, to test the qualities of coal of different kinds, a preliminary report of which is appended. Charles Reeder, Professor Johnson, and Dr. Thomas P. Jones, have been engaged in making ex-

periments upon safety-valves for preventing explosions in steam-boilers. Professor Johnson has also made a series of experiments to test and improve the strength of iron, upon the principle of thermotension. After these several experiments shall have been completed, reports will be made concerning them.

It has been found that the force allowed by the act of the 31st August, 1842, is inadequate for the performance of the duties required in an efficient administration of this department. An estimate has, therefore, been submitted for three additional clerks for the office of the Secretary of the Navy; three for the Bureau of Construction, Equipment, and Repairs; two for the Bureau of Provisions and Clothing; and one to take charge of all the books and papers of the late Board of Navy Commissioners, and the library of the department.

The estimates from the different bureaus, and from the commandant of the marine corps, of the sums that will be required for the proposed service of the coming year, are sent with this report.

All which is respectfully submitted.

DAVID HENSHAW.

To the PRESIDENT OF THE UNITED STATES.